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UNIVERSITY OF CALIFORNIA,

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The Economic Consequences of Disclosure Deregulation: Evidence from Amendment to
Definitions of Smaller Reporting Companies

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Management

by

Qiao Wang

Dissertation Committee:
Associate Professor Devin Shanthikumar, Co-Chair
Professor Terrence Shevlin, Co-Chair
Associate Professor Elizabeth Chuk
Associate Professor Ben Lourie

2023

DEDICATION

To

my beloved parents, husband, and daughter

for their endless love, support, and encouragement

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ACKNOWLEDGEMENTS

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"The Economic Consequences of Disclosure Deregulation: Evidence from Amendment to Definitions of Smaller Reporting Companies" (Dissertation)

"Does Social Media Increase or Moderate Extremeness: Evidence from Seeking Alpha Comments" (with Devin Shanthikumar and Shijia Wu)

"Does the FASB's Simplification Initiative Reduce the Quality of Reported Earnings? Evidence from ASU 2016-09" (with Elizabeth Chuk and Shijun Tonni Xia)

"Hold What You Know? Retail Investor Trading in the IPO Setting" (with Alina Lerman, Marina Niessner, and Devin Shanthikumar)

ABSTRACT OF THE DISSERTATION

The Economic Consequences of Disclosure Deregulation: Evidence from Amendment to Definitions of Smaller Reporting Companies

by

Qiao Wang

Doctor of Philosophy in Management

University of California, Irvine, 2023

Professor Devin Shanthikumar, Co-Chair

Professor Terry Shevlin, Co-Chair

This study evaluates if the Securities and Exchange Commission's (SEC's) disclosure deregulation, i.e., the SEC's 2018 amendment of definition of Smaller Reporting Companies (SRCs), achieves the goals of reducing compliance costs, promoting firm growth, and protecting investors. Using a difference-in-differences design, I examine the overall usefulness to investors of 10-K filings, firm investment activities, analyst coverage and institutional holding after newly classified SRCs choose to reduce disclosures in 10-Ks, by comparing with three control groups. The findings indicate that although firms reducing disclosures can save compliance costs in terms of audit fees, the saved resources are not transferred into more investment activities. I also find that reducing disclosures does not result in a decrease in the overall usefulness of 10-K filings, it can result in a loss of analyst following and institutional holdings.

INTRODUCTION

Disclosure and financial reporting play a critical role in a well-functioning capital market, and in the United States, they are often subject to regulation and mandatory requirements enforced by the Securities and Exchange Commission (SEC). However, compliance with disclosure regulation can impose costs to firms, which can potentially impede firms' growth.[1] These costs are considered to be disproportionately high for small firms given their smaller economic scale.[2] In its effort to relieve compliance burdens of small firms, the SEC employs several size-based exemptions.[3] Prior literature on the impacts of *deregulation* mainly focus on the capital market consequences (Cheng, Liao, and Zhang 2013; Ritter 2013; Barth, Landsman, and Taylor 2017; Chaplinsky, Hanley, and Moon 2017) and financial reporting quality (McCallen, Schmardebeck, Shipman, and Whited 2022). However, the evidence on how deregulation impacts firms' real activities is limited (Lewis and White 2023), and the evidence on the effects of disclosure-only deregulation is more limited.[4] I shed lights on the effectiveness of using *disclosure deregulation* as a tool to reduce compliance burdens and promote firm growth by studying the SEC's 2018 amendments of the definition of Smaller Reporting Companies (SRCs).

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[1] Compliance costs include both direct costs, such as monetary expenditures for the compliance process, and indirect costs, such as diverting management attention from other activities.

[2] For example, Sarbanes-Oxley (SOX) Act of 2002 related compliance costs are relatively higher for small firms (Alexander, Bauguess, Bernile, Lee, and Marietta-Westberg 2013).

[3] For example, SOX created the issuer categories of non-accelerated filers, accelerated filers, and large accelerated filers, and the SEC in 2020 amended accelerated filers definition to allow more firms to file as accelerated filers. The Jumpstart Our Business Startups Act (JOBS) Act of 2012 created the Emerging Growth Companies (EGCs) and provide disclosure exemptions for these firms to go public. The SEC created Smaller Reporting Companies in 2008 and further increased the public float threshold for firms to qualify in 2018.

[4] Both SOX and JOBS Act deregulate not only disclosures, but also other compliance procedures. For example, SOX exempts non-accelerated filers from audit of internal control over financial reporting (ICFR). JOBS Act exempts EGCs from certain disclosures and the ICFR audit, among other exemptions.

The category of SRCs was created by the SEC in 2008, and in 2018, the SEC further increased the public float thresholds from $75 million to $250 million (and added a revenue test) for firms to qualify as SRCs. SRCs can reduce certain disclosures in their SEC filings, such as selected financial data, market risk disclosures, contractual obligations, and comparison of operational results on 10-K filings and compensation-related disclosures on proxy statements. In making the decisions, the SEC stated that the "primary benefit is a reduction in compliance costs," and the "secondary effect is to spur growth to the extent that the compliance costs savings and other resources (e.g., managerial effort) otherwise devoted to disclosure and compliance are productively deployed in alternative ways," "while maintaining investor protections" (SEC 2018). Many firms, especially smaller emerging businesses, welcome this disclosure deregulation. For example, commenters advocating the 2018 SRC definition amendments asserted that compliance costs divert capital and resources from conducting research and development (e.g., Seneca Foods Corporation and Biotechnology Innovation Organization), although several commenters also stated that the potential compliance cost savings are likely small (CFA Institute and Seneca Foods Corporation). The economic analyses by the SEC using the 2006-2009 period around the initial creation of the SRC category failed to provide evidence supporting firm growth promotion. Nevertheless, the SEC passed the 2018 amendments claiming the above stated goals.

In the presence of disclosure *deregulation*, firms who evaluate that the benefits of reducing disclosure outweigh the costs will choose to take advantage of the deregulation provisions and can use the compliance savings to increase investment if the increased investment will increase shareholders' value. Although there is a lack of evidence showing the SEC achieve its goal in its 2008 rule change, the impacts of reduced disclosure on firms with a public float

between $75 million and $250 million, affected by the 2018 change, may also be different from the impacts on firms with public float below $75 million, affected by the 2008 rule change, due to systematic differences between these two groups of firms, as claimed by the SEC in their justification of the 2018 change (SEC 2018). Therefore, it is *ex ante* not clear whether newly classified firms based on the 2018 definition will divert saved resources into other performance-enhancing activities. For either the 2008 or the 2018 disclosure deregulation to improve firm performance, two conditions must be met: (1) the deregulation results in sufficient savings, and (2) firms use these savings effectively to improve performance. In this study, I examine how firms and market participants respond to newly classified SRCs and indirectly examine whether there are compliance costs savings under the 2018 definition.

To examine the consequences of reducing disclosures for the 2018 newly classified SRCs, I employ a difference-in-differences (DID) design. I define newly classified SRCs as firms that were previously subject to the higher reporting requirements, but that, based on the 2018 SEC amendments, were categorized as SRCs. Treatment firms are newly classified SRCs and reduce their 10-K filings (*Reducers*).[5] I construct three control groups consisting of a group of newly classified SRCs that maintain their disclosure levels (*Maintainers*), a group of firms that are not SRCs in both pre- and post-amendment periods (*Never SRCs*), and a group of firms that are SRCs in both pre- and post-amendment periods (*Always SRCs*). To mitigate the concerns that the results might be driven by unobservable systematic differences between the treatment and control groups, I compare the treatment group with each of the control groups separately. Because the control groups differ in size and reporting requirements, none has the same

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[5] Note that compensation-related disclosures are disclosed on proxy statements and only referred to in 10-Ks. Because my investor reaction tests are based on the content of 10-K filings, I focus on the items that are available to reduce on 10-Ks. I leave the examination of the consequences of reducing compensation-related disclosures to future research.

differences with the treatment group, so that if one set of characteristics drives results, it is unlikely that results will be similar for all three control groups.

I begin by examining the impact of reduced disclosure on the overall usefulness of 10-K filings to investors. I predict that if items available for reduced disclosure provide material information to investors, the overall usefulness of 10-K filings would decrease for *Reducers*, compared with firms that do not reduce 10-Ks. To measure the overall usefulness of 10-Ks to investors, I use the absolute value of cumulative abnormal returns around the three-day window starting from the 10-K filing date (e.g., You and Zhang, 2009; Francis, Schipper, and Vincent 2002). My results show that the overall usefulness of 10-Ks to investors does not change for *Reducers* relative to all the three control firms. When separately examining individual items in 10-K filings that are reduced, *Reducers* that exclude Item 7A (market risks) have decreased 10-K usefulness when comparing with *Maintainers* and *Always SRCs*, which is consistent with prior literature showing that market risk factor disclosures contain useful information to investors. Overall, the analyses suggest that the reduced items might be of limited usefulness to investors, and investors are not losing material information, except possible loss of information for Item 7A market risk disclosures.

Next, I examine whether firms are able to divert saved resources into investment activities. I predict that if *Reducers* can save some resources by reducing disclosures and reallocate the resources and time/effort towards investing activities, their investment activities will increase, as claimed by commenters who support the amendments. I specifically examine four measures of investment: capital expenditure (*CAPEX*), research and development (*RD*), M&A activities (*MA*), and overall investment (*TotalInvest*). My analyses reveal that, contrary to my expectation, *Reducers* reduce *RD* and *MA* activities when comparing with *Maintainers* and

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reduce *RD* when comparing with *Always SRCs*. These results suggest that firms may overstate in their comment letters to the 2016 SEC proposal about potential savings and reallocation of saved resources towards investment. The results are more consistent with Seneca Foods Corporation's statement that "the proposed change and the reduced disclosure requirements will have minimal effect to our annual compliance costs" (Seneca Foods Corporation 2016).

I then examine the reactions from equity analysts and institutional investors. Equity analysts and institutional investors are among the most important market participants. If equity analysts and institutional investors perceive an increase in information asymmetry of *Reducers* or view reduced disclosure as a signal about the firms' lower commitment to disclosure, I expect to see lower analyst coverage and smaller institutional holdings in response. On the other hand, if analysts perceive increased value of their information interpretating and processing services, and institutional investors can obtain information advantages due to less publicly available information, they may increase or at least maintain their coverage and ownership in *Reducers*. My results suggest that analyst coverage and institutional holdings of *Reducers* decrease after the 10-K filing reduction when compared with *Always SRCs*, but do not change when compared with other control groups.

I also conduct additional analyses to provide indirect evidence of a decrease in compliance costs. In particular, I examine if *Reducers* are able to reduce the 10-K reporting lag, i.e., the days between the firms' fiscal year end date and their 10-K filing date, and save from audit fees. The analyses show that *Reducers* do not expedite their 10-K filings, even though they are omitting previously reported items from their 10-Ks, but they are able to save from audit fees, suggesting compliance cost savings. In addition, I conduct several cross-sectional analyses to examine the channels through which reducing disclosures affects firms' investment and

market participants. The results show that the reduction in investment activities are present in large *Reducers* but not small *Reducers*, consistent with small *Reducers*, who can benefit more from compliance cost savings, are at least maintaining their investment levels, instead of decreasing; the reduction in institutional investors is present in *Reducers* that exclude Item 7A but not in *Reducers* that include Item 7A, which is consistent with that notion that institutional investors view reducing market risk factors disclosure as material.

Taken together, I observe that SRCs that voluntarily choose to reduce disclosures have reduced audit fees, as an indirect measure of compliance costs, but the savings are not transferred into more investment activities. To the contrary, large *Reducers* tend to reduce investment activities. From the view of market participants, the overall usefulness of 10-K filings to investors does not decrease for *Reducers*, although *Reducers* experience reduced analyst coverage and institutional ownership relative to *Always SRCs*.

My study has certain limitations. First, the study only examines the reduced disclosures in 10-K filings. Compensation-related disclosures in the proxy statements are not yet examined, thus, the conclusions cannot be generalized to the informativeness of the proxy statements. Second, this study only examines two years in the post-period to mitigate the impact of the 2020 SEC's amendment to the definition of Accelerated Filers, which may be too short for the growth impact (i.e., increase in investments) to be observed. Third, I study a sample of publicly traded firms that were classified as SRCs and the implications on their investments and other outcomes, so the findings cannot speak to how the reduced disclosure would impact private firms' going public decisions. Lastly, the choice of disclosure reduction is voluntary for newly classified SRCs. In my sample, 70% of newly classified SRCs choose to reduce their 10-Ks. The null results could be due to the fact that those SRCs that chose to reduce disclosures expect little

effect and those that did not reduce expected negative impact. Therefore, my results cannot be generalized to *Maintainers* if they chose to reduce.

This study makes several contributions. First, it extends the broad literature of regulation by examining the economic consequences of disclosure *deregulation*. Prior literature examines the impact of 2008 SEC's creation of SRCs, the Jumpstart Our Business Startups Act (JOBS Act) of 2012 that creates the Emerging Growth Companies (EGCs), and the 2020 SEC's amendments of definition of Accelerated Filers that allow more issuers to be exempted from auditor attestations of internal controls over financial reporting (ICFR). Several prior studies document negative market consequences. For example, Cheng, Liao, and Zhang (2013) examine the 2008 SEC's creation of SRCs and find that the market liquidity decreases for newly classified SRCs, regardless of the disclosure reduction choice of these firms. Barth, Landsman, and Taylor (2017) and Chaplinsky, Hanley, and Moon (2017) find that EGCs that take advantage of the JOBS Act disclosure reduction provisions have increased information asymmetry, thus larger IPO underpricing. Few papers examine the real consequences of deregulation. Lewis and White (2023) examine biotech startups that go public as EGCs and find that these biotech startups more frequently target rare diseases and cancer and are more likely to reach key milestones in the Food and Drug Administration (FDA) approval process. Additionally, McCallen, Schmardebeck, Shipman, and Whited (2022) exploit the deregulation setting of SEC's 2020 amendments of definition of Accelerated Filers and find a lack of impact of ICFR audits on the internal control effectiveness and financial reporting quality. I extend this stream of literature by examining not only the deregulation's impact on market participants but also on firms' investment activities. More importantly, my results indicate that the disclosure deregulation available to SRCs may fail to motivate firms to improve their investment activities.

Second, the findings in my study would be useful for regulators and policy makers in evaluating the effectiveness of using reduced disclosure as a policy tool. Policy makers and regulators are likely to be particularly interested in how firms and market participants react to disclosure deregulation. Specifically, the SEC created the SRC group and amended the thresholds with a primary intention to alleviate regulation burdens to a broader set of firms and a secondary goal of spurring firm growth. Disclosure regulation (and deregulation) is a recurring policy issue. As new economic changes occur, the SEC could provide further exemptions to particular groups of firms in the future. The results of my study suggest that certain items eligible for reduced disclosure for SRCs are likely to be of little value for investors, and thus reducing these items does not change the overall usefulness of 10-K filings. But more importantly, reducing reporting requirements for the items stated in the 2018 amendment is unlikely to reduce total compliance costs for affected firms and promote growth.

The paper proceeds as follows. Chapter 1 describes institutional background, provides an overview of the related literature, and develops the hypotheses. Chapter 2 describes the data and sample construction process. Chapter 3 describes the research design, and results are presented in Chapter 4. Chapter 5 shows additional analyses. Chapter 6 concludes.

CHAPTER 1: Institutional Background, Prior Literature, and Hypotheses Development

1.1 Institutional Background

1.1.1 Changes of Definitions of Smaller Reporting Companies

In 2008, the SEC established a category of issuers, the Smaller Reporting Companies (SRCs), with an intention to provide regulatory relief for smaller companies by allowing them to provide reduced disclosures for certain items provided in Regulation S-K and Regulation S-X

(see Appendix A for a list of items eligible for reduced disclosures), such as management discussion and analysis (MD&A), selected financial data, two instead of three years of comparative financial statements, and compensation disclosure (Rule No. 33-8876).

On June 27, 2016, the SEC proposed to increase the threshold for firms to qualify as SRCs,[6] and on June 28, 2018, the SEC adopted the amendments by increasing the previous threshold of public float of $75 million to $250 million.[7] The final rules also add a revenue test allowing firms that have no public float or public float smaller than $700 million to be categorized as SRCs if their annual revenues are less than $100 million.[8, 9] Figure 1 illustrates the change of definitions for SRCs based on public floats and also differentiate the categories of Non-accelerated, Accelerated, and Large Accelerated Filers. The new definitions took effect on September 10, 2018. The scope of the reduced disclosure requirement does not change from the 2008 rules or the 2016 proposed amendments.

The purposes of the 2018 amendment, which are consistent with the 2008 creation of SRCs, are to "promote capital formation and reduce compliance costs for smaller companies, while maintaining investor protections." SEC Chairman Jay Clayton commented that "I want our public capital markets to be a place where smaller companies can thrive and thereby provide our

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[6] https://www.sec.gov/news/pressrelease/2016-131.html
[7] https://www.sec.gov/news/pressrelease/2016-131.html
[8] Note that under the prior rule, the revenue test required no public float and less than $50 million in annual revenues. The SEC stated in the finalized guide that it was persuaded by commenters' suggestions that "it is not necessary to subject capital-intensive, low-revenue registrants with larger public floats or market capitalizations to the same reporting requirements as registrants with larger public floats and more well-established, revenue-generating businesses." https://www.sec.gov/rules/final/2018/33-10513.pdf
[9] Examples of these comments include: Acorda et al. recommends a revenue test and state that public float is largely a marker of future value but paints an inaccurate picture of small businesses in the present; BIO state that the SEC should move away from its reliance on public float as the ultimate arbiter of company size); Nasdaq recommends a well-crafted revenue only threshold; NYSE recommends a simple revenue test without a limitation on market capitalization; and Zeller recommends a revenue test for any issuers that are thinly traded. https://www.sec.gov/rules/final/2018/33-10513.pdf

Main Street investors with more access to investing options where our public company disclosure rules and protections apply." The increase of SRC threshold reflects SEC's continuous effort to reduce regulation compliance burden for smaller issuers and its regulation view of one-size-does-not-fit-all.

The comment letters of the SEC's 2016 proposal reflect potential economic impacts to smaller firms: the revenue test would "stimulate innovation and drive business growth," "ensure that pre-revenue companies are not forced to diver investment funds…from science to compliance," and help "avoid stifling the advancement of companies that face costly compliance burdens."

Note that the SEC conducted its own economic analyses based on the 2008 rules by using simplified difference-in-differences analyses (2006 and 2007 as pre period and 2008 and 2009 as post period), and they find: (1) a moderate decrease in audit fees, (2) no significant effect on liquidity (proxied by stock turnover), (3) deterioration in external information production (i.e., reduced institutional investors holdings, but no effect on analyst coverage), (4) mixed results for disclosure quality (i.e., no effect on four discretionary accruals measures, and increased incidence of material restatements), and (5) no significant effect on capital expenditure and R&D investment, but slight decrease in asset growth. The SEC's own economic analyses seem to provide mixed results on whether the reduced disclosures will benefit the firms. However, as mentioned before, the impacts of reduced disclosure on firms with a public float between $75 million and $250 million may be different from the impacts on firms with public float below $75 million due to potential systematic differences between these two groups of firms. Therefore, it is not clear if the results on the 2006-2009 sample apply to the newly classified SRCs under 2018 definition.

One of the advantages of using the SRCs sample other than firms exempted from certain disclosure requirements under SOX and JOBS ACT is that the SRCs are exempted only from certain disclosures but not from other forms of compliance (e.g., internal control audit). In addition, the sample in my study consists of publicly traded firms, so the investment incentives do not change significantly for these firms as is the case for firms that change from private to public (Aghamolla and Thakor 2022) (i.e., the investment incentives may change for firms that go public given the differing information environments). Therefore, the change of economic consequences among firms that reduce disclosure are more likely to be attributed to change in their disclosure policies.

1.1.2 Items Eligible for Reduced Disclosure

Appendix A lists the detailed items that are eligible for reduced disclosures. Among the list of disclosure items, Item 7A on quantitative and qualitative disclosures about market risk factors (e.g., foreign currencies, interest rate, credit, equity) is examined separately in prior literature and is shown to be informative to investors.[10]

1.2 Prior Literature on Deregulation

A long literature in finance and accounting examines the consequences of disclosure and reporting regulation and generally finds that *increased* disclosure regulation (i.e., a voluntary-to-

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[10] Market risk disclosures are required to be disclosed following SEC's Financial Reporting Release (FRR) No. 48, which mandate forward-looking, quantitative market risk disclosures in 10-K filings. FRR No. 48 and SFAS 119 derivative disclosures, which requires firms to disclose (mainly in tabular format) exposures of financial assets and liabilities to market factors (e.g., interest rates, exchange rates, and commodity prices). Prior studies show that market risks disclosures are informative. For example, Linsmeier, Thornton, Venkatachalam, and Welker (2002) examine the market risk disclosure mandated by SEC FRR No. 48 and find that 10-K market risk disclosures reduce investors' uncertainty and diversity of opinion about the implications of these risk factors.

mandatory regime shift) has positive capital market consequences,[11, 12] suggesting that reduced

disclosure could result in negative capital market consequences. Consistent with this notion,

studies that examine disclosure deregulation (i.e., a mandatory-to-voluntary regime shift) find

that disclosure deregulation increases information asymmetry between managers and investors,

thus imposing capital market costs on affected firms, and it also reduces financial reporting

quality. For example, Cheng et al. (2013) examine the SEC's creation of SRCs in 2008 and find

that the newly classified SRCs experience a decrease in market liquidity. They attribute this

reduction of market liquidity to the lack of the commitment role provided by mandatory

disclosure and the insufficient substitution effect provided by voluntary disclosure. Several

studies examine the deregulation provided to the EGCs defined by the JOBS Act of 2012 and

show that for EGCs choosing to take the disclosure exemptions, the indirect cost of raising

capital, proxied by the level of underpricing, increases (Barth et al. 2017; Chaplinsky et al.

2017).

Studies on EGC IPOs also evaluate how the direct cost of going public changes and

generally cast doubt on whether disclosure deregulation could reduce compliance burdens. For

example, Ritter (2013) shows that a 2007 deregulation that reduces SOX burdens for small firms

had no discernable effect on IPO volume. Dambra et al. (2015) show that for EGC IPOs, the de-

risking provisions (e.g., confidential filings provision and the testing-the-waters provision) allow

smaller, research-intensive EGCs to lower the cost of proprietary disclosure, although other de-

burdening provisions (i.e., certain accounting and disclosure requirements such as the auditor

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[11] See Leuz and Wysocki (2016) and Beyer et al. (2010) for reviews of the literature on new and increased disclosure and reporting mandates.

[12] Wiedman (2000) states that "for standard setters and regulators, demonstrating a negative relation between credible disclosures and cost of capital would go a long way toward justifying the need for increased disclosures in financial statements and encouraging full disclosure in general."

attestations of ICFR) are less popular. Similarly, Chaplinsky et al. (2017) examine a sample of 312 EGC IPOs and find that the direct costs of issuance, accounting, legal, or underwriting fees do not decrease.

Opposite to the prior studies that find negative impact, a recent paper by McCallen et al. (2022) examines the SEC's 2020 amendment of definitions of accelerated filers, which exempt more publicly traded firms from the internal control audit requirement, and finds little evidence that internal controls audits improve either internal controls or financial reporting quality for affected firms.

Few papers examine the real consequences of disclosure deregulation. For example, Lewis and White (2023) investigate whether regulation exemptions provided to the EGCs yield economic and societal benefits, and they find that biotech startups going public more frequently target rare diseases and cancer and are more likely to reach key milestones in the FDA approval process, suggesting that the JOBS Act achieves its intended goal of fostering innovation.[13]

1.3 Hypotheses Development

1.3.1 Overall Usefulness of 10-K Filings to Investors

Prior literature using post-EDGAR data generally finds that 10-K filings invoke a market reaction, thus providing evidence consistent with the notion that 10-K filings convey incremental information to investors (Qi, Wu, and Haw 2000; Asthana and Balsam 2001; Asthana, Balsam, and Sankaraguruswamy 2004; Griffin 2003; Li and Ramish 2009), and that market risk factor disclosures contain incremental information (Campbell, Chen, Dhaliwal, Lu, and Steele 2014). If the items that firms omit from 10-Ks contain material information (e.g., market risk disclosures

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[13] In another paper examining EGCs, Chaplinsky et al. (2017) list five potential benefits of JOBS Act for EGCs that go public, but do not provide formal tests.

and management's discussion on comparing operating results), the overall usefulness of 10-Ks would decrease.

However, there are several reasons why there might be no change in the overall usefulness of 10-K filings for *Reducers*. First, the source of usefulness of 10-K filings partially comes from the detailed footnotes that are used to calculate accounting adjustments used by equity analysts (De Franco, Wong, and Zhou 2011). Omitting the items that are available to SRCs (in Appendix A) seems to not change the overall information set available to investors (except Item 7A). Particularly, some of the items could be repetitive and redundant or could be generated from historical financial reports or other sources. For example, the selected financials and three- versus two-year comparisons of operating results could be generated from prior financial reports by investors themselves. The informativeness of market risk disclosures is also limited given that firms tend to use boilerplate language and there is little change in the content across years within firm (Dyer, Lang, and Stice-Lawrence 2017). Second, SRCs who choose to reduce certain items on 10-K may choose to voluntarily improve the disclosure quality in other portions of the 10-Ks, so the overall usefulness of 10-Ks does not change (e.g., Barth et al. 2015). Thus, *ex ante* it is not clear which force is stronger, I state the hypothesis in null form:

> *H1*: The market reaction during the 10-K filing window does not change for firms that reduce 10-K filings (*Reducers*) relative to control firms.

1.3.2 Firm's Investment Activities

To the extent that reducing disclosure decreases compliance costs (such as effort and money required in the preparation and obtaining certification of the disclosure), managers will have more resources and effort that can be diverted to other business activities. *Ex ante*, whether managers will divert the saved resources into other performance-enhancing activities is not

obvious. On the one hand, under the *shareholder value maximizing explanation*, managers of newly classified SRCs who choose to reduce disclosure can divert the saved resources into other performance-enhancing activities that can provide future benefits to shareholders.

On the other hand, reducing disclosure subjects firms to less stringent scrutiny from regulators and other stakeholders, thus relaxing the monitoring of managers and exacerbating agency problems. Under this *private control explanation*, the managers of newly eligible SRCs may take advantage of reducing information to protect their private control benefits (i.e., they could simply shirk).

The prior arguments assume that firms could save a relatively large amount of resources. However, it could also be the case that the compliance costs from reducing disclosures are trivial so firms cannot save enough resources even though they take advantage of reduced disclosures to the full extent. Thus, *ex ante* it is not clear which force is stronger, and I state the hypothesis in null form:

> *H2*: Investment activities do not change for firms that reduce 10-K filings (*Reducers*) relative to control firms.

1.3.3 Analysts' and Institutional Investors' Reactions

Analysts and institutional investors are viewed as among the most important market participants. Prior research shows that firms' information environment (e.g., voluntary disclosure policies) can affect analyst following and institutional holdings. However, e*x ante*, it is not clear how analysts and institutional investors would react to a potential increase in information asymmetry.

In terms of analysts, on the one hand, less information released by a firm may make the

task of analysts harder by providing them with less information (Bhushan 1989; Lang and

Lundholm 1996). With decreased disclosure in 10-K filings, an important source of information

to analysts (Lees 1981), the costs of gathering and processing information go up. In addition,

reduced commitment to disclosure can also signal poor quality of SRCs who choose to reduce

disclosures (Cheng, Liao, and Zhang 2013). Therefore, analysts may stop following firms with

less information. On the other hand, the value of analysts' information discovery and

interpretation may be higher when there is a larger information asymmetry between investors

and firm insiders (e.g., Livnat and Zhang 2012; Lang and Lundholm 1996). Therefore, when

firms choose to reduce disclosure, analyst coverage may increase as analysts see value-adding

potential in covering the firms. For example, the disclosure in 10-K filings could be very

complex to investors, particularly retail investors. Without certain summary information

disclosure in, for example, Item 6, investors' interpretation of the 10-K filings may be more

inefficient. Analysts who have financial expertise can play an important role in helping investors

interpret and summarize the information.

Turning to institutional investors, prior research finds that improved disclosure, which

could reduce the price impact of trades (Diamond and Verrecchia 1991), is associated with

higher levels of institutional ownership (Healy, Hutton, and Palepu 1999; Bushee and Noe 2000).

Institutional investors rely on information disclosure for thorough analyses of the firms.[14] Cheng,

Liao, and Zhang (2013) find that the newly classified SRCs experience a decrease in market

liquidity in the three months after the 10-K filing date, which indicates an increase in transaction

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[14] CFA Institute argued in their comment letter that reduced disclosure for SRCs may prevent investors from receiving all of the material information needed to conduct a thorough analysis and that allowing different sized firms to use different disclosure regimes would signal that the firms lack comparable quality.

costs for institutional investors. Therefore, institutions may reduce their holdings in SRCs who choose to reduce disclosures. However, if reduced disclosure can enhance the potential for profitable trading opportunities because the institutional investors can generate private information to get an advantage over investors who rely on public information (Bushee and Noe 2000; Barth, Landsman, and Taylor 2017), the institutional holdings of SRCs who reduce 10-K disclosures may not decline or even increase.

Based on the above analyses, the direction of the effect of reduced 10-K disclosure on analyst coverage and institutional holdings is unclear, I test the following non-directional hypothesis (stated in the null form):

H3a: Analyst coverage does not change for firms that reduce 10-K filings (*Reducers*) relative to control firms.

H3b: Institutional investors' holdings do not change for firms that reduce 10-K filings (*Reducers*) relative to control firms.

CHAPTER 2: Data and Sample

2.1 Initial Pool of Firms

I begin with all firms that are covered by both Compustat and CRSP (with share code in 10 and 11 and exchange code in 1, 2, and 3, i.e., US incorporated firms with stocks traded on AMEX, NYSE, and NASDAQ), and firms that have no missing fiscal year end returns, sales, CIK or historical CIK.

The effective date of the 2018 SRC public float amendments is September 10, 2018, and public firms that are eligible for SRC can use the reduced disclosure for periodic filings due on or after September 10, 2018. Thus, the earliest 10-K filings that can be filed based on reduced

disclosures are the ones with fiscal year end of June 30, 2018. Therefore, fiscal years before June 30, 2018 are classified as pre-period, and fiscal years on and after June 30, 2018 are classified as post-period. To sharpen the identification and mitigate the impact of other events that may affect my outcome variables, I constrain the initial sample to three pre-periods and fiscal years ending before January 27, 2020.[15] This process results in 14,350 firm-years and 2,995 unique firms. Next, I merge this pool of firms with SEC EDGAR filings and keep only firms with 10-K filings.

In the next step, I exclude firms that are ever emerging growth companies (EGCs) during the initial sample period. Because these firms can scale disclosures regardless of their filing status as Non-Accelerated Filer, Accelerated Filer, or Large Accelerated Filer, and SRC, and they are exempt from SOX 404(b) auditor attestation over ICFR. Switching out of EGC status during the sample period also changes the compliance burden of these firms. Therefore, these firms cannot serve as either treatment firm or control firms. There are 288 firms with 1,333 firm-years deleted due to this screening process.[16]

Table 1 Panel A describes the initial sample selection process. After all these procedures, the pool of firms used to identify treatment and control groups includes 2,699 unique firms with 12,979 firm-years.

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[15] The SEC approved amendments to the definitions for Accelerated Filers by increasing the public float threshold to $250 million on March 12, 2020. The amendments apply to annual report filings due on or after April 27, 2020, which is for annual report with an ending dated after January 27, 2020, based on 90-days filing period, the longest period for non-Accelerated filers.

[16] The status of EGC is only disclosed on the cover page of 10-K filings from the year 2017 onwards. Firms that remained EGC in and beyond 2017 can be identified by a check mark on 10-K filings, which is available as the XBRL tag of "EntityEmergingGrowthCompany." However, this tag cannot identify firms that exited EGC in the year of 2016. To further identify these potential EGCs, I count the word "emerging growth company" in the 10-K filing and manually checked if a firm is EGC or not.

2.2 Identifying Treatment Firms

Ideally, treatment firms should consist of firms that change to SRC only due to the new amendment, therefore, the change in compliance costs solely comes from being qualified as SRC. To begin with, I collect firm's status of SRC by searching tags (i.e., "EntityFilerCategory" and "EntitySmallBusiness") in the XBRL files of 10-K filings.[17] Then from the initial pool of firms, I (1) keep firms that were never SRC in the three pre-periods and were newly classified as SRC in the first year of the 2018 new amendments (i.e., year 0), (2) delete firms that ceased to be SRC in subsequent years, and (3) delete firms that filed as SRC in year 0 but changed to Non-Accelerated Filers in the same year. The rationale for (2) is that there would not be enough post-period observations for these firms. The reason for (3) is that before the 2020 amendments to Accelerated Filers definition, Accelerated Filers whose public floats drop to less than $50 million would file as Non-Accelerated Filers. These firms would qualify as SRC regardless of the 2018 new amendments. In addition, firms that switch from Accelerated Filers to Non-accelerated Filers are exempt from SOX 404(b) audit attestation, which represents a large portion of firms' regulatory compliance costs. To isolate the change of compliance cost due to SRC reduced disclosure from the change of compliance cost due to the relief of SOX 404(b) requirements, these firms are also excluded. Eight firms are deleted due to (3).

Because whether a firm takes advantage of scaling disclosure is optional, newly eligible SRCs can either choose to reduce disclosures or to maintain their previous level of disclosure. Given that my research question is whether reducing disclosure has impacts on firms' investment

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[17] By SEC's final rule, a firm is required to check the "Smaller Reporting Company" box on the cover page of periodic SEC filings, even though it does not opt to use the reduced disclosure. However, some firms may not check the box although they qualify as SRCs. Charlie Guidry from the SEC and the SEC's 2018 final rule confirmed that over 200 firms did not file as SRC even though they could. Charlie Guidry did not comment on whether SEC would enforce it or not.

activities and on market participants, my next step is to classify these newly classified SRCs as either *Maintainers* or *Reducers*, which are newly classified SRCs that do not reduce and newly classified SRCs that reduce their 10-K filings, respectively. To do this, I manually collect data on whether a firm reduces disclosures in their 10-K filings. [18, 19] Specifically, for 10-K filings, I particularly check whether a firm omits Item 5 (stock return figure), Item 6 (selective financial results), Item 7 (contractual obligations), and Item 7A (market risks) and discloses two years' comparison of results in Item 7 instead of three years.

After these processes, there are 192 unique firms that are newly classified SRCs due to the 2018 amendments. After deleting observations that do not have all the required variables, I have a final treatment sample of 184 unique firms with 548 firm-years. Of these 184 firms, 128 firms choose to reduce at least one item in 10-K filings (*Reducers*), and the remaining 56 firms choose to maintain the disclosure level as previous periods (*Maintainers*). Figure 2 provides the distribution of the number of reduced 10-K items for the 184 firms. Panel B of Table 1 depicts the sample selection process, and in the bottom panel under Panel B, I also provide the distribution of firms based on public float in event year zero (i.e., the second fiscal quarter of event year zero).

A further note on the event year for Reducers is that some firms may choose to reduce their disclosure in the second year of being an SRC. Therefore, the year that the firms experience

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[18] I also collect data on disclosure choice for DEF 14A for nonfinancial treatment firms. Specifically, I check whether a firm omits compensation discussion and analysis (CD&A), compensation committee interlock and insider participation, CEO pay ratio, grants of plan-based awards table, option exercises and stock vested table, pension benefits table, and reduces compensation summary from three to two years and from five to three executive officers.
[19] In this paper draft, I only examine the impact of reducing 10-K filing disclosures I leave for future research on an examination of the effect of omitting these items.

a change in compliance costs is the actual reduction year. Thus, for these firms, I adjust the event year zero to the year when they began to reduce disclosures.

Prior literature shows that firms may manipulate the public float to avoid complying with certain threshold-based regulations (e.g., Gao, Wu, and Zimmerman 2009). To examine whether firms manipulate their public float to qualify as SRCs, I evaluate whether "bunching" in the distribution of public floats exists just below the $250 million threshold. I do so by (1) comparing the distribution of public float for newly classified SRCs to a benchmark distribution that should not exhibit bunching: market value of equity (i.e., firms should have no incentive to manipulate market capitalization around the $250 million threshold) and (2) statistically test the continuity of the distribution of public float around $250 million threshold by using the approximate sign test designed by Bugni and Canay (2021).

Figure 3 presents the histograms of public float (Panel A) and market capitalization (Panel B) for newly classified SRCs with public float within $150 million and $350 million. There is no evidence indicating a significantly larger number of firms just below the $250 million threshold in both public float and market capitalization. The approximate sign test of public float around $250 million also delivers a p-value of 0.63, suggesting that the null hypothesis of continuity of density is not rejected.[20] Furthermore, in practice, the incentives for manipulation should also be limited because if the firm does not qualify as SRC in the first year after the effective date, it will not subsequently qualify until its public float falls below a lower threshold—80% of the initial qualification threshold. This lower threshold is set to "avoid situations in which registrants frequently enter and exit SRC status due to small fluctuations in

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[20] Using different bandwidths (e.g., ($50 million, $400 million], ($50 million, $500 million]) for the approximate sign test yield similar insignificant results, thus not rejecting the null hypothesis of continuity.

their public float and that the thresholds do not impose an undue burden on registrants seeking to qualify for SRC status" (SEC 2018).

2.3 Identifying Control Groups

One challenge to estimate the causal effects of voluntarily reducing disclosure is identifying a valid set of control firms that do not experience change in regulatory compliance costs during the same period and are comparable to treatment firms, so they can serve as valid counterfactuals. I construct three sets of control firms. The first control group consists of firms that are *Maintainers*, newly classified SRCs that choose to maintain 10-K disclosures.[21] The second control group consists of large firms that are not SRCs under either 2008 or 2018 definitions during the event years -3 to 1, i.e., *Never SRCs*. The third control group consists of firms that are always SRCs under both 2008 and 2018 definitions during the event year -3 to 1, i.e., *Always SRCs*. To make sure the control firms do not experience change in compliance costs regarding SEC filings, I exclude firms that change between Large Accelerated Filers / Accelerated Filers and Non-accelerated Filers, similar to the reason as discussed in Section 2.2. In a further step, I remove (1) firms whose event year zero public floats are equal to or larger than $500 million from *Never SRCs* and (2) firms whose event year zero public floats are below $25 million from *Always SRCs*, to mitigate systematic differences between large and small firms.

After the prior steps and further requiring no missing required variables, there are 56 unique *Maintainers*, 224 unique *Never SRCs* and 125 unique *Always SRCs*. Panel C (D) of Table

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[21] The choice of reducing 10-K filings is voluntary, so the *Reducers* and *Maintainers* might be systematically different. As examined in Table 2 Panel A and Table 3, there are little differences in observable characteristics between Reducers and *Maintainers*.

1 provides the sample selection process for *Never SRCs* (*Always SRCs*), and in the bottom panel under Panel C (D), I provide the distribution of firms based on event year zero public floats.

I acknowledge that none of the three control groups are perfect in the sense of controlling for unobservable firm characteristics that could potentially affect the outcomes that I examine in this study. SRC status is not randomly assigned as it is based on the public float, and, as a result, firms qualifying for SRC status could be systematically different from those that are not. However, by comparing the treatment firms with three control groups that consist of both smaller and larger firms (in terms of public float) (e.g., Cheng, Liao, and Zhang 2013), the concern that firm size drives my results are mitigated.

Panel E of Table 1 displays the Fama-French industry distribution for the treatment and control firms. Treatment firms have lower representation in the Consumer Durables industry but a relatively larger proportion in Healthcare, Medical Equipment, and Drugs. The industry distribution is consistent with the notion that pharmaceutical firms tend to be smaller. *Never SRCs* have a relatively larger representation from the Manufacturing and Finance industries, and intuitively these firms tend to have larger market capitalization and public floats. *Always SRCs* have a larger proportion of firms in the Business Equipment industry, which consist of tech firms that tend to be small. Overall, the industry distributions across treatment firms and control firms are very similar.

CHAPTER 3: Research Design

3.1 Determinants of Reducing Disclosures

Before examining the consequences of reducing 10-K filings on the overall usefulness of 10-Ks and other outcomes, I first examine the determinants of newly classified SRC firms that

voluntarily choose to reduce 10-Ks. Voluntary disclosure theory predicts that managers disclose information when the benefits exceed the costs (Verrecchia 1983, 2001). SRCs' disclosure reduction decision is also a voluntary disclosure choice. Newly classified SRCs would weigh the costs and benefits of reduced disclosure and determine the disclosure policy. The costs of reduced disclosure include a potential increase in information asymmetry between investors and corporate insiders, potential reduced market liquidity and higher cost of capital. The benefits of reduced disclosure include the potential decrease of compliance burdens to the firms and less monitoring of the firm insiders. For SRCs' decision to reduce 10-K disclosure, I examine the information demand from institutional investors (by looking at the institutional holdings, *PctInsOwn*) (Ajinkya, Bhojraj, and Sengupta 2005) and analysts (by looking at analyst following, *LnNumAnalysts*) (Hirst, Koonce, and Venkataraman 2008). Since different types of institutional investors may have varying preferences for information (Boone and White 2015),[22] I also decompose the institutional holdings into holdings by quasi-Indexers (*PctQuasiIndexer*), transient owners (*PctTransient*), and dedicated owners (*PctDedicted*) (Bushee 2001). To proxy the firms' potential benefits from reducing compliance costs, I include capital expenditure (*CAPEX*), R&D investment (*RD*), and M&A activities (*MA*) and predict that if the firms have large investment, then they are more likely to benefit from the potential reduced compliance costs, i.e., saved resources. *RD* is also used as proxy for the level of information asymmetry of the firms in prior literature, and firms with high level of information asymmetry may choose to improve voluntary disclosure. Thus, how *RD* affects the firms' disclosure reduction choice is not clear *ex ante*. Financially constrained firms are also more likely to take advantage of the reduced

---

[22] Boone and White (2015) argue that quasi-indexers have a strong incentive to demand greater public disclosures because it is costly for them to gather private information on their portfolio firms due to their large and diverse holdings.

disclosure because of the potential savings from compliance costs, so I include the three-year

average cash flows from operating activities (*CFO_Avg_3yr*) (following De Simone, McClure,

and Stomberg 2022). I also include other control variables that could potentially affect the firms'

disclosure choice, including return volatility (*FYRetVol_raw*), book-to-market ratio (*BTM*),

profitability (*ROA*), loss indicator (*Loss*), leverage (*Leverage*), indicator of foreign operations

(*Foreign*), and the closeness to the $250 million public threshold (*CloseTo250_Pct*). Except for

CFO_Avg_3yr, all other variables are measured as of the event year 0. The definitions of the

variables are defined in detail in Appendix B. I separately examine (1) the firms' decision to

reduce disclosure (*Reducer_10K* as dependent variable) and (2) firms' decision to reduce more

or fewer 10-K items (*N_Red_10K* as dependent variable) conditional on that the firms already

choose to reduce disclosure. Specifically, I estimate the following regression model:

$$
\begin{aligned}
Reducer\_10K_i \; &or \; N\_Red\_10K_i \\
&= \alpha + \beta_1 PctInsOwn_i + \beta_2 LnAnalyst_i + \beta_3 CFO\_Avg\_3yr_i \\
&\quad + \beta_4 CAPEX_i + \beta_5 RD_i + \beta_6 FYRetVol\_raw_i + \beta_7 BTM_i + \beta_8 ROA_i \\
&\quad + \beta_9 Loss_i + \beta_{10} Leverage_i + \beta_{11} Foreign_i + \beta_{12} MA_i \qquad (1) \\
&\quad + \beta_{12} CloseTo250\_Pct_i + \epsilon_i.
\end{aligned}
$$

3.2 Consequences of Reduced 10-K Filings

I employ a difference-in-differences design to examine the causal impact of reducing 10-

K filings on various outcomes. The regression model is as follows:

$$
Outcomes_{i,t} = \alpha_i + \alpha_t + \beta Reducer\_10K_i \cdot Post_t + \sum \gamma Controls + \epsilon_{i,t}, \qquad (2)
$$

where *Outcomes* are various outcome variables explained in the following sections. *Controls* are

a set of control variables that are specific to the outcome variables examined, further explained in

the following sections. α_i and α_t indicate firm and fiscal year fixed effects, respectively. The standard errors are clustered by industry to control for cross-sectional correlation among industries.

3.2.1 Overall Usefulness of 10-K Filings to Investors

I use three-day cumulative abnormal returns starting from the 10-K filing date to gauge the overall usefulness of 10-K filings to investors (e.g., You and Zhang, 2008; Francis, Schipper, and Vincent 2002). Because I am concerned with the magnitude of usefulness regardless of whether the incremental information in 10-K filings is good or bad, I use unsigned three-day cumulative abnormal returns starting from the 10-K filing date, *AbsCAR(0,2)*.

I include control variables that affect the 10-K filing window returns. First, I include the absolute three-day cumulative abnormal returns around the earnings announcement (*AbsEA_CARm1to1*) to capture the information included in the preceding earnings announcement, information amount of 10-K filings (*Ln10KSize*), and days between earnings announcement and 10-K filing date (*LnDays_EAToFile*). Second, I include base firm characteristics, including firm size (*LnAssets*), profitability (*ROA*), special items (*SpecialItem*), foreign operation indicator (*Foreign*), and number of business segments (*LnBusSeg*). Lastly, I include auditing-related controls, including audit opinion (*AuditOp*, *AuditOpIC*) and Big 4 auditor indicator (*Big4*). To exclude the impact of the fourth fiscal quarter (Q4) earnings announcements, I exclude from the sample firm-years when 10-Ks are filed within four days of earnings announcements (there are 390 firm-years).

3.2.2 Investment Activities after Reducing 10-K Filings

In examining the effect of reducing 10-K filings on their investment activities, I use four measures of firms' investment activities: capital expenditure (*CAPEX*), R&D expenditure (*RD*), overall investment (*Invest*), and occurrence of M&A activities (*MA*).

I include several firm-specific characteristics as controls that can potentially affect the outcome variables and firms' decision to reduce disclosure. These controls include return on assets (*ROA*), occurrence of loss (*Loss*), debt ratio (*Leverage*), book-to-market ratio (*BTM*), free cash flows (*FreeCF*), firm size (*LnMVE*), return volatility during the fiscal year (*FYRetVol_raw*), indicator for foreign operations (*Foreign*) and number of business segments (*LnBusSeg*). If there is any change in the outcomes due to firms' reducing 10-K filings, β would be significantly different from zero. Detailed definitions of the variables are listed in Appendix B.

3.2.3 Analyst Coverage and Institutional Ownership after Reducing 10-K Filings

For analyst coverage (*LnNumAnalysts*) and institutional holdings (*PctInsOwn*), the outcomes are measured at three months after the 10-K filing date and the most recent quarterly institutional holding after the 10-K filing date, respectively, to make sure that the decision of analysts and institutional investors are made after they know about the firm's disclosure choice. I include the control variables based on prior literature on the determinants of analyst following and institutional ownership: the complexity of the firms, proxied by foreign operations (*Foreign*) and the number of business segments (*LnBusSeg*), potential of future growth proxied by book-to-market ratio (*BTM*) and sales growth (*LnSalesGrowth*), firm size (*LnMVE*), return volatility (*FYRetVol_raw*), loss (*Loss*) and leverage (*Leverage*).

CHAPTER 4: Empirical Results

4.1 Descriptive Statistics

Table 2 provides summary statistics for treatment and control firms. Table 2 Panel A compares the baseline characteristics, measured in the event year zero, between *Reducers* and *Maintainers*. Panel A shows that the baseline characteristics are insignificantly different between *Reducers* and *Maintainers* except that one-year return volatility (*FYRetVol_raw*) and *Loss* are statistically significantly different at 5% and 10% levels, respectively. Panel B compares characteristics between treatment firms with all three control firms during the full sample period, which includes two pre-event years and two post-event years. Several characteristics are significantly different between *Reducers* and control firms, indicating the necessity to control for these characteristics in the regression analyses.

4.2 Determinants of Reducing Disclosures in 10-K Filings

Table 3 presents the results on the determinants of SRCs' choice of reducing disclosure.[23] In columns (1) and (2), the dependent variable is *Reducer_10K*. In columns (3) and (4), the dependent variable is *N_Red_10K*, which is the number of 10-K items that are reduced if the firm does reduce, and the model is run on only *Reducers*. The difference between columns (1) and (2) and between (3) and (4) is that I further decompose the institutional holdings into three types of institutional owners, as defined in Bushee (2001), which are transient owners, quaxi-Indexers, and dedicated owners.

As shown in columns (1) and (2), the information demand by institutional investors and analysts does not appear to significantly affect the newly classified SRCs' disclosure reduction

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[23] The model is estimated using OLS. The results do not change if I use Logit model for Reducer_10K, a (0,1) variable.

decision; firms with larger R&D activities are less likely to reduce disclosures. As shown in columns (3) and (4), for firms that choose to reduce disclosures, firms with larger R&D activities and firms with more analyst coverage tend to reduce fewer items. Newly classified SRCs that have larger holdings by dedicated institutions tend to reduce more, consistent with the notion that these institutional owners can gain information advantage in the case of less publicly available information. Other firm characteristics do not appear to affect firm's disclosure choice much.

4.3 Overall Usefulness of 10-K Filings

Table 4 presents the results of the impacts of reducing 10-K disclosures on the overall usefulness of 10-K filings. Panel A presents the effect of reducing 10-K filings when comparing *Reducers* with *Maintainers*. Column (1) shows a baseline regression without adding controls and fixed effects. Column (2) includes firm and year fixed effects. Column (3) includes basic controls and Column (4) adds auditing-related controls. Across each column, the coefficient on *Reducer_10K* × *Post* is statistically insignificant; therefore, I cannot reject the null hypothesis of no change in 10-K window returns, suggesting that there is no detectable change in the 10-K filing usefulness. Panel B and Panel C compare *Reducers* with *Never SRCs* and *Always SRCs*, respectively. As with Panel A, there is a lack of change in 10-K filing returns. In Panel D of Table 4, I further examine the impact of reducing each of the eligible 10-K items on the overall usefulness of 10-Ks by comparing *Reducers* with each of the three control groups. Across columns (1) to (4), the coefficients on *Red_itemX* × *Reducer_10K* are statistically insignificant for Item 5, Item 6, the number of years of comparison in Item 7, contractual obligation disclosure in Item 7, indicating that reducing these items do not change the overall usefulness of the 10-Ks. In column (5), the coefficient on *Red_item7a* × *Reducer_10K* is statistically significantly negative, suggesting a reduction in the 10-K usefulness for Item 7A (market risks), when

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comparing *Reducers* with *Maintainers* and *Always SRCs*. Overall, the results in Table 4 suggest

that there is no discernable change in the overall usefulness of 10-K filings for firms that reduce

their 10-K disclosures, except that reducing Item 7A has a potential reduction effect on 10-K

filing usefulness.

4.4 Firms' Investment Activities

Table 5 presents the results of the impact of reducing disclosures on firms' investment

activities. Panel A of Table 5 compares *Reducers* to all control groups. Panel B *Reducers* with

each of the control groups separately. As shown in Panel A, the coefficient of the interaction

term, *Reducer_10K × Post*, is insignificantly different from zero for *CAPEX* and *TotalInvest*.

The coefficient is significantly negative for *RD* and *MA*, suggesting *Reducers* are less likely to

increase *RD* or take on M&A in the reducing years. In Panel B, when compared with *Never*

SRCs, there are no significant differences across each of the investment outcomes. When

compared with *Always SRCs* in Panel C, *Reducers* are less likely to increase R&D activities.

Parallel trends are the critical assumption for the validity of DID analyses. Although one

cannot actually examine the parallel trends because the counterfactuals are unobservable,

examining the pattern of data from before the treatment period can suggest the validity of

parallel trends. Figure 4 presents the event study graphs of the impact of disclosure reduction on

investment outcomes. Each graph plots the estimated coefficients on the interaction terms from

Equation (3):

$$Outcomes_{i,t} = \alpha_i + \alpha_t + \beta_1 Reducer\_10K_i \cdot Pre(-2)_t + \beta_2 Reducer\_10K_i \quad (3)$$
$$\cdot Post(0)_t + \beta_3 Reducer\_10K_i \cdot Post(1)_t + \sum \gamma Controls + \epsilon_{i,t},$$

where *Pre(-2)* (*Post(0)* and *Post(1)*) equals one if the fiscal year is the event year -2 (0 and 1).

The set of control variables are consistent with the set of control variables used in estimating

Equation (2) depending on the outcome variables. Panel A of Figure 4 provides the parallel trends analyses for comparisons of *RD* between *Reducers* and *Maintainers*; Panel B shows the parallel trends analyses for comparisons of *RD* between *Reducers* and *Always SRCs*; and Panel C shows parallel trends analyses for comparisons of *RD* between *Reducers* and *Maintainers*. As shown in each figure, there is no evidence of pre-period trending of *RD* and *MA* between *Reducers* and the compared groups, adding to my confidence to attribute the changes of *RD* and *MA* to the change of disclosure policies.

4.5 Analysts' and Institutional Investors' Reactions

Table 6 displays the impact of reducing 10-K filings on analyst coverage and institutional investor holdings. Columns (1) and (2) compare *Reducers* to *Maintainers*. Columns (3) and (4) compare *Reducers* to *Never SRCs*, and columns (5) and (6) compare *Reducers* to *Always SRCs*. When comparing *Reducers* with *Maintainers* and *Never SRCs*, there are no statistically significant changes in analyst coverage and institutional holdings after the 10-K filing date, as the coefficient on *Reducer_10K × Post* is insignificantly different from zero. When comparing *Reducers* with *Always SRCs*, the number of analysts covering the firms and institutional holdings after the 10-K filing decrease (the coefficients on *Reducer_10K × Post* are significantly different from zero at 1% and 10% levels, respectively).

Figure 5 provides parallel trends analyses for comparisons of *LnNumAnalysts* between *Reducers* and *Always SRCs*, by running regression model (3) and using the corresponding control variables. The parallel trends show no evidence of pre-period trending of analyst coverage.

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CHAPTER 5: Additional Analyses and Robustness Tests

5.1 Additional Analyses

5.1.1 Indirect Evidence of Compliance Costs

The mechanism through which reducing disclosure affects various investment outcomes examined in prior Sections is the reduction in compliance costs. Ideally, to directly test whether firms experience reduction in compliance burden, I would need data such as the compensation that firms save from paying less for preparing 10-K filings or working hours spent on preparing 10-K filings. However, none of these measures are readily available. Therefore, I examine the reporting lag of 10-K filings (*DaysEndToFile*), which measures the number of days from fiscal year end to filing date, and audit fees (*LnAuditFees*). Both can indirectly measure compliance costs. If the disclosure reduction results in saving employee time spent on preparing 10-K filings, I would expect *Reducers* to file their 10-K filings sooner. If the items reduced on 10-Ks reduce the working hours be auditors, I would expect a reduction of audit fees for *Reducers*.

To examine the change in 10-K filing lag, I rerun Equation (2) but use reporting lag (*DaysEndToFile*) as the dependent variable. I also include another control variable, size of 10-K filings (*LnSize10K*) to control for the complexity of the 10-K that could affect the reporting lag. Table 7 Panel A shows the results. The reporting lag, measured by both the number and the natural logarithm of the days, is shorter for *Reducers*, when compared to all three control firms, but statistically insignificant. This suggests that the time spent on preparing 10-Ks does not change much for *Reducers*.

To examine the change in audit fees, I rerun Equation (2) but use the natural logarithm of audit fees (*LnAuditFees*) as dependent variable. I also include control variables that are shown to

affect audit fees in prior literature: *ROA*, *Loss*, *LnAsset*, *Foreign*, *LnBusSeg*, and *Big4*. Table 7

Panel B shows that when compared to *Maintainers* and *Never SRCs*, *Reducers* experience a

statistically significant decrease in audit fees. The coefficient of -0.106 (-0.045) translates to a

10.06% (4.4%) reduction in audit fees.

Figure 6 provides parallel trends analyses for comparisons of *LnAuditFees* between

Reducers and *Maintainers* and between *Reducers* and *Never SRCs*, by running regression model

(3) and using the corresponding control variables. The figures indicate no evidence of pre-period

trending of *LnAuditFees*.

5.1.2 Cross-sectional Analyses

I conduct several cross-sectional analyses where I most expect to find a (lack of) response

of firms' investment activities and market participants to reduced disclosures. For these cross-

sectional tests, I reexamine equation (2) by decomposing *Reducer_10K* into two group indicators

and interacting the two indicators with *Post*.

Regarding outcomes of investment activities, I separately examine *Reducers* that (1) have

more constrained resources, so they can benefit more from compliance costs saving and (2)

could potentially save more from reducing disclosures. For (1), because small firms may be more

vulnerable to disproportionate compliance costs, I posit that the disclosure reduction benefits will

accrue at a greater rate for these firms, (i.e., their investment activities are more sensitive to

compliance cost savings). Specifically, I construct a variable of *Smaller_Reducer*

(*Large_Reducer*), which equals one if the *Reducer* is below (above) the bottom (top) quartile of

LnAsset. For (2), I predict that firms reducing more items in 10-Ks can save more and construct a

variable of *High_Reducer* (*Low_Reducer*), which equals one if the *Reducer* reduces five items

(one item) in 10-K filings.

Table 8 Panel A compares small versus large *Reducers*. In each comparison with *MA* as the outcome, the coefficients on *Large_Reducer×Post* are significantly negative, while the coefficients on *Small_Reducer×Post* is insignificantly different from zero. The results suggest that the reduction in *MA* is present only in large *Reducers* and that there is a lack of reduction in investments for small firms. Panel B presents results by comparing *Reducers* who reduce more versus less with control groups. In each comparison with *MA* as the outcome, the coefficients on *High_Reducer×Post* and *Low_Reducer×Post* are significantly negative (except the coefficient of *High_Reducer×Post* when comparing *Reducers* with *Always SRCs*), but the coefficients on *High_Reducer×Post* are smaller in magnitude than the coefficients on *Low_Reducer×Post*. The results suggest that although high *Reducers* reduce M&A activities, the reduction is smaller when compared with low *Reducers*.

In terms of analyst coverage and institutional holdings, because results in Section 4.3 show that omission of Item 7A reduces the overall usefulness of 10-K filings, I construct variable of *Red_item7a* (*Non_Red_item7a*), which equals one if the *Reducer* reduces (does not reduce) Item 7A, to proxy for withholding more material information. Panel C of Table 8 presents the results. As with the main analyses, there are no significant differences when comparing *Reducers* with *Maintainers* and *Never SRCs*. When comparing *Reducers* with *Always SRCs*, the reduction in institutional investors is present in *Reducers* that exclude Item 7A but not in *Reducers* that include Item 7A, which is as expected.

5.2 Robustness Tests

5.2.1 Matched Sample

To mitigate the concerns that there are systematic differences between the treatment and control firms, I use entropy balance matching to ensure treatment and control firms are similar on

observable dimensions (Hainmueller 2012). In addition, compared with other matching methods (e.g., propensity score matching), entropy balancing has the advantage of maintaining as many observations as possible. After entropy balancing the treatment firms and control firms, I rerun the different-in-differences analyses using weighted regressions, and the (untabulated) results are consistent with those using unmatched samples.

5.2.2 Alternative Research Design

Since the new amendment is based on public float threshold (firms with large public float can also meet the SRC definition if their annual sales are below $100 million) and firms qualified as SRCs voluntarily choose to reduce disclosures in 10-K filings, this allows me to use a Fuzzy regression discontinuity design (Fuzzy RDD) to examine the treatment effects on firms that are just around the public float threshold of $250 million. I construct the sample as firms with baseline (event year zero) public floats within $100 million and $400 million bandwidth and compare the various outcome variables using two-stage least-squares regression (i.e., using the public float as instrumental variable). The (untabulated) results are qualitatively similar to my main analyses.

CHAPTER 6: Conclusions

The SEC created the category of Smaller Reporting Companies (SRCs) in 2008 and further increased the public float thresholds for firms qualifying as SRCs in 2018. In making the decisions, the SEC stated that the "primary benefit is a reduction in compliance costs," and a "secondary effect is to spur growth to the extent that the compliance costs savings and other resources (e.g., managerial effort) otherwise devoted to disclosure and compliance are productively deployed in alternative ways," "while maintaining investor protections." The SEC's

final decision is partially based on commenters. Although a few commenters oppose the size-based disclosure rules (e.g., CFA Institute), the corporations argued that the amendment (particularly a revenue-based test) would stimulate innovation and drive business growth and help "avoid stifling the advancement of [these] companies that face costly compliance burdens." My study provides insights on whether firms increase their investment and how market participants react to firms that change disclosure behavior and will be useful for policy makers in evaluating the effectiveness of disclosure deregulation.

Using a difference-in-differences design based on newly classified SRCs that choose to decrease their 10-K filings and three sets of control firms, I examine the overall usefulness of reduced 10-Ks to investors, firms' investment activities, and analysts' and institutional investors' reactions. I find little evidence of a reduction in the overall usefulness of reduced 10-Ks except for Item 7A. In terms of investment activities, I find reduced R&D and M&A activities when comparing *Reducers* to *Maintainers*, and no significant change in other types of investments including capital expenditure, R&D and overall investment when compared with other control firms. Further, analysts and institutional investors tend to reduce their coverage and holdings in firms that reduce disclosures. In addition, the compliance costs in terms of audit fees are statistically significantly smaller for *Reducers*. These analyses suggest that both the compliance cost reduction and the information costs to investors which result from SRC disclosure deregulation are largely insignificant.

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APPENDIX A: Items Eligible for Reduced Disclosure

Item	Reduced Disclosure Accommodation	Source Filings	Coded
Regulation S-K			
101 – Description of Business	May satisfy disclosure obligations by describing the development of the company's business during the last three years rather than five years. Business development description requirements are less detailed than disclosure requirements for non-SRCs.	10-K Item 1	N/A
201 – Market Price of and Dividends on the Registrant's Common Equity and Related Stockholder Matters	Stock performance graph not required.	10-K Item 5	0/1
301 – Selected Financial Data	Not required.	10-K Item 6	0/1
302 – Supplementary Financial Information	Not required.	10-K Item 8	
303 – Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A")	Two-year MD&A comparison rather than three-year comparison.	10-K Item 7	
	Two-year discussion of impact of inflation and changes in prices rather than three years.		
	Tabular disclosure of contractual obligations not required.		
305 – Quantitative and Qualitative Disclosures About Market Risk	Not required.	10-K Item 7a	

402 – Executive Compensation	Three named executive officers rather than five. Two years of summary compensation table information rather than three. Not required: · Compensation discussion and analysis. · Grants of plan-based awards table. · Option exercises and stock vested table. · Pension benefits table. · Nonqualified deferred compensation table. · Disclosure of compensation policies and practices related to risk management. · Pay ratio disclosure.	DEF 14A	
404 – Transactions with Related Persons, Promoters and Certain Control Persons	Description of policies/procedures for the review, approval or ratification of related party transactions not required.	DEF 14A	
407 – Corporate Governance	Audit committee financial expert disclosure not required in first annual report. Compensation committee interlocks and insider participation disclosure not required. Compensation committee report not required.	DEF 14A	
503 – Prospectus Summary, Risk Factors and Ratio of Earnings to Fixed Charges	No ratio of earnings to fixed charges disclosure required. No risk factors required in Exchange Act filings.		

601 – Exhibits	Statements regarding computation of ratios not required.		

Regulation S-X			
Rule	Reduced Disclosure		Source Filings
8-02 – Annual Financial Statements	Two years of income statements rather than three years. Two years of cash flow statements rather than three years. Two years of changes in stockholders' equity statements rather than three years.		10-K Item 8
8-03 – Interim Financial Statements	Permits certain historical financial data in lieu of separate historical financial statements of equity investees.		10-Q
8-04 – Financial Statements of Businesses Acquired or to Be Acquired	Maximum of two years of acquiree financial statements rather than three years.		
8-05 – Pro forma Financial Information	Fewer circumstances under which pro forma financial statements are required.		
8-06 – Real Estate Operations Acquired or to Be Acquired	Maximum of two years of financial statements for acquisition of properties from related parties rather than three years.		
8-08 – Age of Financial Statements	Less stringent age of financial statements requirements.		

Variables	Definition
Variables for Consequences Tests	
AbsCAR0to2	Absolute cumulative abnormal returns in the [0, 2] window of 10-K filing.
AbsEA_CARm1to1	Absolute cumulative abnormal returns in the [-1, 1] window of the earnings announcement prior to the 10-K filing.
AuditOp	Indicator of audit opinion that equals one if the audit opinion is unqualified.
Big4	Indicator variable taking on value of one if the auditor of the firm is one of Big Four.
BTM	Book to market value at the fiscal year end.
CAPEX	Capital expenditure, scaled by lagged total assets. Missing value is replaced with zero.
CFO_Avg_3yr	The three-year average of cash flow from operating activities.
CloseTo250_Pct	$250 million minus the public float, in percentage term.
DaysEndToFile	The number of days between the 10-K filing date and fiscal year end date.
Days_EAToFile	The number of days between the prior earnings announcement and 10-K filing date.
Foreign	Dummy variable that equals one if the firm has foreign activities (i.e., non-missing fca or pifo in Compustat), and zero otherwise.
FreeCF	Free cash flow scaled by total assets. Free cash flow is calculated as cash minus accounts payable minus other current liabilities.
FYRetVol_raw	Raw return volatility during the fiscal year.
Leverage	Leverage ratio, calculated as debt in current liabilities and long-term debt, scaled by total assets.
Loss	Dummy variable that equals one if income before extraordinary items is negative, and zero otherwise.
LnAsset	The natural logarithm of one plus total assets.
LnAuditFees	The natural logarithm of one plus audit fees.
LnBusSeg	The natural logarithm of one plus the number of business segments.
LnDaysEndToFile	The natural logarithm of one plus *DaysEndToFile.*
LnDays_EAToFile	The natural logarithm of one plus *Days_EAToFile.*
LnMVE	The natural logarithm of market capitalization, measured as of the fiscal year end.
LnNumAnalysts	The natural logarithm of one plus the number of analysts following the firm at three months after the 10-K filed date.
LnSalesGrowth	The natural logarithm changes of sales.
LnSize10K	The natural logarithm of one plus the size of 10-K filings.
MA	Dummy variable that equals one if there is merger and acquisition for the fiscal year.
N_Red_10K	The number of reduced items on 10-K filings for a firm. Five items are examined and the largest value for *N_Red_10K* is five.
PctInsOwn	The percentage of institutional investor holdings at the end of the most recent quarter after (before) the fiscal year end for outcome tests (determinant tests), winsorized at 0 and 1.
PctDedicated	The percentage of dedicated institutional investor holdings
PctQuasiIndexer	Percentage of quasi-indexer holdings.
PctTransient	Percentage of transient institutional investor holdings.
Post	Dummy variable. For Reducer, *Post* equals one from the year the firm reduces its 10-K filings, and zero otherwise. For other firms, *Post* equals one for the fiscal year ending after June 30, 2018, and zero otherwise.
PublicFloat	The public float (in millions) for a firm as of the end of the second fiscal quarter of the fiscal year, as reported in 10-K and manually adjusted for errors.

Red_itemX	Dummy variable that equals one if the Item X on 10-K filings is reduced, including Item 5, Item 6, Item 7 number of years comparison, Item 7 contractual obligation disclosures, and Item 7A, and zero otherwise.
Reducer_10K	Dummy variable that equals one if a firm reduce its 10-K filings in the fiscal year, and zero otherwise.
RD	Research and development expenses, scaled by average total assets. Missing value is replaced with zero.
ROA	Return of assets, calculated as income before extraordinary items divided by average total assets.
SpecialItem	Special items, divided by total asset for the fiscal year.
TotalInvest	Sum of capital expenditure, research and development expenses, advertisement expense, minus the sale of PPE, deflated by lagged total assets. Missing value is replaced with zero.

Figure 1   Comparison of Old and New SRC Rules

Panel A Pre-2018 Amendment
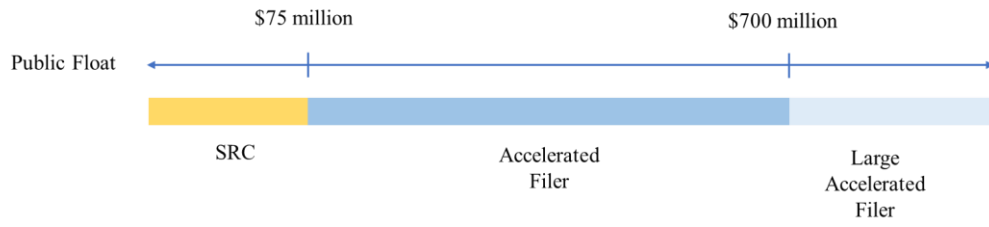
Panel B Post-2018 Amendment but Pre-2020 Amendment
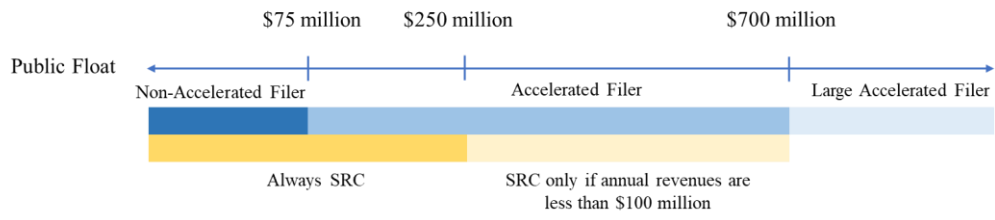
Figure 2   Distribution of Reduced 10-K Items

Sample: 10K Reducers (N = 129)
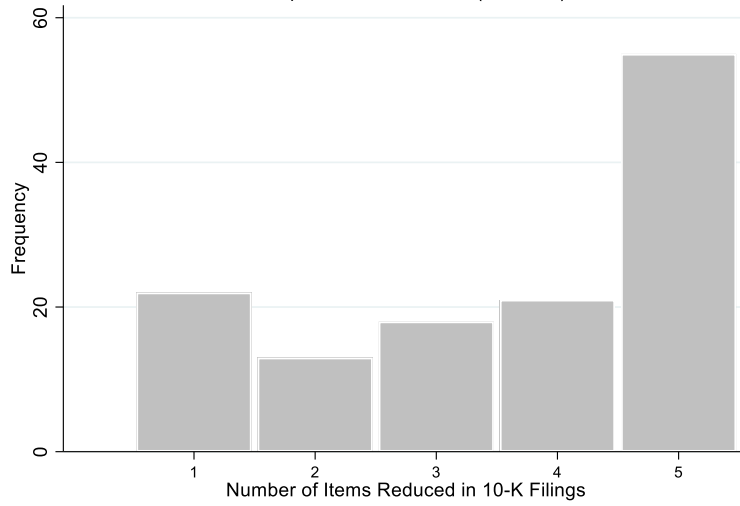
Note: This figure shows the distribution of the number of items reduced in 10-K filings for *Reducers*.

Figure 3   Examining Float Manipulation

Panel A: Histogram of Public Float

All Firms with Public Float in ($150m, $350m)
(N = 200)
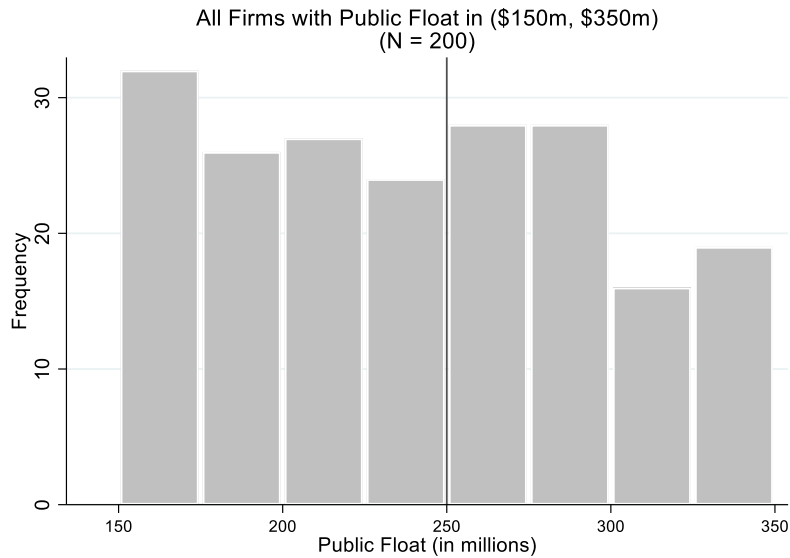
Panel B: Histogram of Market Capitalization

All Firms with Public Float in ($150m, $350m)
and Market Cap < $700m (N = 195)
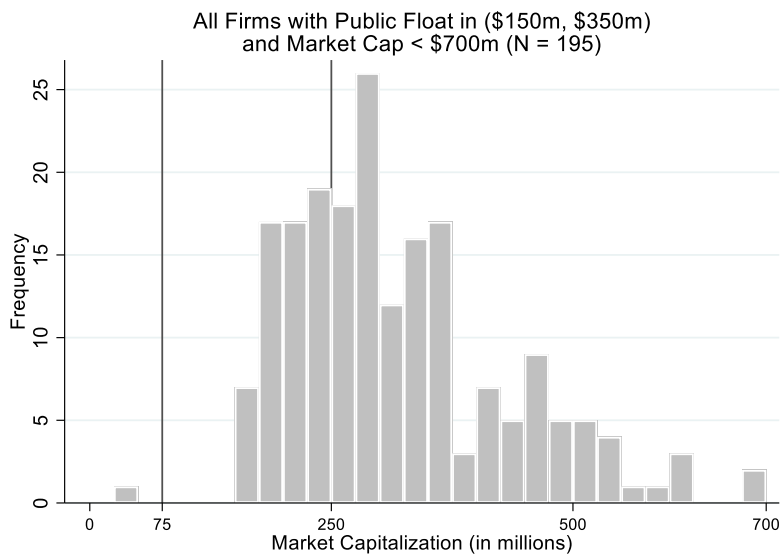
Note: The figures show the histograms of public floats and market capitalization. The histograms are based on sample firms with public floats between $150 million and $350 million. The public floats and market capitalization are measured at the end of the second fiscal quarter that determines the firm's qualification of SRCs.

Figure 4   Parallel Trends – Investment Activities
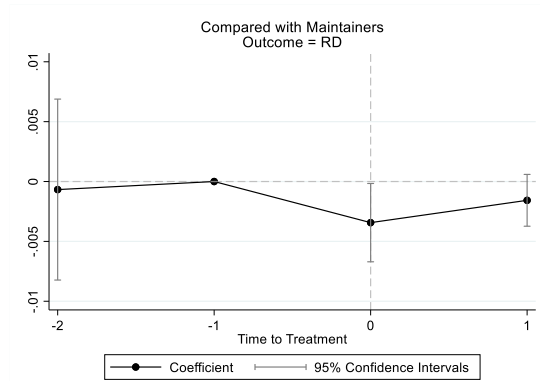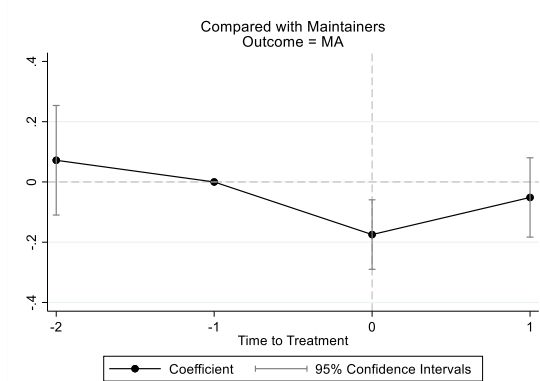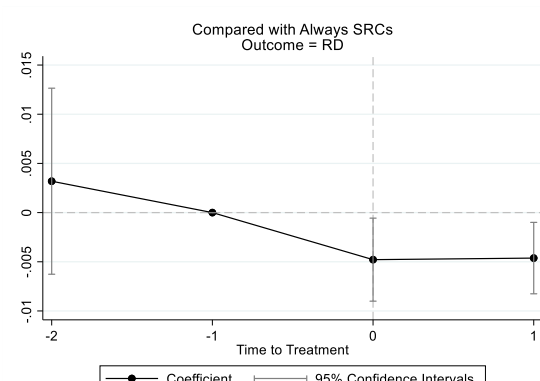
Panel A

Compared with Maintainers
Outcome = RD

Panel B

Compared with Maintainers
Outcome = MA

Panel C

Compared with Always SRCs
Outcome = RD

Note: The figures provide a graphic analysis of the effect of disclosure reduction on investment activities. The figures plot the estimated coefficients on the interaction terms from the estimation of Equation (3). Event period -1 is chosen as the baseline. Panel A is the parallel trends analysis on *RD* of comparing *Reducers* and *Maintainers*; Panel B is the parallel trends analysis on *MA* of comparing *Reducers* and *Maintainers*; and Panel C is the parallel trends analysis on *RD* of comparing *Reducers* and *Always SRCs*. The vertical grey lines in each figure depict the 95% confidence intervals for the coefficient estimates.

Figure 5   Parallel Trends – Analyst Following

Compared with Always SRCs
Outcome = LnNumAnalysts
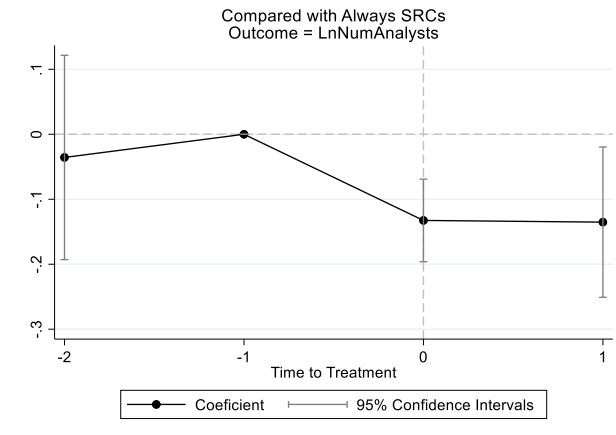
Note: The figure provides a graphic analysis of the effect of disclosure reduction on analyst coverage (*LnNumAnalysts*) with the sample of *Reducers* and *Always SRCs*. The figure plots the estimated coefficients on the interaction terms from the estimation of Equation (3). Event period -1 is chosen as the baseline. The vertical grey lines depict the 95% confidence intervals for the coefficient estimates.

Figure 6   **Parallel Trends – Audit Fees**

Panel A
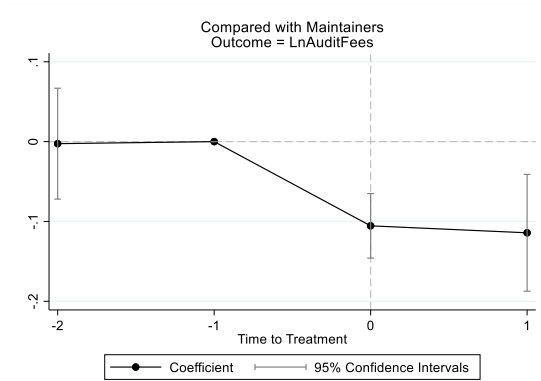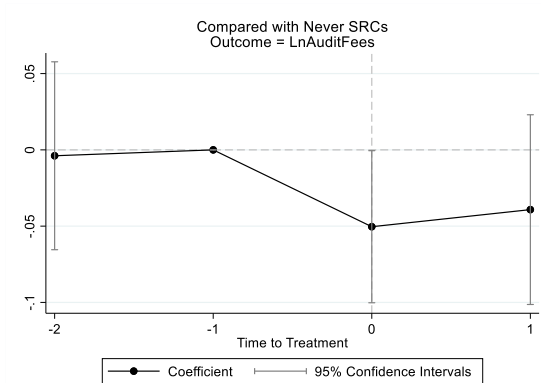
Compared with Maintainers
Outcome = LnAuditFees

Panel B

Compared with Never SRCs
Outcome = LnAuditFees

Panel C

Compared with Always SRCs
Outcome = LnAuditFees
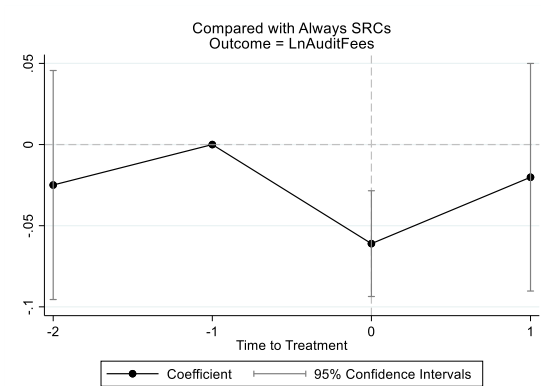
Note: The figures provide a graphic analysis of the effect of disclosure reduction on audit fees (*LnAuditFees*). The figures plot the estimated coefficients on the interaction terms from the estimation of Equation (3). Event period -1 is chosen as the baseline. Panel A is the parallel trends analysis comparing *Reducers* and Maintainers; Panel B is the parallel trends analysis comparing *Reducers* and *Never SRCs*; and Panel C is the parallel trends analysis comparing *Reducers* and *Always SRCs*. The vertical grey lines in each figure depict the 95% confidence intervals for the coefficient estimates.

Table 1   **Sample Selection**

Panel A: Pool of firms

	# Firm-Years	# Firms
Compustat/CRSP firms (share codes in 10 and 11 and exchange codes in 1, 2, and 3) with no missing CIK, return at fiscal year end, and sale, and with at least two prior fiscal years and one post fiscal year (i.e., at least three fiscal years in total). Year 0 is fiscal year ending on and after 6/30/2018.	14,350	2,995
Less: firms that cannot be matched with SEC EDGAR 10K filings	(38)	(8)
Less: Firms that are ever EGC during the sample period	(1,333)	288
Sample used to identify treatment and control groups	12,979	2,699

Panel B: Reducers and Maintainers

	New SRCs	
Identified Newly Classified SRCs: firms that are not SRC in the 3 pre-period fiscal years and are always SRCs during the post period, excluding firms that are ever EGC during the sample period (N = 66)	1,050	220
Less: Firms that change from Large Accelerated Filers / Accelerated Filers to Non-accelerated Filers from t=-1 to t=0	(132)	(28)
Less: firms missing required variables and year -3 relative to the event year	(370)	(8)
Final Newly Classified SRCs sample	548	184
Firms with event year 0 public float < $100 million	115	86
Firms with event year 0 public float between [$100 million, $200 million)	176	60
Firms with event year 0 public float including and above $200 million	257	38

Panel C: Control Group – Never SRCs

	Never SRCs	
Identified firms that are never SRCs in the three prior periods and two post periods	9,118	1,891
Less: firms that are ever non-accelerated filers in the sample period	(543)	(118)
Less: firms with year 0 public float including and above $700 millions	(6,931)	(1,429)
Less: firms missing required variables and year -3 relative to the event year	(587)	0
Final Never SRCs sample	1,057	344
Firms with event year 0 public float below $250 million	154	51
Firms with event year 0 public float between [$250 million, $500 million)	534	173
Firms with event year 0 public float between [$500 million, $600 million)	158	51
Firms with event year 0 public float between [$600 million, $700 million)	221	69

Panel D: Control Group – Always SRCs

	Always SRCs	
Identified firms that are always SRCs in the sample period	1,647	347
Less: firms that are ever accelerated filers	(274)	(56)
Less: firms missing required variables and year -3 relative to the event year	(475)	(1)
Final Always SRCs sample	898	290
Firms with event year 0 public float below $25 million	386	165
Firms with event year 0 public float including and above $25 million	512	125

Panel E: Industry Distributions by Newly Classified SRCs and Control Groups

Fama-French 12 Industry	Treatment Firms		Never SRCs		Always SRCs	
	# Firms	%	# Firms	%	# Firms	%
Consumer Non-Durables	9	4.89%	15	4.36%	9	3.10%
Consumer Durables	2	1.09%	12	3.49%	12	4.14%
Manufacturing	16	8.70%	36	10.47%	25	8.62%
Oil, Gas, and Coal Extraction and Products	7	3.80%	12	3.49%	12	4.14%
Chemicals and Allied Products	4	2.17%	6	1.74%	10	3.45%
Business Equipment	22	11.96%	45	13.08%	60	20.69%
Telephone and Television Transmission	7	3.80%	8	2.33%	3	1.03%
Utilities	4	2.17%	2	0.58%	19	6.55%
Wholesale, Retail, and Some Services	21	11.41%	53	15.41%	0	0.00%
Healthcare, Medical Equipment, and Drugs	39	21.20%	29	8.43%	49	16.90%
Finance	33	17.93%	76	22.09%	55	18.97%
Other	20	10.87%	50	14.53%	36	12.41%
Total	184	100.00%	344	100.00%	290	100.00%

Note: This table reports the sample selection and industry distribution of the sample firms. Panel A describes the criteria for firms to be included in the initial pool of firms to be further classified as treatment group or control groups. Panel B to Panel D describes the criteria for firms to be included in each of the three groups. Panel E reports the distributions of each of the three groups of firms by 12 Fama-French industries.

Table 2   Descriptive Statistics for Treatment and Control Groups

Panel A: Comparing Baseline Characteristics between Reducers and Maintainers in Determinant Test

Variables	(1) Newly Classified SRCs	(2) Reducer (N = 128)	(3) Maintainer (N = 56)	(4) Difference in Mean	(5) p-value
Reducer_10K	0.696				
N_Red_10K	2.489	3.578			
Red_item5	0.603	0.852			
Red_item6	0.440	0.625			
Red_item7_yr	0.543	0.773			
Red_item7_co	0.462	0.664			
Red_item7a	0.440	0.633			
PctInsOwn	0.487	0.487	0.488	0.00	0.98
PctQuasiIndexer	0.236	0.224	0.264	-0.04	0.14
PctTransient	0.080	0.075	0.092	-0.02	0.16
PctDedicated	0.029	0.030	0.026	0.00	0.74
LnNumAnalysts	0.786	0.789	0.778	0.01	0.92
CAPEX	0.034	0.030	0.041	-0.01	0.23
RD	0.098	0.093	0.109	-0.02	0.62
FYRetVol_raw	0.034	0.035	0.029	0.01	0.02**
BTM	0.917	0.942	0.862	0.08	0.82
ROA	-0.142	-0.135	-0.160	0.03	0.64
Loss	0.603	0.648	0.500	0.15	0.06*
Leverage	0.248	0.270	0.199	0.07	0.20
Foreign	0.370	0.375	0.357	0.02	0.82
MA	0.060	0.055	0.071	-0.02	0.66
AbsPFTo250	110.264	114.781	99.940	14.84	0.15

Panel B: Comparisons between Reducers and Control Groups in Full Sample

VARIABLES	(1) Reducer	(2) Maintainer	(3) Never SRCs	(4) Always SRCs	(5) Reducer - Maintainer	(6) p-value	(7) Reducer - Never SRCs	(8) p-value	(9) Reducer - Always SRCs	(10) p-value
AbsCAR0to2	0.070	0.063	0.059	0.060	0.008	0.01**	0.010	0.26	0.007	0.04**
CAPEX	0.029	0.036	0.037	0.030	-0.007	-0.01**	-0.001	0.06*	0.003	0.72
RD	0.008	0.017	0.016	0.017	-0.009	-0.01*	-0.009	0.02**	0.003	0.00***
MA	0.210	0.197	0.308	0.156	0.013	-0.10	0.054	0.70	0.000	0.03**
TotalInvest	0.038	0.058	0.052	0.047	-0.020	-0.01**	-0.009	0.00***	0.000	0.03**
LnAsset	5.610	5.764	6.402	4.473	-0.155	-0.79	1.137	0.14	0.000	0.00***
ROA	-0.132	-0.140	-0.002	-0.109	0.008	-0.13	-0.022	0.73	0.000	0.25
Loss	0.601	0.441	0.336	0.438	0.160	0.27	0.163	0.00***	0.000	0.00***
Leverage	0.243	0.208	0.237	0.162	0.034	0.01**	0.081	0.15	0.729	0.00***
BTM	0.803	0.702	0.628	0.897	0.101	0.17	-0.095	0.19	0.000	0.15
Foreign	0.372	0.352	0.507	0.279	0.019	-0.13	0.092	0.63	0.000	0.00***
SpecialItem	-0.013	-0.018	-0.013	-0.013	0.005	0.00***	0.001	0.22	0.966	0.83
LnBusSeg	0.813	0.718	0.904	0.710	0.095	-0.09*	0.103	0.01**	0.000	0.00***
FreeCF	0.023	-0.094	-0.094	-0.112	0.117	0.12	0.135	0.00***	0.000	0.00***
LnMVE	5.121	5.276	5.941	4.000	-0.155	-0.82	1.121	0.02**	0.000	0.00***
AbsEA_CARm1to1	0.078	0.066	0.079	0.063	0.013	0.00***	0.015	0.06*	0.952	0.00***
AuditOp	0.238	0.258	0.197	0.182	-0.020	0.04**	0.056	0.57	0.082	0.03**
AuditOpIC	0.127	0.103	0.094	0.973	0.024	0.03**	-0.845	0.37	0.057	0.00***
Big4	0.402	0.495	0.569	0.093	-0.092	-0.17	0.309	0.03**	0.000	0.00***
LnAuditFees	13.383	13.182	13.738	12.283	0.201	-0.36	1.099	0.01**	0.000	0.00***
LnSize10K	14.632	14.829	14.865	14.216	-0.197	-0.23	0.416	0.00***	0.000	0.00***
LnDays_EAToFile	1.293	1.860	1.734	1.242	-0.567	-0.44	0.051	0.00***	0.000	0.59
LnSalesGrowth	-0.024	0.028	0.054	0.043	-0.052	-0.08*	-0.067	0.18	0.000	0.02**
FYRetVol_raw	0.035	0.031	0.028	0.034	0.004	0.01**	0.001	0.01**	0.000	0.65

Note: This table reports summary statistics for treatment firms and control firms. Panel A compares that mean values of baseline characteristics between Reducers and Maintainers that are used in the determinant tests. Columns (4) and (5) display the differences in the means and the p-value of testing if the difference is significantly different from zero, respectively. Panel B compares the means values of variables used in outcome test between Reducers and three control groups: Maintainers, Never SRCs, and Always SRCs. Columns (5), (7), and (9) present the differences in the mean values, and columns (6), (8), and (10) list the p-values in testing the differences. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.

Table 3   Determinants of Reducing 10-K Filings

Panel A: Determinants of Reducing 10-K Filings

VARIABLES	(1)	(2)	(3)	(4)
	Reducer_10K		N_Red_10K	
PctInsOwn	0.000		0.805	
	(0.167)		(0.769)	
PctQuasiIndexer		-0.135		-0.191
		(0.258)		(1.023)
PctTransient		-0.463		1.454
		(0.539)		(1.789)
PctDedicated		0.163		2.088*
		(0.351)		(1.141)
LnNumAnalysts	-0.012	-0.002	-0.636***	-0.620***
	(0.056)	(0.054)	(0.221)	(0.220)
CFO_Avg3yr	0.208	0.276	0.443	0.737
	(0.252)	(0.262)	(0.876)	(0.851)
CAPEX	-1.063*	-1.036*	4.022	4.886
	(0.601)	(0.606)	(3.146)	(2.967)
RD	-0.947**	-0.906**	-11.292***	-10.949***
	(0.385)	(0.401)	(3.947)	(3.791)
FYRetVol_raw	3.918	3.745	4.605	2.945
	(2.973)	(3.052)	(12.067)	(12.117)
BTM	0.003	0.004	-0.055	-0.049
	(0.008)	(0.008)	(0.043)	(0.044)
ROA	0.078	0.043	-0.769	-0.890
	(0.235)	(0.239)	(0.968)	(0.973)
Loss	0.128	0.133	0.125	0.093
	(0.093)	(0.092)	(0.390)	(0.392)
Leverage	0.098	0.084	-0.220	-0.203
	(0.079)	(0.080)	(0.381)	(0.380)
Foreign	-0.024	-0.038	0.203	0.191
	(0.073)	(0.073)	(0.329)	(0.327)
MA	-0.123	-0.122	0.093	0.082
	(0.093)	(0.094)	(0.362)	(0.356)
CloseTo250_Pct	0.093	0.075	0.202	0.111
	(0.157)	(0.156)	(0.582)	(0.584)
Constant	0.538***	0.612***	3.266***	3.609***
	(0.133)	(0.120)	(0.548)	(0.499)
Observations	184	184	128	128
Adjusted R-squared	0.038	0.038	0.013	0.003

Panel B: Determinants of Reducing Individual 10-K Items

VARIABLES	(1) Red_item5	(2) Red_item6	(3) Red_item7_yr	(4) Red_item7_co	(5) Red_item7a
PctQuasiIndexer	-0.049	-0.364	-0.295	-0.175	-0.423
	(0.304)	(0.329)	(0.342)	(0.333)	(0.332)
PctTransient	0.969*	0.902	0.667	-0.057	0.722
	(0.551)	(0.626)	(0.638)	(0.689)	(0.673)
PctDedicated	1.005**	0.560	0.246	0.775**	0.484
	(0.386)	(0.463)	(0.384)	(0.387)	(0.418)
LnNumAnalysts	-0.106	-0.066	-0.077	0.005	-0.009
	(0.071)	(0.085)	(0.071)	(0.075)	(0.079)
CFO_Avg3yr	0.767**	0.240	0.132	0.686***	0.604***
	(0.341)	(0.303)	(0.342)	(0.205)	(0.221)
CAPEX	-0.694	-0.525	-0.657	-1.360	-1.432
	(0.995)	(1.056)	(1.046)	(0.962)	(1.018)
RD	-1.708***	-1.377***	-0.304	-1.948***	-1.512***
	(0.549)	(0.470)	(0.817)	(0.541)	(0.554)
FYRetVol_raw	1.679	-4.582	3.219	0.603	0.671
	(3.279)	(3.991)	(3.418)	(3.510)	(3.736)
BTM	-0.023	0.023	-0.022	-0.013	-0.017
	(0.019)	(0.022)	(0.021)	(0.021)	(0.023)
ROA	-0.391	-0.174	0.098	-0.312*	-0.315
	(0.275)	(0.273)	(0.296)	(0.186)	(0.204)
Loss	0.066	0.091	-0.020	-0.051	-0.097
	(0.112)	(0.125)	(0.116)	(0.118)	(0.123)
Leverage	0.097	-0.054	0.120	0.132	-0.017
	(0.109)	(0.132)	(0.106)	(0.119)	(0.140)
Foreign	-0.137	0.016	-0.100	-0.072	-0.072
	(0.094)	(0.102)	(0.097)	(0.100)	(0.101)
MA	-0.107	0.003	-0.081	-0.206*	-0.075
	(0.122)	(0.124)	(0.121)	(0.116)	(0.126)
CloseTo250_Pct	0.208	0.178	-0.058	0.071	0.094
	(0.172)	(0.197)	(0.198)	(0.197)	(0.201)
Constant	0.578***	0.612***	0.736***	0.646***	0.676***
	(0.165)	(0.198)	(0.177)	(0.185)	(0.192)
Observations	123	123	123	123	123
Adjusted R-squared	0.077	-0.045	-0.055	0.027	-0.025

Note: This table presents the results of estimating Equation (1). Columns (1) and (2) use *Reducer_10K* as dependent variables, and Columns (3) and (4) use *N_Red_10K* as dependent variables. Columns (1) and (3) use overall institutional holdings as one of the determinants, and columns (2) and (4) decompose overall institutional holdings into *QuasiIndexer*, *Transient*, and *Dedicated* owners. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.

Table 4   The Effect of Reducing 10-K Filings on the Usefulness of 10-K Filings

Panel A: Comparing Reducers with Maintainers

VARIABLES	(1)	(2)	(3)	(4)
		Dep. Var = *AbsCAR0to2*		
Reducer_10K×Post	-0.012	-0.003	-0.002	0.006
	(0.012)	(0.009)	(0.009)	(0.012)
Reducer_10K	0.009**			
	(0.004)			
Post	0.026***			
	(0.009)			
AbsEA_CARm1to1	0.119**	0.103	0.164	0.188*
	(0.052)	(0.097)	(0.097)	(0.105)
LnSize10K			0.008	0.006
			(0.009)	(0.009)
LnDays_EAToFile			0.008	0.008
			(0.010)	(0.012)
LnAsset			0.031	0.016
			(0.035)	(0.050)
ROA			-0.034	-0.056
			(0.042)	(0.060)
SpecialItem			0.093	0.095
			(0.157)	(0.197)
Foreign			-0.101**	-0.097**
			(0.041)	(0.047)
LnBusSeg			-0.065*	-0.072**
			(0.033)	(0.032)
AuditOp				-0.002
				(0.012)
AuditOpIC				0.004
				(0.024)
Big4				-0.034*
				(0.017)
LnAuditFees				0.017
				(0.044)
Observations	294	259	257	214
Adjusted R-squared	0.061	0.185	0.215	0.190
Firm FE	NO	YES	YES	YES
Year FE	NO	YES	YES	YES
Cluster by Industry	NO	YES	YES	YES

Panel B: Comparing Reducers with Never SRCs

VARIABLES	(1)	(2)	(3)	(4)
		Dep. Var = *AbsCAR0to2*		
Reducer_10K×Post	-0.002	0.017**	0.003	0.011
	(0.009)	(0.007)	(0.009)	(0.011)
Post and Reducer	YES	NO	NO	NO
Basic Controls	NO	NO	YES	YES
Audit Controls	NO	NO	NO	YES
Observations	600	597	595	506
Adjusted R-squared	0.050	0.123	0.122	0.146
Firm FE	NO	YES	YES	YES
Year FE	NO	YES	YES	YES
Cluster by Industry	NO	YES	YES	YES

Panel C: Comparing Reducers with Always SRCs

VARIABLES	(1)	(2)	(3)	(4)
		Dep. Var = *AbsCAR0to2*		
Reducer_10K×Post	-0.006	0.008	0.005	0.007
	(0.011)	(0.010)	(0.010)	(0.011)
Post and Reducer	YES	NO	NO	NO
Basic Controls	NO	NO	YES	YES
Audit Controls	NO	NO	NO	YES
Observations	335	327	324	281
Adjusted R-squared	0.074	0.101	0.092	0.081
Firm FE	NO	YES	YES	YES
Year FE	NO	YES	YES	YES
Cluster by Industry	NO	YES	YES	YES

Panel D: Usefulness of Individual 10-K Filings Items

Comparing Reducers with Maintainers

VARIABLES	(1)	(2)	(3)	(4)	(5)
			Dep. Var. = *AbsCAR0to2*		
Red_item5×Post	0.009				
	(0.010)				
Red_item6×Post		0.014			
		(0.013)			
Red_item7_yr×Post			0.001		
			(0.012)		
Red_item7_co×Post				0.009	
				(0.010)	
Red_item7a×Post					-0.020***
					(0.006)
Basic Controls	YES	YES	YES	YES	YES
Observations	257	257	257	257	257
Adjusted R-squared	0.218	0.222	0.215	0.218	0.229
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES	YES

Comparing Reducers with Never SRCs

VARIABLES	(1)	(2)	(3)	(4)	(5)
			Dep. Var. = *AbsCAR0to2*		
Red_item5×Post	0.009				
	(0.010)				
Red_item6×Post		0.014			
		(0.012)			
Red_item7_yr×Post			0.004		
			(0.012)		
Red_item7_co×Post				0.013	
				(0.012)	
Red_item7a×Post					-0.012
					(0.008)
Basic Controls	YES	YES	YES	YES	YES
Observations	542	542	542	542	542
Adjusted R-squared	0.208	0.210	0.206	0.210	0.209
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES	YES

Comparing Reducers with Always SRCs

VARIABLES	Dep. Var. = *AbsCAR0to2*				
Red_item5×Post	0.014				
	(0.010)				
Red_item6×Post		0.020			
		(0.012)			
Red_item7_yr×Post			0.007		
			(0.011)		
Red_item7_co×Post				0.013	
				(0.010)	
Red_item7a×Post					-0.015**
					(0.007)
Basic Controls	YES	YES	YES	YES	YES
Observations	287	287	287	287	287
Adjusted R-squared	0.171	0.176	0.166	0.170	0.171
Firm FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES	YES

Note: This table presents the results of estimating Equation (2) with measure of 10-K filing usefulness as dependent variables. Panel A, B and C compare the overall usefulness of *Reducers* with control groups separately. Panel D examines the impact of reducing each of the five items on the 10-K usefulness. Firm and year fixed effects are included in all regressions. Standard errors are clustered by Fama-French 48 industry. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.

Table 5   The Effect of Reducing 10-K Filings on Investment Activities

Panel A: Comparing Reducers with Maintainers

VARIABLES	(1) CAPEX	(2) RD	(3) MA	(4) TotalInvest
Reducer_10K×Post	-0.001	-0.003**	-0.159***	-0.001
	(0.005)	(0.002)	(0.056)	(0.004)
ROA	0.004	-0.010	0.214	-0.008
	(0.011)	(0.012)	(0.138)	(0.021)
Loss	0.001	0.001	0.029	0.003
	(0.004)	(0.001)	(0.068)	(0.004)
Leverage	0.002	-0.006	-0.020	-0.008
	(0.021)	(0.004)	(0.148)	(0.023)
BTM	0.004*	0.000	0.016	0.003
	(0.002)	(0.001)	(0.047)	(0.002)
FreeCF	-0.018	0.004	-0.613*	-0.046
	(0.017)	(0.005)	(0.323)	(0.031)
LnMVE	0.011**	0.000	0.034	0.010**
	(0.004)	(0.000)	(0.040)	(0.004)
LnSalesGrowth	0.002	0.000	0.024	0.002
	(0.003)	(0.002)	(0.018)	(0.004)
Foreign	-0.002	0.003	0.045	0.004
	(0.003)	(0.004)	(0.090)	(0.005)
LnBusSeg	0.001	0.006	0.070	0.008
	(0.012)	(0.004)	(0.212)	(0.012)
FYRetVol_raw	0.184	0.032	0.320	0.167
	(0.202)	(0.032)	(1.906)	(0.176)
Observations	518	518	518	518
Adjusted R-squared	0.712	0.940	0.325	0.856
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES

Panel B: Comparing Reducers with Never SRCs

VARIABLES	(1) CAPEX	(2) RD	(3) MA	(4) TotalInvest
Reducer_10K×Post	0.003	-0.002	-0.040	0.004
	(0.003)	(0.001)	(0.039)	(0.004)
Controls	YES	YES	YES	YES
Observations	1,047	1,047	1,047	1,047
Adjusted R-squared	0.778	0.915	0.336	0.851
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES

Panel C: Comparing Reducers with Always SRCs

VARIABLES	(1) CAPEX	(2) RD	(3) MA	(4) TotalInvest
Reducer_10K×Post	0.005	-0.005**	-0.072	-0.001
	(0.005)	(0.002)	(0.045)	(0.007)
Controls	YES	YES	YES	YES
Observations	728	728	728	728
Adjusted R-squared	0.658	0.928	0.346	0.789
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES

Note: This table presents the results of estimating Equation (2) with several measures on firms' investment activities as dependent variables. Firm and year fixed effects are included in all regressions. Standard errors are clustered by Fama-French 48 industry. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.

	(1)	(2)	(3)	(4)	(5)	(6)
Table 6	**The Effect of Reducing 10-K Filings on Analyst Following and Institutional Investors**					
	Compared with Maintainers		Compared with Never SRCs		Compared with Always SRCs	
VARIABLES	*LnNum Analysts*	*PctIns Own*	*LnNum Analysts*	*PctIns Own*	*LnNum Analysts*	*PctIns Own*
Reducer_10K						
×Post	-0.054	0.010	0.003	-0.002	-0.130***	-0.044*
	(0.039)	(0.028)	(0.039)	(0.018)	(0.035)	(0.022)
ROA	0.117	0.048	-0.163	0.080	-0.152*	0.012
	(0.125)	(0.045)	(0.170)	(0.066)	(0.083)	(0.037)
Loss	0.164***	0.012	-0.026	0.003	0.076	-0.011
	(0.043)	(0.021)	(0.036)	(0.010)	(0.047)	(0.012)
Leverage	-0.047	0.019	0.061	0.119	0.260	0.083
	(0.158)	(0.060)	(0.200)	(0.077)	(0.220)	(0.059)
BTM	-0.084**	-0.003	-0.025	-0.006	-0.034	0.002
	(0.033)	(0.021)	(0.028)	(0.016)	(0.033)	(0.017)
LnMVE	0.115**	0.081***	0.140***	0.073***	0.114***	0.071***
	(0.044)	(0.027)	(0.039)	(0.016)	(0.033)	(0.022)
LnSalesGrowth	0.071***	-0.002	0.040*	-0.013	0.039	0.008
	(0.018)	(0.010)	(0.020)	(0.010)	(0.024)	(0.008)
Foreign	0.172***	-0.049*	-0.020	-0.107**	0.039	-0.024
	(0.057)	(0.027)	(0.123)	(0.047)	(0.065)	(0.022)
LnBusSeg	0.093	-0.028	0.393**	-0.006	0.041	-0.008
	(0.092)	(0.057)	(0.169)	(0.044)	(0.099)	(0.048)
FYRetVol_raw	-3.342	-0.021	-0.871	-1.240*	-2.011	-0.394
	(2.414)	(0.647)	(2.201)	(0.674)	(1.528)	(0.393)
Observations	518	518	1,047	1,047	728	728
Adjusted R-squared	0.783	0.748	0.800	0.738	0.824	0.850
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES	YES	YES

Note: This table presents the results of estimating Equation (2) with analyst following and institutions holdings as dependent variables. Columns (1) and (2) display the results of the pooled sample. Columns (3) and (4) (Columns (5) and (6)) present the results by comparing the treatment firms with Never SRCs (Always SRCs). Firm and year fixed effects are included in all regressions. Standard errors are clustered by Fama-French 48 industry. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.

Table 7   Indirect Evidence of Compliance Costs

Panel A: 10-K Filing Lag

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Compared with Maintainers		Compared with Never SRCs		Compared with Always SRCs	
	DaysEnd ToFile	*LnDaysEnd ToFile*	*DaysEnd ToFile*	*LnDaysEnd ToFile*	*DaysEnd ToFile*	*LnDaysEnd ToFile*
Reducer_10K ×Post	-1.359	-0.015	-0.167	-0.001	-1.306	-0.008
	(1.471)	(0.017)	(2.323)	(0.023)	(1.438)	(0.015)
ROA	1.367	-0.004	-8.910	-0.127*	3.969	-0.027
	(2.807)	(0.035)	(5.309)	(0.063)	(5.215)	(0.043)
Loss	-0.030	-0.001	-1.074	-0.015	5.249*	0.030
	(1.646)	(0.021)	(1.234)	(0.015)	(2.830)	(0.022)
Leverage	12.192**	0.143***	19.543***	0.201***	1.298	0.056
	(4.869)	(0.053)	(6.961)	(0.071)	(10.680)	(0.088)
BTM	-1.599	-0.020	4.302	0.036	-2.844	-0.016
	(1.787)	(0.018)	(3.609)	(0.032)	(2.622)	(0.018)
Big4	-0.411	-0.001	1.420	0.027	-16.120	-0.155
	(5.102)	(0.053)	(2.361)	(0.028)	(9.705)	(0.093)
Foreign	-1.718	-0.023	-0.266	0.003	-1.933	-0.013
	(1.672)	(0.026)	(2.134)	(0.025)	(3.180)	(0.032)
LnBusSeg	1.733	0.052	-11.771	-0.096	-5.204	-0.034
	(4.926)	(0.056)	(15.295)	(0.136)	(5.493)	(0.052)
FYRetVol_raw	30.330	0.282	108.570*	0.931	-50.633	-0.173
	(86.753)	(0.865)	(58.125)	(0.589)	(79.017)	(0.720)
LnSize10K	-3.236**	-0.043***	0.617	-0.004	5.848	0.028
	(1.367)	(0.015)	(3.478)	(0.033)	(4.522)	(0.028)
PublicFloat	-0.010	-0.000	0.008	0.000	-0.024*	-0.000*
	(0.008)	(0.000)	(0.014)	(0.000)	(0.013)	(0.000)
Observations	472	472	891	891	679	679
Adjusted R-squared	0.486	0.642	0.395	0.586	0.410	0.623
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES	YES	YES

Panel B: Audit Fees

VARIABLES	(1) Compared with Maintainers	(2) Compared with Never SRCs	(3) Compared with Always SRCs
	Dep. Var. = *LnAuditFees*		
Reducer_10K×Post	-0.106***	-0.045**	-0.039
	(0.023)	(0.022)	(0.027)
ROA	-0.126**	-0.257***	-0.217*
	(0.061)	(0.091)	(0.127)
Loss	0.018	0.008	-0.004
	(0.025)	(0.019)	(0.021)
LnAsset	0.236***	0.387***	0.198***
	(0.034)	(0.077)	(0.059)
Foreign	0.006	0.028	-0.104*
	(0.061)	(0.079)	(0.054)
LnBusSeg	0.074	0.082	0.188**
	(0.064)	(0.058)	(0.087)
Big4	0.417***	0.409***	0.511***
	(0.069)	(0.053)	(0.081)
Observations	589	1,105	826
Adjusted R-squared	0.965	0.957	0.962
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Cluster by Industry	YES	YES	YES

Note: This table presents the results of estimating Equation (2) with *LnAuditFees* as dependent variables. Firm and year fixed effects are included in all regressions. Standard errors are clustered by Fama-French 48 industry. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.

Table 8   Cross-sectional Analyses

Panel A: Smaller VS. Large Reducers

VARIABLES	(1)	(2)	(3)	(4)
Comparing to Maintainers				
	CAPEX	*RD*	*MA*	*TotalInvest*
Small_Reducer×Post	-0.002	-0.007	-0.066	-0.011
	(0.006)	(0.006)	(0.058)	(0.008)
Large_Reducer×Post	0.003	-0.001	-0.165**	0.001
	(0.007)	(0.001)	(0.062)	(0.006)
Observations	518	518	518	518
Adjusted R-squared	0.711	0.941	0.317	0.857
Comparing to Never SRCs				
	CAPEX	*RD*	*MA*	*TotalInvest*
Small_Reducer×Post	-0.002	-0.009	0.007	-0.009
	(0.006)	(0.006)	(0.063)	(0.006)
Large_Reducer×Post	0.006	-0.001	-0.099*	0.005
	(0.006)	(0.001)	(0.056)	(0.006)
Observations	1,047	1,047	1,047	1,047
Adjusted R-squared	0.778	0.916	0.336	0.852
Comparing to Always SRCs				
	CAPEX	*RD*	*MA*	*TotalInvest*
Small_Reducer×Post	-0.000	-0.010	-0.005	-0.012
	(0.007)	(0.007)	(0.062)	(0.011)
Large_Reducer×Post	0.008	-0.003*	-0.139**	0.003
	(0.007)	(0.001)	(0.055)	(0.007)
Observations	728	728	728	728
Adjusted R-squared	0.659	0.928	0.347	0.790
Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES

Panel B: High Reducer VS. Low Reducer

VARIABLES	(1)	(2)	(3)	(4)
Comparing to Maintainers				
	CAPEX	*RD*	*MA*	*TotalInvest*
High_Reducer×Post	0.006	-0.003	-0.165**	0.004
	(0.006)	(0.003)	(0.063)	(0.006)
Low_Reducer×Post	-0.000	-0.005*	-0.227**	-0.003
	(0.005)	(0.002)	(0.095)	(0.005)
Observations	518	518	518	518
Adjusted R-squared	0.712	0.940	0.327	0.856
Comparing to Never SRCs				
	CAPEX	*RD*	*MA*	*TotalInvest*
High_Reducer×Post	0.001	-0.003	-0.109**	-0.002
	(0.004)	(0.002)	(0.054)	(0.004)
Low_Reducer×Post	0.002	-0.006	-0.214**	-0.002
	(0.005)	(0.003)	(0.102)	(0.005)
Observations	1,047	1,047	1,047	1,047
Adjusted R-squared	0.777	0.915	0.339	0.851
Comparing to Always SRCs				
	CAPEX	*RD*	*MA*	*TotalInvest*
High_Reducer×Post	0.001	-0.001	-0.091	0.002
	(0.006)	(0.002)	(0.066)	(0.006)
Low_Reducer×Post	0.003	-0.006	-0.208**	-0.001
	(0.006)	(0.003)	(0.098)	(0.006)
Observations	728	728	728	728
Adjusted R-squared	0.657	0.927	0.349	0.789
Controls	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES

Panel C: Reducing Item 7A VS. Not Reducing Item 7A

VARIABLES	(1) Compared with Maintainers	(2)	(3) Compared with Never SRCs	(4)	(5) Compared with Always SRCs	(6)
	LnNum Analysts	PctIns Own	LnNum Analysts	PctIns Own	LnNum Analysts	PctIns Own
Red_item7a ×Post	-0.043	0.002	0.001	-0.008	-0.125***	-0.053***
	(0.050)	(0.024)	(0.039)	(0.015)	(0.043)	(0.020)
Non_Red_item7a ×Post	-0.072*	0.024	0.007	0.007	-0.138**	-0.029
	(0.043)	(0.045)	(0.058)	(0.038)	(0.053)	(0.041)
ROA	0.120	0.045	-0.163	0.078	-0.151*	0.010
	(0.122)	(0.045)	(0.169)	(0.066)	(0.083)	(0.036)
Loss	0.167***	0.010	-0.026	0.002	0.076	-0.012
	(0.043)	(0.021)	(0.035)	(0.011)	(0.048)	(0.012)
Leverage	-0.046	0.019	0.061	0.117	0.261	0.082
	(0.158)	(0.060)	(0.200)	(0.077)	(0.225)	(0.059)
BTM	-0.086***	-0.002	-0.025	-0.006	-0.034	0.004
	(0.031)	(0.021)	(0.029)	(0.016)	(0.033)	(0.017)
LnMVE	0.113**	0.082***	0.140***	0.073***	0.114***	0.072***
	(0.046)	(0.027)	(0.040)	(0.016)	(0.035)	(0.022)
LnSalesGrowth	0.071***	-0.002	0.040*	-0.013	0.039	0.009
	(0.018)	(0.010)	(0.020)	(0.010)	(0.024)	(0.008)
Foreign	0.171***	-0.048	-0.020	-0.106**	0.039	-0.023
	(0.056)	(0.029)	(0.123)	(0.048)	(0.065)	(0.021)
LnBusSeg	0.091	-0.027	0.393**	-0.006	0.041	-0.007
	(0.090)	(0.057)	(0.169)	(0.044)	(0.099)	(0.048)
FYRetVol_raw	-3.426	0.042	-0.860	-1.211*	-2.030	-0.356
	(2.426)	(0.631)	(2.220)	(0.685)	(1.559)	(0.387)
Observations	518	518	1,047	1,047	728	728
Adjusted R-squared	0.783	0.748	0.800	0.738	0.823	0.850
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Cluster by Industry	YES	YES	YES	YES	YES	YES

Note: This table presents the cross-sectional results of estimating Equation (2) by decomposing *Reducer_10K* into two indicators. Panel A compares small versus large Reducers; Panel B compares Reducers that reduce more versus less; and Panel C compares Reducers that remove Item 7A versus keep Item 7A. Firm and year fixed effects are included in all regressions. Standard errors are clustered by Fama-French 48 industry. Variable definitions are provided in Appendix B. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests.