UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

DO NON-GAAP EXCLUSIONS IMPACT THE EXTENT TO WHICH CURRENT RETURNS REFLECT FUTURE EARNINGS INFORMATION?

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

By

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Norman, Oklahoma
2017

DO NON-GAAP EXCLUSIONS IMPACT THE EXTENT TO WHICH CURRENT RETURNS REFLECT FUTURE EARNINGS INFORMATION?

A DISSERTATION APPROVED FOR THE
MICHAEL F. PRICE COLLEGE OF BUSINESS

BY

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Dedicated to:

Sarah, Shad, and Caleb.

Acknowledgements

I would like to thank my wife, Sarah, for being the unwavering support that she is in my life. The happiest and hardest moments of our life have occurred during my pursuit of this degree. I admire your ability to be so strong, regardless of what life brings. Thank you for encouraging me and telling me that because you were not allowed to quit with your PhD, I was not allowed to quit with mine. I thank my beautiful sons, Shad and Caleb, for the joy they bring me. Shad, you inspire me to be a better person, and I look forward to the day when I can hold you again in my arms. Caleb, your smile and laugh are infectious. I enjoyed the countless hours we spent together in my office, walking around campus, and going to the park while I worked on my dissertation.

I would like to thank my parents, Harold and Lori Brockbank, for the love and support they have given me throughout my life. Thank you for always encouraging me to do my best. I would not be where I am today without you and the profound influence you have had on me. Thank you for always being there for me, both in the joyful times and the difficult ones.

I am grateful to my advisor, Erv Black, for his patience, guidance, advice and encouragement. I also thank the members of my dissertation committee (Karen Hennes, Lubomir Litov, Richard Price, and Wayne Thomas) for their insightful feedback and support.

Thank you to the many unnamed family members, friends, and colleagues who offered words of encouragement and support. I could not have done this alone, and I am grateful to all who helped in any way. Thank you.

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Abstract

Motivated by regulators' concerns about non-GAAP financial measures and building on research that finds more informative disclosures allow current stock returns to better reflect future earnings, I examine whether non-GAAP earnings exclusions enhance or garble the future earnings news captured in current stock returns. Utilizing a novel data collection technique using Amazon Mechanical Turk (MTurk), I collect non-GAAP earnings data from 2003 to 2012 and measure managers' non-GAAP exclusions relative to three comparable earnings: (1) GAAP earnings before extraordinary items, (2) GAAP earnings from operations, and (3) analyst-adjusted "street earnings." I find a negative association between the magnitude of managers' non-GAAP exclusions and the extent to which current returns reflect future earnings information. Additional tests reveal this negative association is due to income-increasing exclusions. I find similar results using the association between current returns and either future earnings from operations or future non-GAAP earnings. I also provide evidence of increased garbling of future earnings news when managers use incremental non-GAAP exclusions to meet or beat the consensus earnings forecast. Finally, I find that consistent non-GAAP reporting is associated with more future earnings information reflected in current stock returns.

1. Introduction

The disclosure of non-GAAP financial measures has received considerable attention from various parties including the business press, regulators, investors and academics. The Securities and Exchange Commission (SEC) provided additional guidance on non-GAAP reporting by updating its Compliance and Disclosure Interpretations in May 2016 and non-GAAP financial measures have become the second most frequent topic of SEC comment letters (Ernst & Young 2016). Former SEC Chair Mary Jo White recently stated that "non-GAAP measures are used extensively and, in some instances, may be a source of confusion" (White 2015). After the SEC issued the additional guidance, she said "we are watching this space very closely and are poised to act through the filing review process, enforcement and further rulemaking if necessary" (White 2016).[1] A primary concern of regulators is protecting investors, a sentiment expressed by James Schnurr, former SEC Chief Accountant, who recently said "the rules are clear that non-GAAP measures must not be misleading" (Schnurr 2016).

The purpose of this study is to examine whether non-GAAP earnings disclosures enhance or garble the future earnings information captured in current stock returns. I examine investors' *expected future* earnings based on the association between current stock returns and future earnings and test whether this association is impacted by the magnitude and direction of exclusions made by managers in calculating non-GAAP earnings. This research design allows me to directly address regulators' concerns that non-GAAP earnings disclosures may be confusing or misleading investors. Prior

[1] Several articles in the business press reference these and other comments made by SEC Chair White in regards to non-GAAP reporting (e.g., Francis and Linebaugh 2015, Teitelbaum 2015, Michaels and Rapoport 2016).

research finds that investors respond to the information contained in non-GAAP earnings, evidenced by a stronger association between *contemporaneous* stock returns and non-GAAP earnings than GAAP earnings (Bradshaw and Sloan 2002; Bhattacharya et al. 2003; Brown and Sivakumar 2003). However, it is predominantly less sophisticated investors that trade on non-GAAP earnings information (Frederickson and Miller 2004; Elliott 2006; Allee et al. 2007; Bhattacharya et al. 2007). It is not clear whether investors are confused by non-GAAP earnings disclosures. I build on this literature by examining how non-GAAP earnings disclosures affect investors' ability to incorporate future earnings news into current prices.[2]

Predicting future earnings is an important valuation use of accounting information. Nichols and Wahlen (2004) succinctly explain the relation between earning information and equity valuation: Information in current earnings is used to predict future earnings, which then determine expected future dividends. Stock price, in turn, reflects the discounted expected future cash flows (future dividends) of the firm. Current earnings' ability to predict future earnings is one aspect of earnings quality, with earnings that reveal more information about future earnings considered higher quality (Dechow et al. 2010). Prior research also suggests that more informative disclosures allow current returns to better reflect future earnings (Lundholm and Myers 2002; Tucker and Zarowin 2006; Orpurt and Zang 2009; Choi et al. 2011). I examine an unexplored aspect of the quality of non-GAAP earnings disclosures by testing whether non-GAAP exclusions influence the extent to which current stock returns reflect future earnings news. Stated

[2] I recognize that there are other non-GAAP measures reported by firms such as funds from operations or EBITDA, but choose to focus my research question on the disclosure of non-GAAP earnings as earnings are the most common non-GAAP disclosure and the summary accounting measure.

differently, I examine the impact of non-GAAP exclusions on investors' expectations of future earnings.

The extant non-GAAP literature predominantly uses earnings persistence to measure the quality of non-GAAP earnings. These studies find that items excluded in calculating non-GAAP earnings are not completely transitory and that different factors (e.g., regulation, board independence, investor sentiment) affect the persistence of non-GAAP exclusions (Gu and Chen 2004; Kolev et al. 2008; Frankel et al. 2011; Brown et al. 2012). However, the persistence of non-GAAP exclusions and the impact of non-GAAP disclosures on investors' ability to predict future earnings news (as captured by stock returns) are two important yet distinct measures of the quality of non-GAAP earnings. Investors may recognize that non-GAAP exclusions are not fully transitory and incorporate this information into their prediction of future earnings, but this recognition by investors is ignored using a persistence model. By examining the association between non-GAAP exclusions and investors' expectation of future earnings, I am able to directly addresses regulators' concern that non-GAAP disclosures confuse investors. Additionally, if reported non-GAAP earnings information can be combined with other information to better predict future earnings, this indirect use of non-GAAP earnings in predicting future earnings will not be captured by measuring earnings persistence, but will be impounded in current stock price. Thus, I use the relation between current stock returns and expected future earnings to capture investors' direct and indirect use of non-GAAP earnings information in predicting future earnings news.

Managers view non-GAAP earnings as one of the most important measures they disclose (Graham et al. 2005) and claim that the information contained in non-GAAP

earnings is useful to investors for both assessing current performance and forecasting future performance (Francis and Linebaugh 2015).[3] Critics, on the other hand, argue that non-GAAP disclosures are opportunistically reported to distort the firm's true performance (Rapoport 2016). If managers use disclosure of non-GAAP earnings to convey information about future earnings to investors, that information should be reflected in current stock returns. Alternatively, if managers use non-GAAP exclusions to garble future earnings news, less information about future earnings will be reflected in current stock returns.

I use a novel technique to collect non-GAAP earnings data from earnings announcement press releases. After programmatically identifying tables within the earnings announcements that contain non-GAAP words or phrases, I paid workers on Amazon Mechanical Turk (MTurk) to identify the non-GAAP earnings per share from these tables. Section 4.2 details this process, which resulted in 7,010 firm-year observations from 2003 to 2012 used to conduct my main analyses.

To test whether managers' non-GAAP exclusions influence the association between current returns and future earnings news, I use a future earnings response coefficient (FERC) model based on Collins et al. (1994), as implemented by Lundholm and Myers (2002), Tucker and Zarowin (2006), Orpurt and Zang (2009), Choi et al. (2011), and Drake et al. (2015). The FERC represents the future earnings information that is reflected in current stock returns. I measure the magnitude of firm's non-GAAP exclusions by comparing non-GAAP earnings to three different comparable earnings

[3] The 2016 Q2 earnings announcement of Alphabet (Google) provides an example of how managers describe the benefit of non-GAAP financial measures: "We believe that both managers and investors benefit from referring to these non-GAAP financial measures in assessing our performance and *when planning, forecasting and analyzing future periods*." (emphasis added)

values: (1) GAAP earnings before extraordinary items, (2) GAAP earnings from operations, and (3) analyst-adjusted "street earnings" within each industry-year.

I find that the association between current returns and future earnings becomes weaker as the magnitude of non-GAAP exclusions increases, consistent with managers' larger non-GAAP exclusions garbling future earnings information. Prior research suggests that the direction of managers' non-GAAP exclusions is important. The majority of non-GAAP exclusions are income-increasing (resulting in non-GAAP earnings that are higher than GAAP earnings), but income-decreasing exclusions are more transitory on average, consistent with informative managerial motives (Baumker et al. 2014; Curtis et al. 2014). Supporting concerns from regulators and the business press focused on non-GAAP earnings that exceed GAAP earnings, I find the results are driven by income-increasing non-GAAP exclusions. Hirshleifer and Teoh's (2003) limited attention theory suggests that non-GAAP earnings will be less informative when managers have greater incentives to increase the current stock price. I expect that these managerial stock price incentives are strongest when non-GAAP exclusions are used to meet or beat an earnings benchmark. Consistent with this theory, I find an incrementally lower FERC when non-GAAP earnings just meet or beat the consensus analyst forecast (by $0.02 or less) while "street earnings" fall short of the consensus forecast.

In robustness tests, I replace future GAAP earnings before extraordinary items with either future GAAP earnings from operations or future non-GAAP earnings and find similar results. To address the concern that firms with larger non-GAAP exclusions have less predictable future earnings due to other firm characteristics, I create a matched sample based on a firm's propensity to disclose larger non-GAAP exclusions and find

consistent results using this sample. Collectively, the results suggest that larger differences between non-GAAP and GAAP earnings are associated with garbling of future earnings news. However, I also find evidence that firms consistently reporting non-GAAP earnings have a stronger association between current returns and future earnings. This suggests that consistent reporting of non-GAAP earnings can help convey information to market participants rather than non-GAAP earnings always garbling future earnings news.

This study makes two main contributions. First, I inform the debate of whether non-GAAP earnings confuse investors by providing evidence that larger non-GAAP exclusions are associated with less future earnings news being reflected in current stock returns. These results suggest that larger adjustments made by managers make prediction of future earnings more difficult for investors. Regulators have expressed concern that non-GAAP disclosures may confuse investors and have suggested that additional regulation for non-GAAP reporting may be necessary. The FERC model used in this study directly measures investors' ability to predict future earnings information, providing a more direct response to regulators' concern about whether investors are misled by non-GAAP earnings disclosures. The findings of this study suggest that regulators' concerns about non-GAAP financial measures are warranted, especially when managers use large income-increasing exclusions in calculating non-GAAP earnings.

Second, I add to the non-GAAP academic literature by measuring a component of non-GAAP earnings quality that has been largely ignored until now—the extent to which non-GAAP earnings disclosures reveal information to investors about future earnings. Prior research predominantly uses earnings persistence to measure the quality

of non-GAAP earnings. However, the characteristics of firms that disclose non-GAAP earnings indicate that earnings persistence may be an inappropriate measure of earnings quality for this group of firms. Firms that disclose non-GAAP earnings have more frequent losses (Marques 2006) and losses have very low persistence (Basu 1997). Non-GAAP disclosing firms also have higher growth and market-to-book ratios (Bhattacharya et al. 2004; Lougee and Marquardt 2004; Marques 2006; Bentley et al. 2016), indicating higher levels of future good news that may not be captured in current earnings. Dechow et al. (2010) state that persistence is a poor measure of earnings quality for growth firms. Thus, a stock return-based measure of the extent to which non-GAAP earnings disclosures reveal information about future earnings helps give a more complete view of non-GAAP earnings quality.

The findings of this study should be interpreted with caution for a few reasons. First, the FERC model assumes market efficiency. If markets do not efficiently incorporate all relevant information (including information provided by non-GAAP earnings disclosures), the interpretation of my findings is not clear. Second, even with the results using my propensity score matched sample, I cannot eliminate the possibility that managers of firms with lower FERCs simply exclude more items in calculating non-GAAP earnings.

2. Background & Related Literature

2.1 Non-GAAP Regulatory Background

The SEC has addressed concerns over non-GAAP reporting in several ways over the past decade and a half. On December 4, 2001, the SEC issued a cautionary statement about the reporting of non-GAAP financial information to alert investors of the potential dangers of relying on non-GAAP measures that could distort a firm's GAAP results (SEC 2001). The statement warned investors that non-GAAP measures may not be comparable across firms and suggested that a GAAP loss presented as a non-GAAP profit may deceive investors, especially when no clear explanation of the exclusions is given.

In compliance with section 401(b) of the Sarbanes-Oxley Act (SOX), the SEC issued Regulation G, which became effective on March 28, 2003 (SEC 2003). Regulation G requires that firms provide (1) equal or greater prominence of GAAP measures relative to non-GAAP financial measures, (2) reconciliation of non-GAAP financial measures to the most comparable GAAP measure, and (3) explanation of the reasons management believes the non-GAAP financial measures are informative to investors.

In conjunction with Regulation G, the SEC amended Item 10 of Regulation S-K and Item 10 of Regulation S-B to contain similar requirements. These amendments included a prohibition of adjusting non-GAAP measures to "eliminate or smooth items identified as non-recurring, infrequent or unusual" when the items are reasonably likely to occur within two years or were reported in the prior two years. In January 2010, the SEC issued a Compliance and Disclosure Interpretation to address questions relating to non-GAAP financial measure disclosures, which was subsequently updated in July 2011 and May 2016 (SEC 2016). These updates clarified that recurring items can be excluded

from non-GAAP measures if they are not described as non-recurring and all other disclosure requirements were met. The May 2016 update also introduced several general interpretations about misleading non-GAAP measures. Former SEC Chair Mary Jo White has stated that "non-GAAP measures are used extensively and in some instances may be a source of confusion" (White 2015) and even suggested that more regulation may be necessary for non-GAAP reporting (Michaels and Rapoport 2016; White 2016).[4]

2.2 Non-GAAP Literature

Early studies in the non-GAAP literature find that investors respond to non-GAAP earnings, evidenced by higher ERCs and R-squared values relative to GAAP earnings when examining the returns-earnings relation both over an entire quarter and in the 3-day window around the earnings announcement (Bradshaw and Sloan 2002; Bhattacharya et al. 2003; Brown and Sivakumar 2003). Subsequent studies find that the value relevance and information content of non-GAAP earnings is greater when GAAP earnings are less informative (Lougee and Marquardt 2004), and that firms with less value relevant GAAP earnings place more emphasis on non-GAAP earnings (Bowen et al. 2005).[5] Other studies indicate that it is predominantly less sophisticated investors who trade on non-GAAP earnings (Frederickson and Miller 2004; Elliott 2006; Allee et al. 2007; Bhattacharya et al. 2007). Using data from the pre-Regulation G period, Doyle et al. (2003) find evidence that investors do not fully incorporate the future cash flow information contained in analyst-adjusted "street earnings" at the time of the earnings

[4] The SEC is not alone in expressing concerns about non-GAAP reporting. The International Organization of Securities Commissions issued a cautionary statement about non-GAAP measures in 2002 followed by a proposed statement with expectations for presentation of non-GAAP financial measures in 2014.

[5] Lougee and Marquardt (2004) define GAAP earnings informativeness based on high-tech industry membership, intangible intensity, sales growth, leverage, earnings volatility, and the existence of special items.

announcement.[6] Although there is evidence that investors respond to non-GAAP earnings disclosures, a key unanswered question in this literature is whether investors are misled or informed by these non-GAAP earnings disclosures (Berger 2005; Christensen 2007).

Hirshleifer and Teoh (2003) present a theoretical model in which some investors have limited attention and show that managers will opportunistically report non-GAAP earnings that are higher than GAAP earnings, which results in an upward bias in stock prices. On the other hand, they show that if managers' long-term reputational concerns outweigh their preference for higher current stock prices, then non-GAAP earnings will inform investors about managers' true expected future cash flows of the firm. Thus, theory does not clearly predict whether non-GAAP earnings disclosures will provide more or less information to investors about future earnings. This question is important to the debate surrounding non-GAAP earnings because managers claim non-GAAP earnings are informative and useful to investors while critics argue that non-GAAP earnings are manipulated to mask the firm's true financial performance. Several different approaches have been used in the non-GAAP literature to examine managers' motives for providing non-GAAP earnings. These approaches include using the persistence of non-GAAP earnings and exclusions to measure earnings quality, examining choices related to the inclusion or exclusion of specific items in non-GAAP earnings, and analyzing non-GAAP reporting behaviors that are deemed aggressive.

2.2.1 Persistence of Non-GAAP Earnings and Exclusions

Many of the studies that comment on the debate over managers' motives for providing non-GAAP earnings examine the persistence of exclusions as a measure of the

[6] In untabulated analysis, I do not find any evidence of mispricing based on non-GAAP exclusions in my sample period.

quality of non-GAAP earnings. Transitory exclusions, which are less likely to persist into future earnings, are considered higher quality under the assumption that managers intending to inform through non-GAAP reporting would exclude only transitory items when calculating non-GAAP earnings. Managers that exclude permanent items in calculating non-GAAP earnings are therefore assumed to be acting opportunistically with the intent to mask their firm's true performance.

Early studies find that non-GAAP exclusions persist and are negatively related to both future cash flow from operations (Doyle et al. 2003) and future earnings (Gu and Chen 2004), but do not discuss whether the results suggest informative or opportunistic motives for non-GAAP disclosure.[7] Doyle et al. (2003) find that this association is attributable to the exclusion of other items, and not the exclusion of special items. Kolev et al. (2008) examine the quality of non-GAAP exclusions before and after SEC intervention via Regulation G, using the persistence of exclusions as a measure of quality and opportunism. They find that non-GAAP exclusions are less persistent following Regulation G and conclude that the quality of non-GAAP earnings has improved, consistent with non-GAAP earnings becoming more informative. More recent studies examine the impact of different monitoring environments on the quality of non-GAAP earnings, finding more persistent (lower quality) exclusions for firms with higher investor sentiment (Brown et al. 2012) or less independent boards of directors (Frankel et al. 2011) and less persistent (higher quality) exclusions following debt covenant violations

[7] Burgstahler et al. (2002) examine the persistence of special items and find that special items, like other non-GAAP exclusions are not completely transitory. However they find that stock prices appear to reflect the information in special items that relates to future earnings. Doyle et al. (2003), on the other hand, find that investors do not fully incorporate the future cash flow implications of non-GAAP exclusions at the time of the earnings announcement, indicating that they may be misled by non-GAAP earnings.

(Christensen et al. 2015). While prior research identifies different settings where the persistence of non-GAAP exclusions changes, there is limited evidence of whether investors are misled by these non-GAAP exclusions. I add to this literature by using a measure of non-GAAP earnings quality which incorporates how investors' expectations of future earnings are impacted by non-GAAP exclusions.

2.2.2 Inclusion or Exclusion of Specific Items

Several studies examine non-GAAP reporting decisions related to specific expenses or gains. One benefit of these studies is identifying whether the decision is attributable to informative or opportunistic motivations. On the other hand, these studies are relatively narrow and their conclusions may not be generalizable to broader non-GAAP reporting settings. Riedl and Srinivasan (2010) compare the persistence of special items presented as a separate line item in the income statement and special items disclosed in a footnote. They find that special items presented as a separate line item are less persistent, consistent with informative disclosure motives.[8] Barth et al. (2012) examine the exclusion of stock-based compensation expense by both analysts and managers. Their findings are consistent with informative exclusion of stock-based compensation by analysts but opportunistic exclusion by managers.

Other studies examine the non-GAAP treatment of transitory gains. Transitory gains provide an interesting setting where exclusion is considered informative because the gain is not recurring and exclusion results in non-GAAP earnings that are lower than

[8] Income statement line item disclosure is considered more salient than footnote disclosure and special items are assumed to be transitory. Therefore, informative disclosure would be for special items disclosed as a line item on the income statement to be more transitory. Alternatively, opportunistic disclosure would be for managers to disclose more permanent special items as an income statement line item where they would be presumed to be transitory.

GAAP earnings, contrary to managers' preference for reporting higher non-GAAP earnings. Baumker et al. (2014) find that while 88.5 percent of firms with one-time gains from legal settlements or insurance recoveries mention the gain and 85.8 percent provide its dollar amount, only 34 percent report non-GAAP earnings with the gain explicitly excluded. Choi et al. (2007) find that managers in the U.K. tend to include non-recurring gains in non-GAAP earnings despite their transitory nature. These results suggest that managers opportunistically fail to exclude transitory gains in calculating non-GAAP earnings in an attempt to convey better performance. However, Curtis et al. (2014) find evidence of managers excluding transitory gains from non-GAAP earnings, consistent with informative motivations. The mixed results from these studies examining specific disclosure decisions illustrate the difficulty in addressing the quality of non-GAAP earnings disclosures.

2.2.3 Aggressive Non-GAAP Reporting

Several studies examine non-GAAP reporting behavior that is deemed aggressive, with the assumption that aggressive reporting is opportunistic. These include (1) excluding items from non-GAAP earnings in order to meet an earnings benchmark and (2) excluding recurring items from non-GAAP earnings beyond what analysts exclude.[9] Black and Christensen (2009) find that both non-recurring items (e.g., restructuring charges) and recurring items (e.g., research and development costs, depreciation and amortization, and stock-based compensation expense) are commonly excluded to help non-GAAP earnings beat the consensus analyst forecast or turn a GAAP loss into a

[9] These earnings benchmarks include changing a GAAP loss into a non-GAAP profit and just meeting or beating the consensus analyst forecast with the non-GAAP earnings number when the GAAP earnings number falls short.

non-GAAP profit. However, the likelihood of these aggressive exclusions decreases following Sarbanes-Oxley and Regulation G (Black et al. 2015). Doyle et al. (2013) find that firms with non-GAAP earnings greater than their GAAP earnings are more likely to meet or beat the consensus analyst forecast relative to all other firms, regardless of whether those firms disclose non-GAAP earnings. They interpret this result as evidence that managers opportunistically define non-GAAP earnings to meet this earnings benchmark. However, they also find that investors discount the earnings surprise of firms that only meet the consensus analyst forecast through non-GAAP exclusions. Additional research finds this discounting of non-GAAP earnings that meet or beat the consensus forecast in both the pre-SOX and post-SOX periods (Black et al. 2012).

Other studies examine insider trading activity to further explore the idea that excluding items from non-GAAP earnings to meet earnings benchmarks is opportunistic. Frankel et al. (2011) find net selling by insiders in the month following the earnings announcement when non-GAAP earnings exceed the consensus forecast while GAAP earnings do not. They also find that this insider trading activity decreases as the independence of the board increases. The level of investor sentiment is positively associated with this net selling by insiders after using non-GAAP exclusions to meet or beat an earnings benchmark (Brown et al. 2012).

Other studies compare the non-GAAP exclusions of managers and analysts. Gu and Chen (2004) find that analysts are able to identify some of the transitory components of earnings, evidenced by higher persistence of items included in non-GAAP earnings by analysts than items excluded by analysts. Choi et al. (2007) separate non-GAAP exclusions of U.K. firms into three main categories: (1) non-recurring items identified by

analysts, (2) additional exclusions of recurring items by managers, and (3) items identified by analysts as non-recurring but not excluded by managers. They find that, on average, recurring items excluded by managers are transitory while non-recurring items included in managers' non-GAAP earnings are permanent. Both of these results are consistent with managers' non-GAAP exclusions being informative. On the other hand, Brown et al. (2012) find that firms with higher investor sentiment have larger non-GAAP exclusions, including managers' incremental exclusions of recurring items beyond those excluded by analysts. The likelihood of these incremental managerial exclusions decreased following Regulation G but these incremental exclusions still occur (Black et al. 2015).

While these aggressive non-GAAP reporting behaviors could be described as opportunistic, the question of whether these behaviors mislead investors and garble future earnings news is still unanswered. Investors discount managers' opportunistic non-GAAP reporting, but the information provided in non-GAAP earnings may be useful to investors in predicting future earnings.

3. Hypothesis Development

While prior research finds that, on average, non-GAAP exclusions are not completely transitory, there has yet to be a direct examination of whether non-GAAP earnings disclosures influence investors' ability to predict future earnings news as reflected by current stock returns. Studies that use the persistence of non-GAAP exclusions to infer the usefulness of non-GAAP earnings in predicting future earnings implicitly assume that investors are unable to recognize the future earnings implications of non-transitory non-GAAP exclusions. Because current stock prices contain some information that will not be captured in earnings until a future period, I use this price leading earnings relation to examine whether non-GAAP earnings enhance or diminish investors' ability to predict future earnings news.

If managers use disclosure of non-GAAP earnings to convey information about future earnings to investors (beyond information contained in GAAP earnings), this additional future earnings information should be reflected in current stock returns. Excluding specific items in calculating non-GAAP earnings could provide an informational signal to investors about how managers view those items or give a clearer picture of the firm's core earnings.[10] Managers frequently assert in their explanation for the use of non-GAAP metrics that non-GAAP earnings provide useful information to investors in predicting future performance. Disclosure of non-GAAP earnings also

[10] For example, stock-based compensation and research and development costs are frequently excluded from non-GAAP earnings despite being recurring expenses. Managers' exclusion of these items may signal that they view stock-based compensation as a way of increasing employee loyalty and productivity rather than simply an expense. Similarly, managers may view research and development costs as investments in the future of the firm and not merely expenses. Both of these signals about the specific excluded items could provide information about future earnings. A persistence-based evaluation of non-GAAP earnings would conclude that these non-GAAP earnings are of lower quality because these items persist into future earnings.

exposes the firm to greater scrutiny from external parties such as regulators or shareholders (Christensen et al. 2015). Due to this increase scrutiny, managers may not be willing to provide non-GAAP earnings or may exclude fewer items in calculating non-GAAP earnings. Firms that stopped disclosing non-GAAP earnings following Regulation G had lower quality non-GAAP earnings prior to Regulation G, suggesting that the costs of regulatory scrutiny may have been too great for those firms (Kolev et al. 2008). Firms that choose to disclose non-GAAP earnings could therefore provide informative signals about future earnings news.

Alternatively, non-GAAP earnings disclosures may garble information about future earnings. Recent evidence from the business press suggests that the difference between GAAP earnings and non-GAAP earnings is increasing over time (Francis and Linebaugh 2015; Kingsbury 2016; Lahart 2016a). Additionally, firms with larger non-GAAP exclusions have worse stock returns in the periods following the earnings announcement (Doyle et al. 2003; Lahart 2016b). Higher levels of non-GAAP exclusions may make it more difficult to identify relevant future earnings information. It is also possible that larger exclusions may be one-time items that are not relevant for future earnings and non-GAAP earnings excluding those items may provide useful information to investors about future earnings. As it is not clear ex ante whether larger non-GAAP exclusions increase or decrease future earnings predictability, my first hypothesis is non-directional and stated in null form:

H1: The extent to which future earnings news is reflected in current stock returns is not associated with the magnitude of a firm's non-GAAP exclusions.

Hirshleifer and Teoh (2003) suggest that when managers have stronger preferences for a higher current stock price, they will report higher non-GAAP earnings regardless of the firm's true performance. In this case, managers would care less about their reputation for accurate reporting in favor of higher equity valuation. Managers may therefore exclude items to inflate non-GAAP earnings which could distort investors' expectations of future earnings. Concerns from regulators and the business press focus on non-GAAP earnings that exceed GAAP earnings due to income-increasing exclusions made by managers (Francis and Linebaugh 2015; Lahart 2016a; Michaels and Rapoport 2016). Additionally, prior research suggests that income-decreasing exclusions are transitory, consistent with informative managerial motives (Baumker et al. 2014; Curtis et al. 2014). I therefore expect that income-increasing non-GAAP exclusions will be associated with garbling of future earnings information while income-decreasing exclusions will help investors to better predict future earnings:

H2a: Income-increasing non-GAAP exclusions are associated with less future earnings news reflected in current stock returns.

H2b: Income-decreasing non-GAAP exclusions are associated with more future earnings news reflected in current stock returns.

4. Research Design and Sample Selection

4.1 Research Design

To test the usefulness of non-GAAP earnings in predicting future earnings, I begin with a model of the return-earnings relation from Collins et al. (1994):

$$R_t = \alpha_0 + \alpha_1 UX_t + \sum_{k=1}^{3} \alpha_{k+1} \Delta E_t(X_{t+k}) + \varepsilon_t \quad (1)$$

In this model, the annual stock return (R_t) is explained by three components: unexpected earnings in the current period (UX_t), the change in expected earnings for future periods ($\Delta E_t(X_{t+k})$), and random noise (ε_t).[11] Future earnings predictability is represented by the relation between information disclosed during the current period (captured by the current stock return) and the change in expected future earnings (α_2, α_3, and α_4). However, because expected earnings in the current period and future periods are unobservable, I use the model implemented by Lundholm and Myers (2002), Tucker and Zarowin (2006), Orpurt and Zang (2009), Choi et al. (2011), and Drake et al. (2015), which utilizes proxies for unexpected and expected earnings:

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \varepsilon_t \quad (2)$$

In Model (2), R_t is the current year's stock return, measured over the fiscal year, which incorporates all public information disclosed in that period. X_{t-1} and X_t are earnings per share (EPS) for the prior year and the current year, which proxy for the unexpected earnings in the current year.[12] X_{t3} is the sum of EPS over the subsequent three years, a

[11] Collins et al. (1994) limit future earnings to three years in their model because empirically returns do not significantly explain future earnings beyond three years (Kothari and Sloan 1992).

[12] As Lundholm and Myers (2002) state, use of both current and prior earnings allows for a more flexible estimation of expected earnings. If earnings are treated as a random walk and the prior earnings are the expectation of current earnings then β_1 and β_2 should be of similar magnitude and opposite signs, equivalent to using the change in earnings. Alternatively, if the expectation of earnings each year is zero then β_1 should be close to zero.

proxy for expected future earnings.[13,14] However, realized future earnings contain both an *expected* portion and an *unexpected* portion. To isolate the expected portion of future earnings, the realized stock return over years t+1 through t+3 (R_{t3}) is included to control for the unexpected portion of future earnings, as unexpected shocks to future earnings will be captured in future returns. Therefore, the coefficient on X_{t3} (β_3) represents the degree to which future earnings information is reflected in current stock returns, and is referred to as the future earnings response coefficient (FERC). Prior research finds that more informative disclosures allow current stock returns to reflect more future earnings news (Lundholm and Myers 2002; Orpurt and Zang 2009; Choi et al. 2011). To the extent that the FERC captures changes in investors' expectations of future earnings, firms with more informative disclosures will have higher FERCs.

To test my first hypothesis of whether the magnitude of non-GAAP exclusions impacts the extent to which future earnings information is reflected in current stock returns, I estimate the following model using the sample of firm-year observations where non-GAAP earnings per share was disclosed:[15]

[13] My main tests use future GAAP earnings before extraordinary items and discontinued operations (EPSFX). As alternative measures, I also use future GAAP earnings from operations (OPREPSX) and future non-GAAP EPS.

[14] X_{t-1}, X_t, and X_{t3} are all adjusted for stock splits and stock dividends and scaled by beginning of period stock price.

[15] Disclosing non-GAAP earnings is a non-random choice made by managers and unobservable factors that influence this choice may also be associated with the relation between current returns and future earnings. In untabulated analysis, I implement a Heckman selection model (Heckman 1979) with the disclosure of non-GAAP earnings modeled in the first stage and the inverse Mills ratio from this first stage included in all my regressions to control for the unobservable characteristics associated with the choice to disclose non-GAAP earnings. Using a number of different instruments to meet the exclusion condition (percentage of firms in the industry year disclosing non-GAAP, whether any analyst following the firm follows a non-GAAP disclosing firm, whether the audit office of the firm's auditor has any clients to disclose non-GAAP earnings that year, or a financial crisis indicator), I obtain qualitatively similar results to those presented in the tables.

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t + \beta_6 NG_t * X_{t-1} + \beta_7 NG_t * X_t$$
$$+ \boldsymbol{\beta_8 NG_t * X_{t3}} + \beta_9 NG_t * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (3)$$

In this model, *NG* is a fractional ranking within each industry-year of the absolute value of a firm's non-GAAP exclusions per share, scaled so that values range from 0 to 1. To reduce the influence of outliers that have very large per share values, I scale the non-GAAP exclusions by the absolute value of GAAP earnings per share before calculating the ranking.[16] Observations with *NG* equal to zero represent firms with the smallest absolute difference between non-GAAP EPS and the comparable EPS within a given industry-year. Likewise, observations with the largest absolute non-GAAP exclusions within a given industry-year have *NG* equal to one.

Because there is no single EPS value that is clearly the best comparison for non-GAAP EPS, I use three different comparable EPS values that are commonly used in the literature: (1) GAAP earnings per share before extraordinary items (EPS_{GAAP}), (2) GAAP earnings per share from operations (EPS_{OP}), and (3) the IBES Actual EPS (EPS_{Street}), often referred to in the literature as "street earnings", which has been adjusted in accordance with analysts' exclusions (Bradshaw and Sloan 2002; Doyle et al. 2013). Using these three different comparable earnings values results in three different *NG* variables: NG_{Total}, NG_{Recur}, and NG_{Incr}. NG_{Total} measures the magnitude of the total non-GAAP exclusions, calculated as the difference between manager-adjusted non-GAAP EPS and GAAP EPS before extraordinary items ($EXCL_{Total}$ in Figure 1).[17]

[16] For robustness, I use three alternatives before calculating the rankings for the *NG* variable: (1) no scalar, leaving the non-GAAP exclusions as per share amounts, (2) multiplying by shares used for calculating diluted EPS (CSHFD) then scaling by total assets (AT), and (3) scaling by beginning of period price. The results are qualitatively similar using each of these alternatives.

[17] For non-GAAP exclusions calculations, all earnings per share values are on a diluted basis. The basis of the IBES Actual is determined based on equality to any of the Compustat EPS numbers (EPSPI, EPSFI, EPSPX, EPSFX, OPEPS, or OPREPSX) then on the primary/diluted indicator in IBES (PDI). Consistent

NG_{Recur} measures the magnitude of managers' exclusion of recurring items, calculated as the difference between manager-adjusted non-GAAP EPS and GAAP EPS from operations ($EXCL_{Recur}$ in Figure 1). Finally, NG_{Incr} measures managers' incremental exclusions beyond the exclusions made by analysts, calculated as the difference between manager-adjusted non-GAAP EPS and the IBES Actual EPS or "street earnings" ($EXCL_{Incr}$ in Figure 1).

The coefficient of interest is the interaction term between *NG* and future earnings (β_8), which represents the difference in the FERC between the firms with the largest non-GAAP exclusions relative to firms with the smallest non-GAAP exclusions. A positive β_8 would indicate that as the magnitude of non-GAAP exclusions increases, the FERC increases, suggesting that non-GAAP earnings disclosures convey additional information about future earnings. Alternatively, a negative β_8 indicates a decrease in the FERC as non-GAAP exclusions increase, suggesting that non-GAAP earnings disclosures garble future earnings news.

I include several other variables as controls that have been shown in prior literature to be associated with the choice to disclose non-GAAP earnings (Heflin and Hsu 2008; Brown et al. 2012; Christensen et al. 2014; Heflin et al. 2015). These include prior disclosure of non-GAAP earnings (*LAG_NONGAAP*), having operating earnings that fall short of the consensus forecast (*MISS*), reporting negative earnings from operations (*LOSS*), firm size (*SIZE*), earnings volatility (*STDROA*), analyst following (*NUMANALYSTS*), leverage (*LEVERAGE*), book-to-market ratio (*BTM*), magnitude of special items (*SPECIAL*), asset tangibility (*INTAN*), and reporting an increase in earnings

with Bradshaw et al. (2016), I convert from basic to diluted using the ratio of EPSFI to EPSPI and the IBES dilution factor when EPSFI is missing. If OPREPSX is missing, I adjust OPEPS in a similar fashion.

from the prior year (*UPEARN*). Detailed variable definitions are provided in the Appendix. Size, earnings volatility, loss incidence, and analyst coverage are important controls to include not only because of their association with the probability of non-GAAP disclosure, but they have also been shown to be associated with FERCs (Tucker and Zarowin 2006; Orpurt and Zang 2009; Choi et al. 2011).[18] In my regression analyses, I use the fractional ranking within industry-year of each these variables so a 0 represents observations with the lowest value of each variable and a 1 represents the observations with the highest value of each variable within a given industry-year. Additionally, I interact each of these variables with future earnings (X_{t3}) to control for any effect they may have on the FERC.[19] I also include year and industry fixed effects (using the Fama-French 48 industry classifications) to control for returns being correlated within a given year or industry and cluster standard errors by firm in all my tests.[20]

Prior literature suggests that income-increasing non-GAAP exclusions are different than income-decreasing non-GAAP exclusions, with the general finding (based on earnings persistence models) that income-decreasing non-GAAP exclusions are more informative (Choi et al. 2007; Baumker et al. 2014; Curtis et al. 2014). To test my second hypothesis of whether the direction of the non-GAAP exclusions affects the FERC, I estimate the following model:

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[18] Controlling for the effect of losses on the predictability of future earnings could diminish the overall effect of non-GAAP earnings. That is, one could argue that non-GAAP earnings could be more informative when firms report losses, and controlling for losses would capture some of over effect of non-GAAP earnings. As a robustness test, I drop *LOSS* and *LOSS**X_{t3} from the model which results in qualitatively similarly results.

[19] In untabulated results, I find similar results when interacting all control variables with X_{t-1}, X_t, and R_{t3} in addition to X_{t3}.

[20] Because the percentage of firms disclosing non-GAAP earnings and the magnitude of non-GAAP exclusions is increasing over my sample (see Figure 2), I also interact the year fixed effects with X_{t3} to control for any effect individual years may have on the predictability of future earnings.

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t^+ + \beta_6 NG_t^+ * X_{t-1}$$
$$+ \beta_7 NG_t^+ * X_t + \boldsymbol{\beta_8 NG_t^+ * X_{t3}} + \beta_9 NG_t^+ * R_{t3} + \beta_{10} NG_t^- + \beta_{11} NG_t^- * X_{t-1}$$
$$+ \beta_{10} NG_t^- * X_t + \boldsymbol{\beta_{13} NG_t^- * X_{t3}} + \beta_{14} NG_t^- * R_{t3} + \gamma_n Controls$$
$$+ \delta_n Controls * X_{t3} + \varepsilon_t \quad (4)$$

NG^+ is equal to NG for observations where non-GAAP EPS was greater than the comparable EPS, while NG^- is equal to NG for observations where non-GAAP EPS was less than the comparable earnings. β_8 represents whether income-increasing non-GAAP exclusions enhance or garble future earnings information while β_{13} represents the effect of income-decreasing non-GAAP exclusions on the FERC. I predict that β_8 will be negative, consistent with larger income-increasing non-GAAP exclusions garbling future earnings information and making prediction of future earnings more difficult for investors. I also predict that β_{13} will be positive, which would indicate that income-decreasing non-GAAP exclusions help investors to better predict future earnings.

As an additional test of this hypothesis, I identify "suspect" firm-year observations where managers use non-GAAP exclusions to meet earnings benchmarks and estimate the following model:

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t^+ + \beta_6 NG_t^+ * X_{t-1}$$
$$+ \beta_7 NG_t^+ * X_t + \beta_8 NG_t^+ * X_{t3} + \beta_9 NG_t^+ * R_{t3} + \beta_{10} SUSPECT_t$$
$$+ \beta_{11} SUSPECT_t * X_{t-1} + \beta_{10} SUSPECT_t * X_t + \beta_{13} SUSPECT_t * X_{t3}$$
$$+ \beta_{14} SUSPECT_t * R_{t3} + \beta_{15} SUSPECT_t * NG_t^+$$
$$+ \beta_{16} SUSPECT_t * NG_t^+ * X_{t-1} + \beta_{17} SUSPECT_t * NG_t^+ * X_t$$
$$+ \boldsymbol{\beta_{18} SUSPECT_t * NG_t^+ * X_{t3}} + \beta_{19} SUSPECT_t * NG_t^+ * R_{t3} + \gamma_n Controls$$
$$+ \delta_n Controls * X_{t3} + \varepsilon_t \quad (5)$$

SUSPECT is one of three indicator variables: *PROFIT*, *MEET*, or *JUSTMEET*. *PROFIT* is equal to one if non-GAAP EPS is positive or equal to zero while GAAP EPS from operations is negative. *MEET* is equal to one if non-GAAP EPS is equal to or greater than the consensus analyst forecast while analyst-adjusted "street earnings" fail to meet the consensus forecast. *JUSTMEET* is equal to one for those observations where non-GAAP EPS meets or beats the consensus by $0.02 or less while "street earnings" fall short. The scenarios for *MEET* and *JUSTMEET* require that managers use incremental non-GAAP exclusions to meet the consensus forecast and represent more aggressive non-GAAP reporting behavior. Therefore, I only examine incremental exclusions (NG_{Incr}) when *SUSPECT* is equal to *MEET* or *JUSTMEET*.

For this analysis, I use NG^{+} in the regressions because only income-increasing exclusions could cause non-GAAP earnings to meet an earnings threshold when GAAP earnings from operations fall short. Thus, the interpretation of the coefficients becomes relative to firm year observations that have no difference between non-GAAP and comparable earnings or have income-decreasing non-GAAP exclusions. Hirshleifer and Teoh's (2003) limited attention theory suggests that non-GAAP earnings will be more misleading when managers are focused on increasing the current stock price. Failing to meet earnings benchmarks can have negative compensation effects for managers (Matsunaga and Park 2001), providing managers with incentive to meet the earnings benchmark through non-GAAP exclusions.[21] I predict that the information garbling effect will be even stronger in these cases where non-GAAP exclusions are used to meet

[21] Doyle et al. (2013) find that relative to all other firms, firms that use income-increasing non-GAAP exclusions to meet earnings benchmarks have lower earnings response coefficients. The impact this has on the predictability of future earnings, however, is unknown.

earnings benchmarks. Therefore, I expect β_{18} to be negative.

4.2 Sample & Data Collection

I begin with all firms in the intersection of Compustat, CRSP, and IBES with fiscal years ending between 2003 and 2012.[22] I use directEDGAR to identify 8-Ks that contain an earnings announcement by a combination of their filing date, item number and the filing containing either "press release" or "news release".[23] I match these based on CIK and date. Because firms are required to provide a reconciliation between non-GAAP earnings and GAAP earnings, I attempt to identify this reconciliation table within the press release. I chose to focus on disclosure of non-GAAP EPS rather than non-GAAP earnings because earnings per share is a summary performance number often focused on by the business press and is the summary value forecasted by analysts.[24] Using directEDGAR, I extract the tables from the press releases that contain any information on a "per share" basis. Using Python, I then identify the tables that contain any non-GAAP words, such as "adjusted," "non-GAAP," "pro forma," "excluding," "ongoing earnings," "normalized earnings," "core earnings" or their variants, similar to Bentley et al. (2016).

This process identifies 18,077 tables from these earnings announcement press releases that contain non-GAAP words or phrases. I then collect non-GAAP earnings per share from these tables utilizing Amazon Mechanical Turk (MTurk), paying individuals

[22] My sample period begins in 2003 because prior to the implementation of Regulation G in 2003, firms did not have to file earnings announcements with the SEC. My sample period ends in 2012 to allow for the three years of future earnings and returns required by the model.

[23] I match 8-Ks to Compustat/CRSP/IBES based on the 8-K filing being within one week of the earnings announcement (for the majority, the earnings announcement date and the 8-K filing date are the same day). Consistent with DellaVigna and Pollet (2009), I use the earlier earnings announcement date from Compustat (RDQ) or IBES (ANNDATS). Earnings announcements typically have Item 2.02 (Results of Operations and Financial Condition), but some firms use Item 7.01 (Regulation FD Disclosure), Item 8.01 (Other Events), or Item 9.01 (Financial Statements and Exhibits).

[24] Additionally, non-GAAP per share performance measures are specifically identified by the SEC in the Non-GAAP Compliance & Disclosure Interpretations (SEC 2016).

to identify and record GAAP and non-GAAP EPS from the tables for the years provided. To ensure accuracy of the data collection, I identify ten sample tables with various presentation formats and different non-GAAP descriptors and require that an individual correctly identify both the GAAP EPS and the non-GAAP EPS from nine of the ten tables to be able to help with data collection. If an individual was interested in the data collection task, but not accurate on these first ten tables, I provided ten different tables for a second opportunity to qualify based on accurately identifying the relevant EPS values with the same 90% accuracy standard.

I require that each table be recorded by two different individuals and I manually review each table with any discrepancies. Roughly 14.7% of the tables (2,665/18,077) had discrepancies from what was recorded by the two individuals. However, the majority of these discrepancies were due to table extraction errors where column headers were not extracted with rest of the table, making correct identification impossible. In these cases, I identify the associated 8-K on the SEC's EDGAR website and record the relevant data. Additionally, if an individual was unsure of the data they recorded, they could leave a comment for me to check their work. I provided feedback to individuals with the trends of common mistakes I saw when reviewing the recorded data.

Over the course of the data collection period, 84 individuals met the accuracy standard to record data from the sample tables. Of these, 35 input data from at least 100 tables. However, almost 60% of the data collection was done by four individuals, with one individual submitting the data from 9,373 tables.[25] This data collection yielded

[25] MTurk ensures that a specific individual could only input the data from a given table one time. Thus, each of the 9,373 tables recorded by this one individual were also recorded by another worker.

non-GAAP EPS values for 12,625 firm-years between 2002 and 2014.[26]

I exclude observations that are missing data for past, current and future three years' GAAP earnings, and for observations missing current year and future three years' returns. To minimize the effect of outliers, I exclude observations in the top or bottom one percent of the distributions of each of those variables, consistent with Tucker and Zarowin (2006), Orpurt and Zang (2009), and Choi et al. (2011). All other variables are winsorized at the 1st and 99th percentiles. This results in a final sample of 7,010 firm-year observations from 2003 through 2012.[27] Descriptive statistics for my sample can be found in Table 1. The median total exclusions are $0.20 per share while the median recurring exclusions are $0.05 per share and the median incremental exclusions are $0.00 per share. Untabulated descriptive statistics show that the manager-adjusted non-GAAP earnings differ from GAAP earnings before extraordinary items 93.4% of the time, differ from GAAP earnings from operations 83.8% of the time and differ from "street earnings" (IBES Actual) 43.7% of the time.[28] Both the percentage of firms disclosing non-GAAP earnings (Figure 2 Panel A) and the magnitude of non-GAAP exclusions (Figure 2 Panel B) are increasing over time in my sample period, consistent with reports in the business press (Lahart 2016a). The correlations in Table 2 suggest a negative association between the various non-GAAP exclusions measures and both current returns and future earnings. However, the focus of this study is whether non-GAAP exclusions have an impact on the

[26] All of the 2002 observations were from press releases reporting 2003 data, which also provided non-GAAP EPS data for 2002 as the prior period.

[27] Although I have firm-year observations from 2002 from my data collection, I use only those observations from 2003 to ensure that all the observations are post-Regulation G. Results are qualitative similar when including 2002 in the analysis. Requiring three years of future GAAP earnings eliminates 2013 and 2014 data.

[28] These results are more consistent with Bhattacharya et al. (2003), who report manager-adjusted non-GAAP earnings differ from "street earnings" 35% of the time, and not the 6% suggested by Doyle et al. (2013).

association between current returns and future earnings, which cannot be examined directly from the correlations in Table 2.

5. Results

The estimation of Model (3) is presented in Table 3 with observations ranked based on the absolute magnitude of the non-GAAP exclusions. The columns present rankings based on total exclusions, recurring exclusions and incremental exclusions, respectively. The negative coefficient on X_{t-1} combined with the positive coefficient on X_t are consistent with the positive relation between current period returns and the change in earnings. The positive coefficient on X_{t3} and negative coefficient on R_{t3} are consistent with current period returns being positively associated with *expected future* earnings for firms with the smallest non-GAAP exclusions. Coefficients on the interactions between control variables and future earnings are generally as expected (untabulated). Firms with greater earnings volatility and loss firms have lower FERCs. Analyst coverage is positively associated with FERCs as expected, but not significant.

For the test of H1, the coefficient on the interaction between the non-GAAP exclusion ranking and future earnings (β_8) is negative and significant, regardless of whether non-GAAP earnings are compared to GAAP earnings before extraordinary items, operating earnings or "street earnings." Thus, as the magnitude of a firm's non--GAAP exclusions increases, the association between current returns and future earnings decreases, consistent with non-GAAP earnings garbling future earnings information, making it more difficult for investors to predict future earnings.

Table 4 presents the estimation of Model (4) where income-increasing and income-decreasing non-GAAP exclusions are separated. Regardless of which comparable earnings is used, the interaction between income-increasing non-GAAP exclusions and future earnings is negative and significant. This supports H2a and

suggests that the results in Table 3 are driven by income-increasing non-GAAP exclusions. However, the interaction between income-decreasing non-GAAP exclusions and future earnings is not significant, suggesting that while income-decreasing exclusions may be transitory (Baumker et al. 2014; Curtis et al. 2014), the magnitude of these exclusions does not influence investors ability to predict future earnings. Thus, I do not find support for H2b. The garbling of future earnings information seems to be concentrated among firms with larger income-increasing non-GAAP exclusions, lending support to critics concerns that non-GAAP earnings are opportunistically reported.

The models in both Table 3 and Table 4 examine the association between current period returns and future GAAP earnings before extraordinary items, which may not be the most appropriate measure for evaluating the quality of non-GAAP earnings disclosures. If managers exclude items from non-GAAP earnings to convey information about the firm's future operating performance, non-GAAP earnings disclosures may be more useful in predicting earnings from operations rather than earnings before extraordinary items. To examine this question, I replace GAAP earnings before extraordinary items with GAAP earnings from operations and re-estimate the equations with results presented in Table 5.

The results are generally similar to those presented in Table 3 and Table 4, suggesting that the findings are not dependent on using GAAP earnings before extraordinary items rather than operating earnings. The results in Panel A of Table 5 provide evidence that as the magnitude of non-GAAP exclusions increases, the association between current returns and future operating earnings decreases, consistent with larger non-GAAP exclusions garbling information about future earnings from

operations. Panel B separates the non-GAAP exclusions into income-increasing and income-decreasing exclusions and suggests that income-increasing non-GAAP exclusions drive the result of a lower FERC, similar to the results in Table 4.

In untabulated analysis, I re-estimate the models using past, current and future non-GAAP earnings.[29] In this analysis, the results when non-GAAP earnings are compared to GAAP earnings (total exclusions) or operating earnings (recurring exclusions) are no longer significant. However, the results for incremental non-GAAP exclusions relative to "street earnings" are still significant. This may be due to the decreased sample size or that total and recurring exclusions are not as relevant in predicting future non-GAAP earnings.

Regardless of which future earnings measure is used (GAAP earnings before extraordinary items, earnings from operations or non-GAAP earnings), I find no evidence of non-GAAP earnings increasing the amount of future earnings news reflected in current stock returns. On the other hand, I find evidence that as the magnitude of non-GAAP exclusions increase, the FERC decreases, consistent with non-GAAP earnings disclosures garbling future earnings information, decreasing investors' ability to predict future earnings.

As an additional test of H2a, I examine situations where non-GAAP earnings may be less informative due to pressures managers face associated with meeting earnings benchmarks. If non-GAAP exclusions are used to meet an earnings benchmark, I identify those observations as "suspect." The first three columns of Table 6 present the results of estimating Model (5) with *PROFIT* as the *SUSPECT* variable. The three-way interaction

[29] This reduces the sample size to 2,835 because it requires that a firm disclose non-GAAP earnings for five consecutive years to be included in the estimation.

between *PROFIT*, NG^{+} and X_{t3} is not significant in any of these columns, suggesting that using non-GAAP exclusions to change a GAAP operating loss into a non-GAAP profit does not incrementally impact the extent the which future earnings news is reflected in current stock returns.[30] The fourth and fifth columns of Table 6 present the results of using *MEET* and *JUSTMEET* as the *SUSPECT* variable. The three-way interaction between *MEET*, NG^{+} and X_{t3} in column four is insignificant while the three-way interaction between *JUSTMEET*, NG^{+} and X_{t3} in the last column is negative and significant (one-tailed p-value <0.1).[31] These findings suggest that using incremental non-GAAP exclusions to just meet or beat the consensus forecast results in a stronger information garbling effect, consistent with Hirshleifer and Teoh's (2003) theory. That is, future earning are incrementally more difficult for investors to predict when managers use incremental non-GAAP exclusions to just meet or beat the consensus analyst forecast. However, this result is limited to settings where managers aggressively exclude items beyond what analysts have excluded in order to just meet or beat the consensus forecast.

[30] In additional untabulated tests, I examine cases where a GAAP loss before extraordinary items (EPSFX < 0) is turned into a non-GAAP profit and cases where non-GAAP earnings just exceed zero by $0.01 or less. I do not find significant results in either of these cases. I also examine when "street earnings" meet or beat the consensus forecast but non-GAAP EPS is less than the consensus from managers' use of income-decreasing exclusions. In untabulated analysis, I find that the three-way interaction is insignificant in these cases.

[31] If exclusions are not scaled by GAAP EPS before calculating *NG*, this has a two-tailed p-value of less than 0.05.

6. Robustness Tests & Additional Analysis

6.1 Propensity Score Matched Sample

I find that firms with larger non-GAAP exclusions have a weaker association between current returns and future earnings, consistent with non-GAAP earnings disclosures garbling future earnings news. However, it is possible that firms with larger non-GAAP exclusions have innately less predictable future earnings due to other firm characteristics and as a result, the weaker association I find for these firms may not be due to the non-GAAP exclusions. Although I include a number of firm characteristics in my regressions as control variables, their effectiveness as controls depends on the linear relation between variables assumed when using OLS regression. Propensity score matching (PSM) can help address this concern of functional form misspecification, discussed in detail by Shipman et al. (2017). In PSM, treatment and control observations are matched based on an estimated probability of treatment (Rosenbaum and Rubin 1983). This creates a sample of matched pairs that differ only in the variable of interest and all other characteristics are similar across the two groups. Thus, differences in the outcome variable between the two groups are more reliably due to the treatment than differences in group composition.

In my setting, the "treatment" would be firms with large non-GAAP exclusions and "control" firms being those with small non-GAAP exclusions. I first estimate a propensity to disclose large non-GAAP exclusions using the following model:

$$Pr(HI\_EXCL_t = 1) = f\,(\,\lambda_0 + \lambda_1 EXCL_{t-1} + \lambda_2 MISS_t + \lambda_4 LOSS_t + \lambda_5 SIZE_t + \lambda_6 STDROA_t + \lambda_7 NUMANALYSTS_t + \lambda_8 LEVERAGE_t + \lambda_9 BTM_t + \lambda_{10} SPECIAL_t + \lambda_{11} INTAN_t + \lambda_{11} UPEARN_t + Year\ FE + Industry\ FE + \varepsilon_t\,) \quad (6)$$

HI_EXCL is a dummy variable equal to one if the magnitude of a firm's non-GAAP exclusions (scaled by GAAP EPS) are above the industry median in year t. $EXCL_{t-1}$ is the firm's non-GAAP exclusions (scaled by GAAP EPS) in the prior year. All other variables are previously defined. I estimate this model separately for total exclusions, recurring exclusions and incremental exclusions. Firms with larger non-GAAP exclusions (*HI_EXCL*=1) are then matched to firms with smaller non-GAAP exclusions (*HI_EXCL*=0) based on the predicted values from Model (6). I use a caliper distance that is equal to 20% of the standard deviation of the predicted propensity score, as suggested by Austin (2011).

Panel A of Table 7 presents the estimation of Model (6) for $EXCL_{Incr}$ while Panel B provides a comparison of means of the covariates across the two groups after matching on propensity scores. Within my matched sample, there are significantly more firms with negative operating earnings with smaller incremental non-GAAP exclusions than in the larger incremental exclusions group. However, firms with negative operating earnings have a weaker association between current returns and future earning, so having more of these firms in the small non-GAAP exclusion group would bias against finding the negative coefficient on the $NG_t * X_{t3}$ using this sample.

The results of estimating Model (3) and Model (4) using the PSM sample are presented in Table 7 Panel C and Panel D, respectively. The coefficient on the interaction

between non-GAAP exclusions and future earnings is negative and significant for both recurring exclusions and incremental exclusions, consistent with my prior findings, while the result for total non-GAAP exclusions is no longer significant. This is also the case with the income-increasing exclusions presented in Panel D. Thus, after matching on the propensity to disclose larger non-GAAP exclusions, I find that the association between current returns and future earnings is weaker for firms with larger non-GAAP exclusions, consistent with non-GAAP exclusions garbling future earnings information.[32]

6.2 Consistent Non-GAAP Reporters

In the May 2016 update to the Compliance and Disclosure Interpretation related to non-GAAP reporting, the SEC specifies that inconsistently reporting non-GAAP financial measures between periods could be misleading (SEC 2016). Although I am not able to identify the specific items excluded in calculating non-GAAP EPS each year, I attempt to proxy for consistent non-GAAP reporting firms based on a specific reporting phenomenon. There are 461 observations in my sample where non-GAAP EPS is equal to GAAP EPS before extraordinary items. It is not clear why a firm would report non-GAAP EPS equal to GAAP EPS, unless the firm consistently reports non-GAAP EPS, excluding the same items each period, and none of those items occurred during the specified period. I identify firms that reported non-GAAP EPS equal to GAAP EPS at least once during my sample period (24.6% of the 1,952 firms in my sample, or 26.1% of the 7,010 firm-year observations). For each of those firms' annual observations, I set *CONSISTENT* equal to one.

[32] In untabulated analysis using the PSM sample, I do not find significant results for Model (5) with the "suspect" observations. I do not find this alarming due to the reduced sample size from matching combined with the small number of observations in the *JUSTMEET* condition.

Table 8 presents the results of comparing the FERC of these firms to all other firms in my sample. I find that the interaction between *CONSISTENT* and X_{t3} is positive and significant, suggesting that the FERC is higher for these firms. That is, firms that consistently report non-GAAP earnings have more future earnings information reflected in current stock returns than other non-GAAP reporting firms, suggesting that non-GAAP reporting by these firms enables investors to better predict future earnings. I also examine whether non-GAAP exclusions of these firms are associated with less garbling of future earnings information. The significantly positive three-way interaction in the last column in Table 8 suggests that larger incremental non-GAAP exclusions of these firms are associated with higher FERCs relative to all other non-GAAP disclosing firms. Thus, opposite of my main findings, larger non-GAAP exclusions by firms that consistently report non-GAAP earnings appear to provide information that allows investors to better predict future earnings. SEC concerns over inconsistent non-GAAP reporting seems to be warranted as consistent non-GAAP reporting firms are associated with less garbling of future earnings news.

6.3 Earnings Components

Stock prices represent discounted expected future cash flows, and many firms exclude non-cash items in their calculation of non-GAAP earnings, presumably to help in the estimation of future cash flows. I separate past, current and future earnings into its accrual and cash flow components and re-estimate my models to examine whether my results are driven by either the accrual or cash flow component alone. In untabulated analysis, I find that higher magnitude non-GAAP exclusions as associated with both less predictable future accruals and less predictable future cash flows. The magnitude and

significance of the coefficient on the cash flow component is roughly double that on the accrual component. This result holds when separating income-increasing and income-decreasing exclusions as well.

7. Conclusion

Former SEC Chair Mary Jo White has repeatedly expressed concern over non-GAAP measures potentially confusing investors (White 2015; White 2016). Despite these concerns, the academic literature has yet to provide direct tests of whether non-GAAP earnings disclosures convey additional information to investors about future earnings or garble future earnings news. Using the association between *current* period returns and expected *future* earnings, I examine whether non-GAAP earnings impact investors' ability to predict future earnings. I provide evidence that as the magnitude of the managers' non-GAAP exclusions increase, less information about future earnings is reflected in current stock returns, consistent with non-GAAP earnings garbling future earnings news. This information garbling effect is driven by income-increasing non-GAAP exclusions, where managers provide a non-GAAP earnings number that exceeds GAAP earnings. I find consistent results when using future GAAP earnings before extraordinary items, future GAAP earnings from operations, or future non-GAAP earnings. I also provide evidence that managers excluding items beyond analysts' exclusions in order to meet or beat the consensus earnings forecast is associated with incrementally more garbling of future earnings news. To the extent that regulators are concerned about non-GAAP earnings confusing investors by garbling future earnings news, the results of this study suggest that regulators concerns are warranted. However, the effect of recent guidance released by the SEC related to non-GAAP disclosures in mitigating the disclosure of misleading information remains to be seen.

Many studies use "street earnings" as a proxy for the non-GAAP earnings disclosed by managers. However, the results of this paper indicate that the differences

between manager-adjusted non-GAAP earnings and analyst-adjusted "street earnings" are associated with different levels of future earnings information reflected in current stock returns. Therefore, "street earnings" may not be an appropriate proxy for manager-adjusted non-GAAP earnings.

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Appendix A: Tables and Figures

Table 1 - Descriptive Statistics

Variable	Mean	Std Dev	Min	0.25	Median	0.75	Max
EPS_{GAAP}	1.068	2.427	-33.260	0.130	0.940	2.010	27.660
EPS_{Op}	1.415	1.963	-15.220	0.320	1.100	2.180	28.190
EPS_{Street}	1.562	1.921	-14.050	0.480	1.220	2.290	31.280
$EPS_{NonGAAP}$	1.623	1.924	-14.050	0.520	1.250	2.310	32.930
R_t	0.120	0.475	-0.815	-0.166	0.072	0.321	3.327
X_{t-1}	0.002	0.193	-2.417	0.010	0.041	0.065	0.314
X_t	0.020	0.125	-1.140	0.010	0.045	0.071	0.382
X_{t3}	0.107	0.291	-1.955	0.009	0.144	0.248	1.414
R_{t3}	0.352	0.841	-0.946	-0.218	0.210	0.695	4.876
$EXCL_{Total}$	0.519	1.251	-2.060	0.010	0.200	0.580	7.420
$EXCL_{Recur}$	0.196	0.599	-1.680	0.000	0.050	0.290	3.280
$EXCL_{Incr}$	0.052	0.332	-1.150	0.000	0.000	0.020	2.060
SIZE	7.363	1.758	2.138	6.103	7.270	8.510	12.399
STDROA	0.072	0.087	0.001	0.023	0.047	0.088	0.859
NUMANALYSTS	2.123	0.700	0.693	1.609	2.197	2.639	3.401
MISS	0.538	0.499	0.000	0.000	1.000	1.000	1.000
LOSS	0.146	0.353	0.000	0.000	0.000	0.000	1.000
LEVERAGE	0.204	0.189	0.000	0.028	0.175	0.320	0.829
BTM	0.532	0.383	-0.186	0.272	0.459	0.709	2.545
SPECIAL	-0.019	0.046	-0.252	-0.016	-0.004	0.000	0.057
INTAN	0.217	0.202	0.000	0.040	0.163	0.352	0.728
UPEARN	0.594	0.491	0.000	0.000	1.000	1.000	1.000
LAG_NONGAAP	0.742	0.437	0.000	0.000	1.000	1.000	1.000
PROFIT	0.061	0.239	0.000	0.000	0.000	0.000	1.000
MEET	0.089	0.285	0.000	0.000	0.000	0.000	1.000
JUSTMEET	0.016	0.124	0.000	0.000	0.000	0.000	1.000
CONSISTENT	0.261	0.439	0.000	0.000	0.000	1.000	1.000

This table provides descriptive statistics for the sample of 7,010 firm-year observations of firms that disclosed non-GAAP earnings per share from 2003 to 2012. See Appendix for variable definitions.

Table 2 - Correlation Matrix

Variable	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
A. R_t	1.00	-0.16	0.20	0.21	-0.08	-0.18	-0.06	-0.02	-0.03	0.01	0.03	-0.07	-0.10	-0.02	0.15	0.20	-0.01	0.29
B. X_{t-1}	-0.01	1.00	0.36	0.18	0.00	-0.03	-0.05	-0.05	0.19	-0.20	0.14	-0.05	-0.37	-0.02	-0.18	0.10	0.03	-0.19
C. X_t	0.32	0.51	1.00	0.35	-0.03	-0.58	-0.27	-0.12	0.22	-0.20	0.15	-0.17	-0.58	-0.04	-0.23	0.61	0.03	0.29
D. X_{t3}	0.33	0.35	0.50	1.00	0.38	-0.09	-0.09	-0.05	0.23	-0.23	0.10	-0.13	-0.32	0.05	-0.02	0.12	-0.05	0.13
E. R_{t3}	-0.06	0.07	0.07	0.47	1.00	0.06	0.04	0.00	-0.03	-0.02	-0.01	0.02	0.00	0.04	0.06	-0.06	0.03	-0.02
F. $EXCL_{Total}$	-0.17	-0.12	-0.51	-0.16	0.06	1.00	0.59	0.27	0.08	0.05	0.03	0.18	0.20	0.12	0.15	-0.63	0.08	-0.34
G. $EXCL_{Recur}$	-0.06	-0.19	-0.33	-0.18	0.03	0.62	1.00	0.43	0.02	0.08	0.05	0.36	0.27	0.06	0.05	-0.09	0.08	-0.16
H.$EXCL_{Incr}$	-0.02	-0.07	-0.10	-0.08	-0.04	0.22	0.32	1.00	-0.05	0.05	-0.09	-0.07	0.10	0.00	0.08	-0.05	-0.03	-0.07
I. SIZE	0.02	0.36	0.35	0.31	0.04	0.05	-0.08	-0.10	1.00	-0.33	0.58	-0.07	-0.30	0.26	0.05	0.10	0.07	0.01
J. STDROA	-0.06	-0.34	-0.33	-0.36	-0.10	0.13	0.18	0.06	-0.44	1.00	-0.08	0.07	0.28	-0.08	-0.13	-0.16	-0.05	-0.02
K. NUMANALYSTS	0.06	0.10	0.13	0.11	0.03	0.06	0.06	-0.09	0.58	-0.09	1.00	0.01	-0.20	0.04	-0.26	0.07	0.12	0.05
L. MISS	-0.09	-0.13	-0.27	-0.18	-0.01	0.32	0.56	-0.13	-0.07	0.13	0.01	1.00	0.18	-0.03	0.00	-0.05	0.08	-0.14
M. LOSS	-0.14	-0.40	-0.56	-0.34	-0.05	0.21	0.25	0.08	-0.30	0.33	-0.19	0.18	1.00	-0.02	0.15	-0.23	-0.08	-0.17
N. LEV	-0.01	0.14	0.10	0.12	0.05	0.07	-0.08	-0.07	0.38	-0.19	0.08	-0.06	-0.06	1.00	-0.09	-0.04	0.15	-0.06
O. BTM	0.09	0.08	0.00	0.06	0.05	0.08	-0.02	0.02	0.07	-0.12	-0.26	0.01	0.12	-0.05	1.00	-0.11	-0.08	-0.08
P. SPECIAL	0.17	0.10	0.41	0.13	-0.05	-0.56	-0.04	0.00	0.03	-0.17	0.03	-0.03	-0.17	-0.09	-0.04	1.00	-0.04	0.31
Q. INTAN	0.01	-0.03	-0.04	-0.03	0.07	0.17	0.10	-0.04	0.07	0.02	0.11	0.07	-0.10	0.15	-0.07	-0.22	1.00	0.00
R. UPEARN	0.32	-0.27	0.37	0.16	-0.01	-0.37	-0.14	-0.03	0.01	-0.05	0.06	-0.14	-0.17	-0.06	-0.10	0.31	0.00	1.00

This table gives the correlation between the variables using the sample of 7,010 firm-year observations of non-GAAP earnings disclosing firms from 2003 to 2012. Pearson correlations are shown above the diagonal while Spearman correlations are shown below the diagonal. See Appendix for variable definitions.

Table 3 – Magnitude of Non-GAAP Exclusions

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t + \beta_6 NG_t * X_{t-1} + \beta_7 NG_t * X_t + \boldsymbol{\beta_8 NG_t * X_{t3}} + \beta_9 NG_t * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (3)$$

	$\boldsymbol{NG_t = NG_{Total}}$	$\boldsymbol{NG_t = NG_{Recur}}$	$\boldsymbol{NG_t = NG_{Incr}}$
Intercept	0.050	0.083	0.079
	(0.729)	(1.252)	(1.133)
X_{t-1}	-0.441***	-0.557***	-0.388***
	(-4.493)	(-5.662)	(-6.118)
X_t	0.599***	0.617***	0.521***
	(3.115)	(6.507)	(6.912)
X_{t3}	0.822***	0.710***	0.721***
	(3.379)	(2.827)	(2.776)
R_{t3}	-0.091***	-0.113***	-0.099***
	(-5.924)	(-8.118)	(-9.497)
NG_t	0.092***	0.086***	0.024
	(4.094)	(4.337)	(1.296)
$NG_t * X_{t-1}$	0.088	0.285**	-0.028
	(0.600)	(2.095)	(-0.233)
$NG_t * X_t$	-0.145	-0.258	0.012
	(-0.541)	(-1.326)	(0.066)
$\boldsymbol{NG_t * X_{t3}}$	**-0.314*** **	**-0.211** **	**-0.222** **
	(-3.072)	**(-2.301)**	**(-2.211)**
$NG_t * R_{t3}$	-0.007	0.034	0.020
	(-0.302)	(1.516)	(0.857)
Controls	Included	Included	Included
Year & Industry FE	Included	Included	Included
Adjusted R^2	0.335	0.336	0.333
Observations	7,010	7,010	7,010

This table provides the results from estimating Model (3) using firm-year observations of firms that disclosed non-GAAP earnings per share between 2003 and 2012. *NG*, as well as all control variables are within industry-year fractional rankings that range from 0 to 1. T-statistics based on standard errors clustered by firm are presented below each coefficient. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Table 4 – Income-Increasing & Income-Decreasing Non-GAAP Exclusions

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t^{+} + \beta_6 NG_t^{+} * X_{t-1} + \beta_7 NG_t^{+} * X_t + \boldsymbol{\beta_8 NG_t^{+} * X_{t3}} + \beta_9 NG_t^{+} * R_{t3} + \beta_{10} NG_t^{-} + \beta_{11} NG_t^{-} * X_{t-1} + \beta_{12} NG_t^{-} * X_t + \boldsymbol{\beta_{13} NG_t^{-} * X_{t3}} + \beta_{14} NG_t^{-} * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (4)$$

	$\boldsymbol{NG_t = NG_{Total}}$	$\boldsymbol{NG_t = NG_{Recur}}$	$\boldsymbol{NG_t = NG_{Incr}}$
Intercept	0.041	0.092	0.087
	(0.591)	(1.373)	(1.282)
X_{t-1}	-0.428***	-0.554***	-0.387***
	(-4.312)	(-5.630)	(-6.130)
X_t	0.584***	0.614***	0.520***
	(3.017)	(6.445)	(6.890)
X_{t3}	0.833***	0.680***	0.710***
	(3.450)	(2.735)	(2.735)
R_{t3}	-0.092***	-0.113***	-0.098***
	(-5.907)	(-8.112)	(-9.436)
NG_t^{+}	0.103***	0.105***	0.037*
	(4.440)	(5.081)	(1.747)
$NG_t^{+} * X_{t-1}$	0.048	0.284**	-0.028
	(0.314)	(2.036)	(-0.203)
$NG_t^{+} * X_t$	-0.101	-0.228	-0.029
	(-0.365)	(-1.129)	(-0.139)
$\boldsymbol{NG_t^{+} * X_{t3}}$	**-0.332*** **	**-0.234** **	**-0.275** **
	(-3.126)	**(-2.434)**	**(-2.404)**
$NG_t^{+} * R_{t3}$	-0.009	0.029	0.025
	(-0.369)	(1.266)	(0.863)
NG_t^{-}	0.024	0.033	-0.017
	(0.631)	(1.047)	(-0.653)
$NG_t^{-} * X_{t-1}$	0.241	0.277	0.008
	(1.506)	(1.570)	(0.051)
$NG_t^{-} * X_t$	-0.095	-0.298	0.098
	(-0.272)	(-0.952)	(0.411)
$\boldsymbol{NG_t^{-} * X_{t3}}$	**-0.221**	**-0.143**	**-0.067**
	(-1.476)	**(-1.118)**	**(-0.495)**
$NG_t^{-} * R_{t3}$	0.011	0.049	0.011
	(0.287)	(1.458)	(0.347)
Controls	Included	Included	Included
Year & Industry FE	Included	Included	Included
Adjusted R^2	0.336	0.336	0.333
Observations	7,010	7,010	7,010

This table provides the results from estimating Model (4). *NG*, as well as all control variables are within industry-year fractional rankings that range from 0 to 1. T-statistics based on standard errors clustered by firm are presented below each coefficient. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Table 5 – Predicting Operating Earnings

Panel A: Magnitude of Non-GAAP Exclusions

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t + \beta_6 NG_t * X_{t-1} + \beta_7 NG_t * X_t + \boldsymbol{\beta_8 NG_t * X_{t3}} + \beta_9 NG_t * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (3)$$

	$\boldsymbol{NG_t = NG_{Total}}$	$\boldsymbol{NG_t = NG_{Recur}}$	$\boldsymbol{NG_t = NG_{Incr}}$
Intercept	0.005	0.024	0.024
	(0.067)	(0.340)	(0.343)
X_{t-1}	-0.611***	-1.112***	-0.733***
	(-3.117)	(-5.363)	(-5.954)
X_t	0.279	0.802**	0.307*
	(1.008)	(2.406)	(1.736)
X_{t3}	1.114***	1.071***	1.082***
	(4.211)	(3.805)	(4.189)
R_{t3}	-0.100***	-0.123***	-0.109***
	(-6.473)	(-8.555)	(-10.192)
NG_t	0.113***	0.126***	0.056**
	(4.132)	(5.279)	(2.355)
$NG_t * X_{t-1}$	-0.130	0.711**	0.063
	(-0.417)	(2.373)	(0.268)
$NG_t * X_t$	0.105	-0.696	0.238
	(0.243)	(-1.587)	(0.659)
$\boldsymbol{NG_t * X_{t3}}$	**-0.265***	**-0.240***	**-0.290****
	(-1.733)	**(-1.858)**	**(-1.992)**
$NG_t * R_{t3}$	-0.015	0.028	0.011
	(-0.648)	(1.240)	(0.479)
Controls	Included	Included	Included
Year & Industry FE	Included	Included	Included
Adjusted R^2	0.353	0.356	0.351
Observations	7,010	7,010	7,010

This table provides the results from estimating Model (3) using firm-year observations of firms that disclosed non-GAAP earnings per share between 2003 and 2012. GAAP earnings from operations (OPREPSX, adjusted for stock splits and dividends) is used for X_{t-1}, X_t, and X_{t3}. *NG*, as well as all control variables are within industry-year fractional rankings that range from 0 to 1. T-statistics based on standard errors clustered by firm are presented below each coefficient. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Panel B: Income-Increasing & Income-Decreasing Non-GAAP Exclusions

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t^+ + \beta_6 NG_t^+ * X_{t-1} + \beta_7 NG_t^+ * X_t + \boldsymbol{\beta_8 NG_t^+ * X_{t3}} + \beta_9 NG_t^+ * R_{t3} + \beta_5 NG_t^- + \beta_6 NG_t^- * X_{t-1} + \beta_7 NG_t^- * X_t + \boldsymbol{\beta_8 NG_t^- * X_{t3}} + \beta_9 NG_t^- * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (4)$$

	$\boldsymbol{NG_t = NG_{Total}}$	$\boldsymbol{NG_t = NG_{Recur}}$	$\boldsymbol{NG_t = NG_{Incr}}$
Intercept	-0.010	0.029	0.028
	(-0.144)	(0.394)	(0.406)
X_{t-1}	-0.621***	-1.099***	-0.732***
	(-3.178)	(-5.289)	(-5.944)
X_t	0.304	0.785**	0.304*
	(1.091)	(2.352)	(1.717)
X_{t3}	1.136***	1.088***	1.064***
	(4.258)	(3.776)	(4.120)
R_{t3}	-0.101***	-0.123***	-0.108***
	(-6.507)	(-8.551)	(-10.132)
NG_t^+	0.123***	0.146***	0.077***
	(4.353)	(5.753)	(2.898)
$NG_t^+ * X_{t-1}$	-0.229	0.642**	0.090
	(-0.726)	(2.042)	(0.344)
$NG_t^+ * X_t$	0.172	-0.468	0.215
	(0.391)	(-1.049)	(0.518)
$\boldsymbol{NG_t^+ * X_{t3}}$	**-0.261***	**-0.257***	**-0.367****
	(-1.670)	**(-1.861)**	**(-2.140)**
$NG_t^+ * R_{t3}$	-0.016	0.027	0.016
	(-0.664)	(1.151)	(0.552)
NG_t^-	0.109**	0.080**	-0.005
	(2.362)	(2.267)	(-0.141)
$NG_t^- * X_{t-1}$	0.644*	0.914***	-0.036
	(1.756)	(2.609)	(-0.113)
$NG_t^- * X_t$	-0.646	-1.206**	0.395
	(-1.106)	(-2.167)	(0.945)
$\boldsymbol{NG_t^- * X_{t3}}$	**-0.336**	**-0.108**	**-0.089**
	(-1.638)	**(-0.621)**	**(-0.563)**
$NG_t^- * R_{t3}$	0.003	0.030	-0.002
	(0.077)	(0.946)	(-0.057)
Controls	Included	Included	Included
Year & Industry FE	Included	Included	Included
Adjusted R^2	0.354	0.357	0.352
Observations	7,010	7,010	7,010

This table provides the results from estimating Model (4) using GAAP earnings from operations (OPREPSX, adjusted for stock splits and dividends) for X_{t-1}, X_t, and X_{t3}. *NG*, as well as all control variables are within industry-year fractional rankings that range from 0 to 1. T-statistics based on standard errors clustered by firm are presented below each coefficient. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Table 6 – Using Non-GAAP Earnings to Meet/Beat Earnings Thresholds

SUSPECT =	***PROFIT***			***MEET***	***JUSTMEET***
NG_t =	NG_{Total}	NG_{Recur}	NG_{Incr}	NG_{Incr}	NG_{Incr}
X_{t-1}	-0.401***	-0.456***	-0.432***	-0.386***	-0.385***
	(-4.943)	(-5.939)	(-7.236)	(-6.769)	(-6.812)
X_t	0.521***	0.491***	0.534***	0.513***	0.532***
	(3.247)	(5.737)	(6.480)	(7.056)	(7.403)
X_{t3}	0.818***	0.633**	0.696***	0.713***	0.712***
	(3.435)	(2.485)	(2.792)	(2.788)	(2.765)
R_{t3}	-0.090***	-0.102***	-0.102***	-0.097***	-0.097***
	(-6.721)	(-8.317)	(-10.258)	(-9.943)	(-9.897)
NG_t^+	0.095***	0.084***	0.038*	0.055**	0.044**
	(4.159)	(4.227)	(1.794)	(2.228)	(2.110)
$NG_t^+ * X_{t-1}$	-0.002	0.122	0.077	-0.110	-0.043
	(-0.013)	(0.933)	(0.473)	(-0.731)	(-0.327)
$NG_t^+ * X_t$	0.108	0.336	0.129	0.027	-0.039
	(0.458)	(1.600)	(0.652)	(0.159)	(-0.190)
$NG_t^+ * X_{t3}$	-0.320***	-0.235**	-0.318***	-0.225*	-0.262**
	(-3.163)	(-2.556)	(-2.583)	(-1.907)	(-2.296)
$NG_t^+ * R_{t3}$	-0.018	0.009	0.030	0.010	0.022
	(-0.835)	(0.411)	(1.158)	(0.334)	(0.767)
$SUSPECT_t$	0.038	-0.112	0.097**	-0.052	0.111
	(0.292)	(-0.634)	(2.082)	(-1.084)	(1.132)
$SUSPECT_t * X_{t-1}$	0.532*	-0.662	0.183	0.324	-1.698
	(1.827)	(-1.578)	(1.248)	(0.689)	(-1.083)
$SUSPECT_t * X_t$	-0.183	0.704*	-0.003	0.479	-0.766
	(-0.276)	(1.690)	(-0.022)	(1.080)	(-0.830)
$SUSPECT_t * X_{t3}$	-0.026	-0.308	-0.010	-0.359	0.246
	(-0.043)	(-0.518)	(-0.065)	(-1.192)	(0.569)
$SUSPECT_t * R_{t3}$	0.151	0.164	0.051	0.038	-0.116
	(1.440)	(1.342)	(1.486)	(0.445)	(-0.774)
$SUSPECT_t * NG_t^+$	-0.011	0.166	-0.125*	0.022	-0.328**
	(-0.070)	(0.834)	(-1.651)	(0.305)	(-2.157)
$SUSPECT_t * NG_t^+ * X_{t-1}$	-0.630	0.853	-0.468*	-0.059	3.895
	(-1.485)	(1.592)	(-1.667)	(-0.079)	(1.499)
$SUSPECT_t * NG_t^+ * X_t$	-0.172	-1.760***	-1.319**	-0.789	1.113
	(-0.183)	(-2.730)	(-2.523)	(-0.991)	(0.568)
$SUSPECT_t * NG_t^+ * X_{t3}$	**0.212**	**0.543**	**0.150**	**0.298**	**-1.033#**
	(0.304)	**(0.811)**	**(0.573)**	**(0.718)**	**(-1.338)**
$SUSPECT_t * NG_t^+ * R_{t3}$	-0.131	-0.157	-0.039	-0.009	0.298
	(-1.132)	(-1.070)	(-0.399)	(-0.072)	(1.211)
Controls	Included	Included	Included	Included	Included
Year & Industry FE	Included	Included	Included	Included	Included
Adjusted R^2	0.337	0.338	0.337	0.333	0.333
Observations	7,010	7,010	7,010	7,010	7,010

Model (5) estimation with standard errors clustered by firm. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values < 0.01, 0.05 and 0.1. # indicates one-tailed p-value < 0.1.

Table 7 – Propensity Score Matched Sample

Panel A: Propensity Score Estimation

$$Pr(HI\_EXCL_{Incr,t} = 1) = f(\lambda_0 + \lambda_1 EXCL_{t-1} + \lambda_2 MISS_t + \lambda_4 LOSS_t + \lambda_5 SIZE_t + \lambda_6 STDROA_t + \lambda_7 NUMANALYSTS_t + \lambda_8 LEVERAGE_t + \lambda_9 BTM_t + \lambda_{10} SPECIAL_t + \lambda_{11} INTAN_t + \lambda_{11} UPEARN_t + Year\ FE + Industry\ FE + \varepsilon_t) \quad (6)$$

	Coefficient	Chi-Square	p-value
Intercept	0.1351	0.466	0.4947
$EXCL_{Incr,t-1}$	0.3060***	94.176	<0.0001
$MISS_t$	-0.3679***	87.798	<0.0001
$LOSS_t$	0.1088*	3.372	0.0663
$SIZE_t$	0.0264	2.353	0.1250
$STDROA_t$	0.7687***	10.174	0.0014
$NUMANALYSTS_t$	-0.3094***	61.734	<0.0001
$LEVERAGE_t$	0.0436	0.145	0.7033
BTM_t	-0.0836	2.026	0.1546
$SPECIAL_t$	0.0656***	10.055	0.0015
$INTAN_t$	0.0012	0.559	0.4548
$UPEARN_t$	-0.1944***	22.948	<0.0001
Year & Industry FE	Included		
N	5,426		
Max-rescaled R^2	0.159		
Area under ROC Curve	0.708		

This table provides results from estimating Model (6) with *HI_EXCL* as the dependent variable. Chi-square values are reported to the right of the coefficient estimates. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Panel B: Covariate Balance

Variable	$HI\_EXCL_{Incr} = 1$ Mean	$HI\_EXCL_{Incr} = 0$ Mean	t-statistic of Difference	p-value
MISS	0.546	0.569	1.04	0.297
LOSS	0.119	0.187	4.21***	0.000
SIZE	7.477	7.374	-1.27	0.205
STDROA	0.068	0.072	1.18	0.237
NUMANALYSTS	2.197	2.153	-1.46	0.144
LEVERAGE	0.195	0.185	-1.27	0.205
BTM	0.530	0.542	0.66	0.511
SPECIAL	-0.018	-0.022	-1.71*	0.087
INTAN	0.215	0.223	0.89	0.373
UPEARN	0.599	0.579	-0.87	0.384
N	984	984		

This table presents the mean values of the control variables across the $HI\_EXCL_{Incr} = 1$ and $HI\_EXCL_{Incr} = 0$ groups after using propensity score matching. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Panel C: Magnitude of Non-GAAP Exclusions

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t + \beta_6 NG_t * X_{t-1} + \beta_7 NG_t * X_t + \boldsymbol{\beta_8 NG_t * X_{t3}} + \beta_9 NG_t * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (3)$$

	$\boldsymbol{NG_t = NG_{Total}}$	$\boldsymbol{NG_t = NG_{Recur}}$	$\boldsymbol{NG_t = NG_{Incr}}$
Intercept	-0.155	0.066	-0.160
	(-1.113)	(0.502)	(-1.251)
X_{t-1}	-0.073	-0.655***	-0.212
	(-0.339)	(-4.046)	(-1.513)
X_t	-0.050	0.752***	0.254*
	(-0.095)	(3.942)	(1.886)
X_{t3}	1.144***	0.697*	0.935**
	(2.717)	(1.729)	(2.466)
R_{t3}	-0.044	-0.094***	-0.081***
	(-1.152)	(-3.013)	(-4.686)
NG_t	0.090	0.181***	0.050
	(1.427)	(3.946)	(1.359)
$NG_t * X_{t-1}$	-0.574	0.385	-0.110
	(-1.510)	(1.513)	(-0.506)
$NG_t * X_t$	0.545	-0.047	0.609*
	(0.741)	(-0.117)	(1.886)
$\boldsymbol{NG_t * X_{t3}}$	**-0.025**	**-0.525*** **	**-0.510** **
	(-0.105)	**(-2.590)**	**(-2.563)**
$NG_t * R_{t3}$	-0.155***	0.013	0.036
	(-2.620)	(0.229)	(0.776)
Controls	Included	Included	Included
Year & Industry FE	Included	Included	Included
Adjusted R^2	0.309	0.363	0.331
Observations	1,526	1,726	1,968

This table provides the results from estimating Model (3) using a propensity score matched sample based on the propensity to have larger non-GAAP exclusions. *NG*, as well as all control variables are within industry-year fractional rankings that range from 0 to 1. T-statistics based on standard errors clustered by firm are presented below each coefficient. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Panel D: Income-Increasing & Income-Decreasing Non-GAAP Exclusions

$$R_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 X_t + \beta_3 X_{t3} + \beta_4 R_{t3} + \beta_5 NG_t^+ + \beta_6 NG_t^+ * X_{t-1} + \beta_7 NG_t^+ * X_t + \boldsymbol{\beta_8 NG_t^+ * X_{t3}} + \beta_9 NG_t^+ * R_{t3} + \beta_5 NG_t^- + \beta_6 NG_t^- * X_{t-1} + \beta_7 NG_t^- * X_t + \boldsymbol{\beta_8 NG_t^- * X_{t3}} + \beta_9 NG_t^- * R_{t3} + \gamma_n Controls + \delta_n Controls * X_{t3} + \varepsilon_t \quad (4)$$

	$NG_t = NG_{Total}$	$NG_t = NG_{Recur}$	$NG_t = NG_{Incr}$
Intercept	-0.206	0.102	-0.186
	(-1.512)	(0.789)	(-1.339)
X_{t-1}	-0.052	-0.601***	-0.226
	(-0.243)	(-3.662)	(-1.582)
X_t	-0.075	0.668***	0.273**
	(-0.140)	(3.419)	(1.999)
X_{t3}	1.367***	0.612	0.941**
	(3.343)	(1.466)	(2.512)
R_{t3}	-0.060	-0.091***	-0.080***
	(-1.555)	(-2.903)	(-4.565)
NG_t^+	0.136**	0.231***	0.086*
	(2.018)	(4.418)	(1.872)
$NG_t^+ * X_{t-1}$	-0.535	0.152	-0.045
	(-1.424)	(0.538)	(-0.132)
$NG_t^+ * X_t$	0.696	0.549	0.807*
	(0.931)	(1.088)	(1.850)
$\boldsymbol{NG_t^+ * X_{t3}}$	**-0.319**	**-0.591****	**-0.713*****
	(-1.247)	**(-2.468)**	**(-2.941)**
$NG_t^+ * R_{t3}$	-0.105*	-0.014	0.041
	(-1.670)	(-0.231)	(0.716)
NG_t^-	-0.096	0.048	-0.033
	(-1.049)	(0.811)	(-0.765)
$NG_t^- * X_{t-1}$	-0.667	1.150***	0.002
	(-1.105)	(2.807)	(0.012)
$NG_t^- * X_t$	0.883	-0.375	0.006
	(0.868)	(-0.806)	(0.017)
$\boldsymbol{NG_t^- * X_{t3}}$	**0.428**	**-0.317**	**-0.036**
	(1.633)	**(-1.345)**	**(-0.192)**
$NG_t^- * R_{t3}$	-0.162**	0.026	-0.003
	(-2.285)	(0.375)	(-0.079)
Controls	Included	Included	Included
Year & Industry FE	Included	Included	Included
Adjusted R^2	0.317	0.369	0.335
Observations	1,526	1,726	1,968

This table provides the results from estimating Model (4) using a propensity score matched sample based on the propensity to have larger non-GAAP exclusions. *NG*, as well as all control variables are within industry-year fractional rankings that range from 0 to 1. T-statistics based on standard errors clustered by firm are presented below each coefficient. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1, respectively.

Table 8 – Consistent Non-GAAP Reporters

		$NG_t = NG_{Recur}$	$NG_t = NG_{Incr}$	$NG_t = NG_{Incr}$
X_{t-1}	-0.380***	-0.409***	-0.530***	-0.342***
	(-6.960)	(-3.163)	(-4.354)	(-4.643)
X_t	0.517***	0.724***	0.671***	0.543***
	(7.027)	(2.775)	(5.714)	(6.150)
X_{t3}	0.584**	0.793***	0.669***	0.702***
	(2.253)	(3.425)	(2.720)	(2.709)
R_{t3}	-0.086***	-0.088***	-0.099***	-0.094***
	(-8.217)	(-4.503)	(-6.022)	(-7.690)
$CONSISTENT_t$	-0.034**	0.033	0.003	-0.008
	(-2.528)	(1.230)	(0.152)	(-0.450)
$CONSISTENT_t*X_{t-1}$	-0.073	-0.068	-0.079	-0.185
	(-0.718)	(-0.351)	(-0.433)	(-1.541)
$CONSISTENT_t*X_t$	0.033	-0.335	-0.208	-0.063
	(0.292)	(-0.949)	(-1.115)	(-0.456)
$CONSISTENT_t*X_{t3}$	**0.195****	0.101	0.181	0.077
	(2.459)	(0.771)	(1.541)	(0.779)
$CONSISTENT_t*R_{t3}$	-0.034*	-0.008	-0.047*	-0.018
	(-1.924)	(-0.274)	(-1.816)	(-0.922)
NG_t		0.118***	0.098***	0.040*
		(4.226)	(4.269)	(1.852)
NG_t*X_{t-1}		0.044	0.255	-0.125
		(0.238)	(1.521)	(-0.904)
NG_t*X_t		-0.348	-0.400*	-0.092
		(-0.945)	(-1.686)	(-0.461)
NG_t*X_{t3}		-0.279**	-0.169	-0.289***
		(-2.218)	(-1.566)	(-2.599)
NG_t*R_{t3}		-0.000	0.017	0.029
		(-0.008)	(0.637)	(1.068)
$CONSISTENT_t*NG_t$		-0.102**	-0.065*	-0.079**
		(-2.331)	(-1.734)	(-2.031)
$CONSISTENT_t*NG_t*X_{t-1}$		0.066	0.036	0.314
		(0.200)	(0.130)	(1.218)
$CONSISTENT_t*NG_t*X_t$		0.544	0.608	0.678*
		(1.052)	(1.577)	(1.700)
$CONSISTENT_t*NG_t*X_{t3}$		**0.062**	**-0.042**	**0.341#**
		(0.268)	**(-0.202)**	**(1.574)**
$CONSISTENT_t*NG_t*R_{t3}$		-0.059	0.044	-0.072
		(-1.137)	(0.912)	(-1.545)
Controls	Included	Included	Included	Included
Year & Industry FE	Included	Included	Included	Included
Adjusted R^2	0.333	0.337	0.337	0.337
Observations	7,010	7,010	7,010	7,010

This table provides results for firms that consistently disclose non-GAAP EPS. Standard errors are clustered by firm. See Appendix for variable definitions. ***, **, and * indicate two-tailed p-values less than 0.01, 0.05 and 0.1. # indicates one-tailed p-value less than 0.1.

Figure 1: Non-GAAP Exclusions

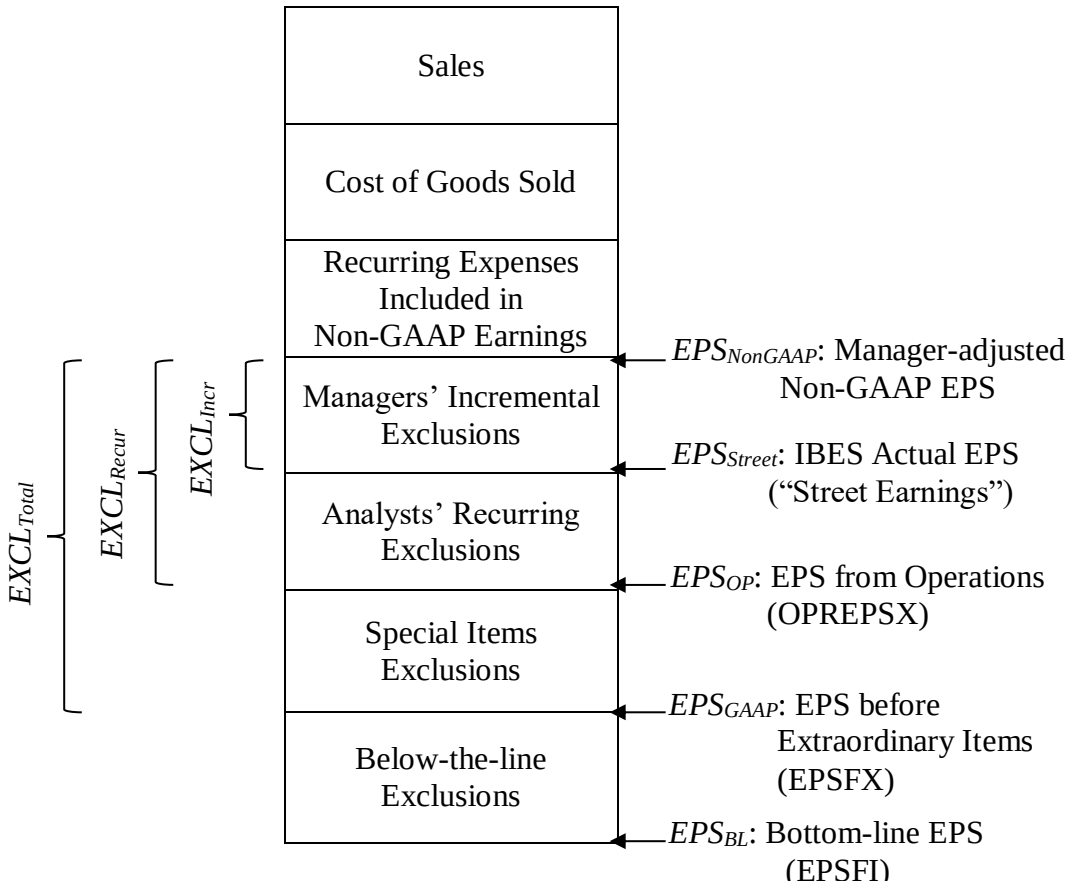
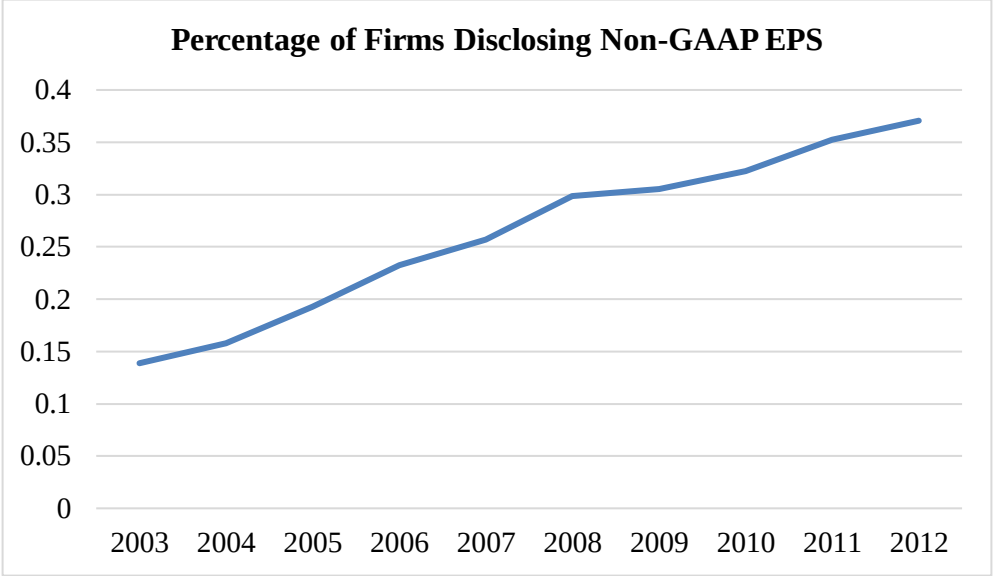
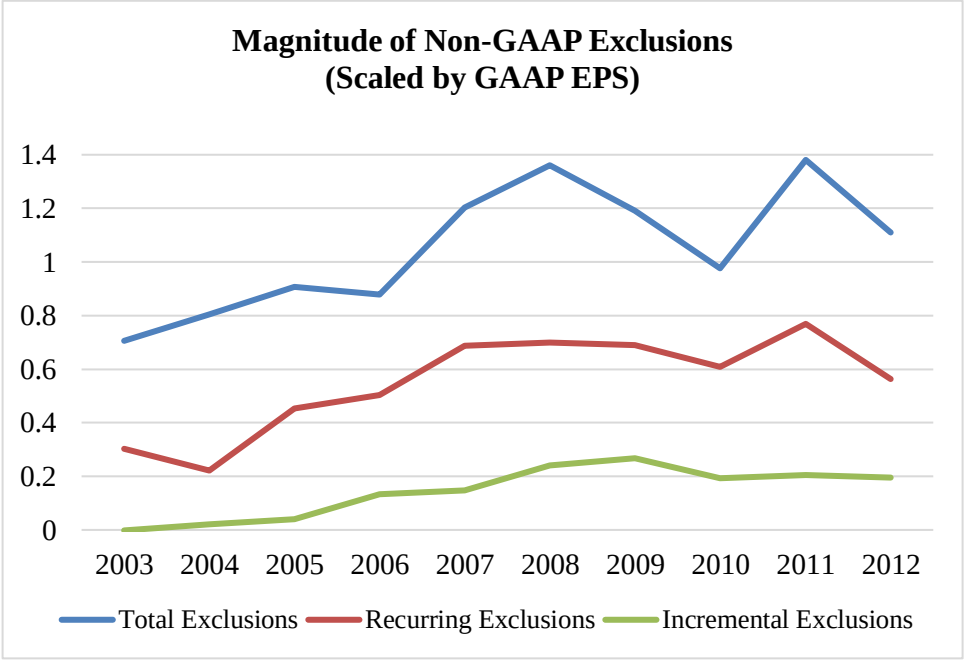


Figure 2: Non-GAAP Earnings & Exclusions Over Time



Panel A: This graph presents the percentage of firms from the intersection of Compustat, CRSP, and IBES that disclosed non-GAAP earnings per share each year from 2003 to 2012.



Panel B: This graph presents the average magnitude of non-GAAP exclusions each year, with exclusions per share scaled by GAAP earnings per share. Total, recurring and incremental exclusions are calculated as outlined in the Appendix ($EXCL_{Total}$, $EXCL_{Recur}$, and $EXCL_{Incr}$).

Appendix B: Variable Definitions

EPS_{GAAP}	GAAP earnings per share before extraordinary items (EPSFX).
EPS_{OP}	GAAP earnings per share from operations (OPREPSX).
EPS_{Street}	Analyst-adjusted "street earnings" per share (IBES Actual EPS).
$EPS_{NonGAAP}$	Manager-adjusted non-GAAP earnings per share disclosed in the fourth quarter earnings announcement press release.
R_t	12-month stock return over the fiscal year t.
X_{t-1}	Earnings per share (EPSFX, adjusted for stock splits and stock dividends) in year t-1, scaled by stock price at the beginning of year t.
X_t	Earnings per share (EPSFX, adjusted for stock splits and stock dividends) in year t, scaled by stock price at the beginning of the year t.
X_{t3}	Sum of earnings per share (EPSFX, adjusted for stock splits and stock dividends) in years t+1, t+2 and t+3, scaled by stock price at the beginning of year t.
R_{t3}	Annually compounded stock return for years t+1 through t+3.
$EXCL_{Total}$	Total non-GAAP exclusions, calculated as $EPS_{NonGAAP}$ minus EPS_{GAAP}.
$EXCL_{Recur}$	Recurring item exclusions, calculated as $EPS_{NonGAAP}$ minus EPS_{OP}.
$EXCL_{Incr}$	Managers' incremental exclusions, calculated as $EPS_{NonGAAP}$ minus EPS_{Street}.
NG_{Total}	Within industry-year fractional ranking of the magnitude of a firm's total non-GAAP exclusions ($EXCL_{Total}$). Values range from 0 to 1 with 0 representing observations with the smallest differences (positive or negative) between GAAP EPS and non-GAAP EPS in each industry-year and 1 representing observations with the largest differences. $EXCL_{Total}$ is scaled by abs(EPS_{GAAP}) before ranking.
NG_{Recur}	Within industry-year fractional ranking of the magnitude of a firm's exclusion of recurring items ($EXCL_{Recur}$ */GAAP EPS*). Values range from 0 to 1 with 0 representing observations with the smallest differences (positive or negative) between GAAP EPS from operations and non-GAAP EPS in each industry-year and 1 representing observations with the largest differences. $EXCL_{Recur}$ is scaled by abs(EPS_{GAAP}) before ranking.
NG_{Incr}	Within industry-year fractional ranking of the magnitude of a firm's incremental non-GAAP exclusions ($EXCL_{Incr}$ */GAAP EPS*). Values range from 0 to 1 with 0 representing observations with the smallest differences (positive or negative) between the analyst-adjusted IBES Actual EPS and non-GAAP EPS in each industry-year and 1 representing observations with the largest differences. $EXCL_{Incr}$ is scaled by abs(EPS_{GAAP}) before ranking.

$PROFIT_t$	= 1 (0 otherwise) if $EPS_{NonGAAP}$ is zero or positive while EPS_{OP} is negative.
$MEET_t$	= 1 (0 otherwise) if $EPS_{NonGAAP}$ meets or exceeds the consensus analyst forecast while EPS_{Street} does not.
$JUSTMEET_t$	= 1 (0 otherwise) if $EPS_{NonGAAP}$ meets or exceeds the consensus analyst forecast by \$0.02 or less while EPS_{Street} does not.
CONSISTENT	=1 (0 otherwise) for firms that have at least one year where $EPS_{NonGAAP}$ is equal to EPS_{GAAP}.
$LAG\_NONGAAP_t$	=1 (0 otherwise) if the firm disclosed $EPS_{NonGAAP}$ in year t-1.
$MISS_t$	=1 (0 otherwise) if EPS_{OP} is less than the consensus analyst forecast in year t.
$LOSS_t$	=1 (0 otherwise) if EPS_{OP} is negative in year t.
$SIZE_t$	Natural log of total assets (AT) at the beginning of year t.
$STDROA_t$	Standard deviation of earnings before extraordinary items and discontinued operations scaled by total assets (IB/AT) over the sample period.
$NUMANALYSTS_t$	Natural log of one plus the number of analysts following the firm in year t.
$LEVERAGE_t$	Ratio of total debt (DLC+DLTT) to total assets (AT) in year t.
BTM_t	Book-to-market ratio, calculated as the ratio of book value of equity to market value of equity (CEQ/(PRCC_F*CSHO)) at the beginning of year t.
$SPECIAL_t$	Special items (SPI), scaled by total assets (AT) at the beginning of year t.
$INTAN_t$	Level of intangible assets (INTAN), scaled by total assets (AT) at the beginning of year t.
$UPEARN_t$	=1 (0 otherwise) if earnings before extraordinary items (IB) in year t is greater than earnings before extraordinary items in year t-1.
HI_EXCL_{Total}	=1 (0 otherwise) if $EXCL_{Total}$ is above the industry median in year t.
HI_EXCL_{Recur}	=1 (0 otherwise) if $EXCL_{Recur}$ is above the industry median in year t.
HI_EXCL_{Incr}	=1 (0 otherwise) if $EXCL_{Incr}$ is above the industry median in year t.