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Evidence Regarding Management's Choice of Forecast Precision and Financial Statement Irregularities

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Introduction

Much prior research focuses on restatements arising from the misapplication of generally accepted accounting principles (GAAP) such that the original financial statements were incorrect at the time issued.[1] This prior research documents evidence that higher litigation risk arising from restatements is associated with a lower propensity to make forecasts, less timely forecasts, and less precision in the forecast (Johnson et al., 2001; Baginski et al., 2002). Ettredge et al. (2013) find that restatement firms exhibit less precise and less optimistically biased management earnings forecasts in the post– restatement periods. This evidence suggests that managers of restatement companies exhibit risk–averting forecasting behavior following restatements.

However, these prior studies may have failed to consider that management's choice of forecast precision may provide insight (an observable signal) into firms' choice to undertake accounting irregularities ([intentional misstatements] [Hennes et al., 2008]). Our study explores this potentially important aspect in which a voluntary disclosure choice can be used to assist in predicting an accounting irregularity that results in a restatement. Of particular interest is whether firms with irregularities tend to issue more precise forecasts in the period for which earnings are restated. This study provides empirical evidence on this issue.

Using insights and results from prior research, we motivate our empirical analyses to better understand the potential link between irregularities and management forecast precision. The intuition presented in the prior management forecast literature to explain their findings assists us in our study. Hennes et al. (2008) report that sorting restatements into either an irregularity group or an error group increases the power of tests that rely on restatements as an indicator of deliberate misreporting. Thus, the implementation of proper controls for these factors is critical.

Part of the purpose of this study is to investigate whether firms with intentional misstatements are induced with economic incentives to issue more precise (point) earnings forecasts than firms without irregularities or restatements in the period for which earnings are restated (the restatement period). The driving force behind this motivation is the managers' desire to capture a large market reaction to their earnings forecast and the more precise forecasts obtain a higher valuation from investors. We contend that firms with subsequent reporting irregularities either (1) chose the forecast precision anticipating that they would be aggressive in their financial reporting or (2) were forced to be aggressive in their financial reporting once they had chosen their forecast precision and determined they would need to be aggressive in order to meet or beat their more precise forecast.

Thus, we believe that a potential incentive exists for a firm to issue a more precise forecast if they believe they can meet or beat that forecast since prior research indicates stronger stock price reactions to more precise management forecasts (Baginski et al., 1993; Libby et al., 2006; Han and Tan, 2007). We are not aware of any prior research that investigates the topic of this study – the potential for a linkage between the choice of management earnings forecast precision and subsequent restatement of the financial statements being forecasted.

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[1]A restatement is made by management to correct previously filed financial statements which are later discovered to have been false and misleading (Skinner, 1997).

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Overall, we find firms with irregularities tend to issue more precise forecasts in the period that earnings are restated in order to capture a larger market reaction, enhance a stronger firm–investor trust relationship, and lower investors' perceived risk and uncertainty about future prospects. Managers may knowingly plan to employ more aggressive earnings management or know that they have the option to do so at the time they issued their forecast and hence can be more precise in their earnings forecast.

We expect that firms with irregularities have a greater propensity to issue more precise forecasts while the managers of firms without irregularities or restatements are more likely to issue less precise management forecasts. Consistent with our expectations, our results provide empirical evidence that firms with a reporting irregularity tend to issue more precise forecasts while those without restatements are likely to issue less precise forecasts. Our results also suggest that the reduction in earnings management following a restatement may be attributed partially to firms choosing less precise forecasts.

This study makes two major contributions to the accounting literature. Management earnings forecasts represent one of the key voluntary disclosure mechanisms by which managers establish or alter market earnings expectations, preempt litigation concerns, and influence their reputation for transparent and accurate reporting. Accordingly, understanding how management makes strategic choices regarding their forecasts is important since the importance of voluntary management earnings forecasts to the functioning of capital markets has been documented (Healy and Palepu, 2001). Evidence of larger negative stock price reactions to announcements of intentional misstatements (i.e., an irregularity) (Hennes et al., 2008) suggests that rational management should have considered the potential costs of an intentional misstatement being discovered when choosing to misstate. Accordingly, we expect management considered the benefit of issuing a precise forecast in their calculus of deciding to misstate earnings. This study adds to this research by directly documenting a relation between a reporting irregularity and the precision in management forecasts of firms.

In addition, the results of this study enrich the disclosure literature by providing evidence on disclosure precision in the context of restatements. While this study deals with a specific adverse event, a restatement, implications of our findings potentially have broader applicability to strategic disclosure choices being made by firms. Thus, we bring a new and rich perspective on the interaction of management, investors and restatements beyond that of other studies examining restatement disclosures (Files et al., 2009). In addition, this study provides evidence that the observable pattern in management forecast precision may have been useful to auditors or investors in predicting that an irregularity was likely and it could result in a restatement.

In section two, we provide an overview of our study, discuss the prior literature and present our hypotheses. We describe our methodology and models in section three and present our empirical results in section four. In section five, we provide our conclusions.

Study Overview, Prior Literature, and Hypothesis Development

Overview

Prior research studies have studied how better corporate governance is associated with a higher overall level of voluntary disclosure (Chi and Ziebart, 2017; Eng and Mak, 2003), forecast errors, forecast optimism, and forecast precision (Ajinkya et al., 2005; Karamanou and Vafeas, 2005). Other prior evidence suggests better corporate governance (Byard et al., 2006) and better disclosure (Chi and Ziebart, 2014) are associated with analysts' forecast accuracy. Chi and Ziebart (2017) study the effect of audit quality on attributes of management earnings forecasts. There is, however, no evidence on how an irregularity influences the precision of management earnings forecasts or vice versa.

Studies have found that restatements result in loss of market value (Palmrose et al., 2004), increased cost of capital (Hribar and Jenkins, 2004), increased auditor resignations (Huang and Scholz, 2012), more lawsuits (Palmrose and Scholz, 2004), impact compensation, executive turnover, and external financing (Desai et al., 2006; Graham et al., 2008; Cheng and Farber, 2008; Chen et al., 2013). Studies also indicate that investors react more strongly to more precise than less precise forecasts (Baginski et al., 1993). These consequences provide managers with incentives to strategically choose the attributes of their forecasts.

Since a more precise earnings forecast leads to a positive market reaction (Pownall et al., 1993; Baginski et al., 1993; Libby et al., 2006) and an irregularity significantly causes investors to respond negatively (Hennes et al., 2008), firms with

irregularities may have strong incentives to take actions for optimal forecasts.[2] This is also supported in several studies that demonstrate that managers have considerable discretion in choosing the frequency, precision, and horizon of their forecasts when issuing forecasts (Choi et al., 2010; Choi et al., 2011). Management earnings forecasts represent one of the vital voluntary disclosure mechanisms by which managers establish or alter market earnings expectations (Hirst et al., 2008).

In this study, we focus on irregularities (intentional misstatement) and their linkage to the precision level of a management earnings forecast. Irregularities are the more severe type of restatement and have greatly impacted financial reporting credibility. Irregularities also are assumed to be somewhat intentional, or at least, are not due to an unintentional error. Since we are looking at the linkage between forecast precision (a management choice) and irregularities (also a management choice), restatements due to errors are less prone to have been the result of intentional action by management.

Investors' perceptions of financial quality are important since they affect their perception of the reliability of the financial information. Accordingly, irregularities, by definition, imply a lower quality of financial information and questions management honesty, integrity, and credibility since the irregularity is, by definition, due to an intentional decision. Thus, investors and regulators view irregularities as being much more severe, and controlling for error versus irregularity is likely to improve the power of tests in our restatement setting.

Based on Hennes et al. (2008), we identify a sample of firms that committed financial reporting fraud and thus restated their earnings during 2000 to 2005. As a control sample we use observations from the COMPUSTAT universe during 2000 to 2005 for which earnings are not restated.[3] Using a sample of 8,853 management forecasts of quarterly EPS made during the period 2000 to 2005, we document that managers of firms subject to intentional misstatements (fraud) tend to issue either point forecasts in the period for which earnings are restated (the restatement period) or smaller ranges if a range forecast is issued. A descriptive analysis of firms issuing a forecast in the period in which an accounting irregularity occurs shows that the change between the prior management forecast (either for the prior quarter of the current year or the same quarter for the prior year) is from a less precise to a more precise forecast for many observations in our sample. Our evidence also suggests that managers of firms without irregularities or restatements are more likely to disclose less precise management forecasts.

Restatement

Restatements often call into question the credibility of a firm's prior financial statements and are often accompanied by allegations of securities fraud. Restatements not only cause investors and analysts to reassess the firm's future earnings prospects but also to lose confidence in the quality of reported earnings. Prior studies explore the causes and consequences of restatements with hypotheses based on the premise that restatements are due to aggressive accounting (intentional misreporting) (Hennes et al., 2008). For example, Kedia and Philippon (2009) study the economics of fraudulent reporting and refer to the misstated period for all the restatements in their sample as the "fraudulent reporting period".[4]

Much of the research on restatements has focused on the financial statement effects of restatements and has shown that the negative market reaction to restatements varies with certain characteristics of these financial statement corrections (Palmrose et al., 2004). Prior research on accounting restatements also includes such topics as: restatements and management earnings forecast behavior (Ettredge et al., 2013); underlying causes attributed to restatements (Plumlee and Yohn, 2010); executive compensation and incentives to restate earnings (Efendi et al., 2007; Burns and Kedia, 2006); the market reaction to earnings restatements (Palmrose et al., 2004), restatements and the cost of capital (Hribar and Jenkins, 2004); restatements and executive turnover (Desai et al., 2006; Collins et al., 2009; Land, 2010; Burks, 2010); restatements and auditor turnover (Hennes et al., 2012; Wallace, 2005; Thompson and McCoy, 2008; Srinivasan, 2005; Agrawal and Cooper, 2016); the information content of earnings after restatements (Wilson, 2008); restatements and audit committee consequences (Srinivasan, 2005); the characteristics of repeat restatements (Files et al., 2014); and corporate decisions on the impact of reoccurrence of financial restatements (Chi and Sun, 2014).

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[2]Hennes et al. (2008) report that sorting restatements into two groups of either an irregularity or an error could increase the power of tests that rely on restatements as an indicator of deliberate misreporting.

[3]Given our research issue and the modeling approach we use in our analyses (forecast precision as the independent variable), we do not try to match observations between the irregularity sample and our control sample.

[4]The executive turnover studies hypothesize that executives are fired for aggressive accounting, and the compensation and restatement studies hypothesize that managers intentionally misstate earnings for compensation–related reasons.

Irregularities

For our research on restatements, a focus on irregularities rather than on errors is more appropriate and inclusion of errors in a sample presumed to be entirely irregularities or aggressive accounting could affect the interpretation of the results (Hennes et al., 2008). The impact of restatements involving irregularities has caused significant reactions from the stock market, auditor turnover, and manager turnover. Specifically, Hennes et al. (2012) find that restatements classified as irregularities suffer a higher likelihood of auditor dismissal than restatements classified as errors. Hennes et al. (2012) also find that the market reaction to the irregularities sample (–fourteen percent) is significantly more negative than it is for the errors sample (–two percent). Hennes et al. (2012) re–examine the relation between restatements and CEO/CFO turnover in the thirteen months (six months before to six months after) surrounding the restatements and find that restating firms experience significantly higher CEO/CFO turnover. Moreover, turnover is higher for firms with irregularities than those with errors –forty–nine percent (sixty–four percent) of firms experiencing turnover of their CEOs (CFOs) for irregularity firms, but only eight percent (twelve percent) for error firms.

Management Forecast Precision in the Market's Reaction or Analysts'/Investors' Reactions

Management earnings forecasts are influential to the functioning of capital markets (Healy and Palepu, 2001). Some prior studies have investigated the link between management forecast precision and investor's use of the information, analysts' use of the information, and market stock price reactions to the information. For example, Baginski et al. (1993), Han and Tan (2007), Libby et al. (2006), and Chi and Ziebart (2014) find that when management earnings forecasts are more precise, the markets' reaction to the forecast will be stronger.

With respect to the relationship between management forecast precision and the analysts' reaction to the forecast, Chi and Ziebart (2014) use a sample of 3,584 yearly management EPS forecasts and 10,287 quarterly management EPS forecasts to examine the impact of management's choice of forecast precision on the subsequent dispersion and accuracy of analysts' earnings forecasts. They provide empirical evidence that managements' disclosure precision has a statistically significant impact on both the dispersion and the accuracy of subsequent analysts' forecasts. The dispersion in analysts' forecasts is negatively related to the management forecast precision. In other words, a precise management forecast is associated with a smaller dispersion in the subsequent analysts' forecasts. They also find evidence consistent with accuracy in subsequent analysts' forecasts being positively associated with the precision in the management forecast.

Libby et al. (2006) use ninety–five experienced sell–side analysts to predict future quarterly and annual earnings in response to earnings guidance and then revise their annual forecasts after receiving the actual quarterly earnings announcement. They experimentally demonstrate that, in the short term, forecast form does not affect analysts' earnings forecasts. However, once earnings are released, forecast accuracy interacts with forecast form to determine analysts' revised earnings forecasts. Stated differently, point forecasts lead to greater revisions (reactions) than range forecasts. Earnings expectations of firms that employ a higher level of precision are likely to be more accurate.

Han and Tan (2007) use eighty–five MBA students from a major Singapore university to predict underlying mechanisms for the effects of management guidance forms on investors' judgments. They experimentally show that nonprofessional investors react differently to different types of range forecasts. Nonprofessional investors' own revisions of forecasted earnings are different depending on whether management's range forecast has explicit upper and lower bounds (i.e., earnings will be between $2.00 and $2.10) or it has implicitly stated upper and lower bounds (i.e., earnings will be within five cents of $1.05).

Choi et al. (2010) reexamine whether the sign of the news (good versus bad) is associated with the precision of management earnings forecasts with a sample of 16,872 management earnings forecasts. They provide evidence that forecast precision (i.e., point, range, or qualitative) is related to the sign of news. That is, bad news forecasts are less precise than are good news forecasts. They also show that the precision of range forecasts is related to the sign of the news and to the magnitude of the forecast surprise (i.e., the difference between the management earnings forecast and the market's extant expectations for future earnings). Specifically, forecasts become less precise and ranges (for range forecasts) become larger the greater the forecast surprise, and the relationship is stronger for bad news forecasts than for good news forecasts.

Baginski et al. (1993) predict the effect of management forecast precision on equity pricing and the assessment of earnings uncertainty with a sample of 868 management forecasts. They show that stock price reactions to earnings forecasts are contingent on forecast form; point forecasts lead to greater stock price reactions relative to range forecasts. In contrast, Pownall et al. (1993) find no variation in stock price reactions conditional on forecast form with a sample of 1,252

management forecasts. Waymire (1986) finds there is an increase in the forecast accuracy of analysts' earnings forecasts slightly after issuance of a management earnings forecast.

Precision of Management Earnings Forecast

Management earnings forecasts are voluntary disclosures that provide information that is important in making an evaluation of the firm and its expected profitability. Accordingly, management may choose the level of forecast precision to match the precision in their own information about the firm's future (King et al., 1990). In addition, management may choose to provide either a quantitative forecast or a qualitative forecast. While quantitative forecasts are point, range, minimum, or maximum estimates, qualitative forecasts usually involve a descriptor such as "earnings will be higher than last period". Prior research seems to indicate that management acts strategically in their choices of forecast attributes.

Other prior work has focused on the determinants of management forecast precision. Baginski and Hassell (1997) find that forecast precision is increasing in private information (as proxied by analyst following) and decreasing in public information (as proxied by firm size). Bamber and Cheon (1998) find that forecast precision is lower for firms operating in a more concentrated product market when the forecasts are released via a press release (versus via meeting with analysts and reporters), and that forecast precision has been increasing over time. Both Baginski and Hassell (1997) and Bamber and Cheon (1998) find that management forecasts are less precise the longer the forecast horizon.

Prior research suggests that managers acting in the best interests of the firm should enhance transparency by issuing more frequent, specific, and accurate forecasts (Skinner, 1994; Kasznik and Lev, 1995; Kim and Verrecchia, 1991; Baginski et al., 1993; Williams, 1996).[5] However, managers acting in their own self–interest could decide to disclose less than what is optimal for various reasons, including insider trading opportunities and reputational risks of erroneous forecasts. These lines of research reiterate the role of incentives in understanding managers' forecasting behavior. Specifically, King et al. (1990) suggest that management will strategically choose the precision of the forecast about the firm's future when issuing earnings forecasts. Research in psychology predicts that point forecasts will be perceived as more precise than range forecasts (Wallstern et al., 1986) since a range provides an indicator of uncertainty (Rapoport et al., 1990; Highhouse, 1994). In addition, a range forecast is less likely than a point forecast to be inaccurate since it contains more possible outcomes and is more likely to include the realization.

Hypotheses Development

None of the studies previously described provides direct evidence concerning the association between financial statements requiring a restatement due to an irregularity and management's choice of forecast precision. Our study extends the extant research to better understand management's strategic choice of forecast precision and the decision to commit an irregularity. In addition, our study investigates whether choice of forecast precision is informative regarding whether an irregularity and restatement occurring.

Firms with irregularities have ample opportunity and incentives to manage their forecast precision. Prior research documented significant and positive effects regarding the attributes of the earnings guidance on market reactions. Failure to meet or beat a management forecast is usually accompanied by a stock price decline. Several prior studies suggest that the precision of the management earnings forecast may assist investors in interpreting specific market sector trends and results in positive market reactions. Baginski et al. (1993) find that point forecasts are associated with a stronger stock market reaction than are range forecasts. This is also supported in a wide range of studies that shows that more precise management forecasts result in stronger stock prices reactions (Baginski et al., 1993; Libby et al. ,2006; Han and Tan, 2007).

Investors are thought to react more strongly to restatements involving fraud/irregularity (Hennes et al., 2008). In other words, restatements involving fraud/irregularity mirror investors' perception of the credibility of financial statements. It has a substantial impact on investor concerns about their assessment of the quality of management's oversight over financial reporting or about their perceptions of the quality of the accounting information system.

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[5]The willingness to enhance transparency, and therefore the optimal disclosure policy, is constrained by the costs of disclosure (including proprietary and litigation costs).

Thus, given the importance of an irregularity used to meet or beat the firm's own management earning forecast and the investors' stock price reaction to a restatement, (Hennes et al., 2008), firms have incentives to take actions to choose forecast attributes carefully.

We expect an association between firms experiencing a restatement due to an irregularity and the likelihood that managers had issued a more precise earnings forecast (either a point forecasts and or a range forecast with a smaller range). A more precise earnings forecast leads to a positive market reaction and a lower level of investors' perceived risk and uncertainty about future prospects. However, our intuition is twofold for managers to capture the benefits of the precision, (1) once a firm chooses to issue a precise forecast, there may be more pressure on the firm to engage in more aggressive earnings management; or alternatively, (2) a firm may have already chosen to be aggressive in their earnings management and therefore chooses to release a precise forecast in order to capture the benefits of the precision. While we cannot discern which of these processes occur, we hypothesize that the issuance of a more precise management forecast is more associated with the firm having a restatement due to an irregularity. We test our prediction of a link between choice of forecast precision and an earnings restatement due to an irregularity with our first hypothesis:

> **H1:** There is a positive relationship between firms with an irregularity and their having issued a point (more precise) management earnings forecast.

While a point forecast provides the highest level of precision, a range forecast provides the next level of precision. A forecast with a relatively small range (such as "earnings per share between $0.80 and $1.20") is likely viewed as being much more precise than is a forecast with a relatively greater range (such as "earnings per share between $0.50 and $1.50"). Although the midpoints of these two ranges are the same, the level of precision varies dramatically. Therefore, we expect that a firm with an irregularity will have issued a more precise (smaller) range earnings forecast. We test this prediction with our second hypothesis.

> **H2:** There is a positive association between firms with a reporting irregularity and their having issued a more precise (smaller) range forecast.

Methodology

Sample Selection

Our irregularity sample is based on the General Accounting/Government Accountability Office (GAO) (2002, 2003, and 2006) restatement database with all restatements classified as either errors (unintentional misstatements) or irregularities (intentional misstatements) as in Hennes et al. (2008). This database contains 2,705 restatements announced during January 1997 to June 2006. Hennes et al. (2008) demonstrates the importance of distinguishing errors from irregularities when studying earnings restatements. Since we investigate the link between firms with an irregularity and management forecast precision, it is critically important for us to include only restatements due to fraudulent reporting (irregularities) in our sample.

We use the Audit Analytics Restatement database to identify the beginning date and ending date of each irregularity. For the irregularities on the Hennes et al. (2008) dataset that cannot be matched with the Audit Analytic database, we manually search the online EDGAR database to identify the restatement period. Our fraud sample includes irregularities announced during January 2000 (the starting date of Audit Analytic Restatement database) to June 2006 (the ending date of the Hennes et al., 2008, dataset). When we match to our management forecasts, our final irregularity sample contains forty–nine firms and a total of 123 irregularities (announced during January 2000 to December 2005) and 1,192 restated firm–quarters (ranging from years 2000 to 2005).[6] As a control sample we use observations from the COMPUSTAT universe during 2000 to 2005 for which earnings are *not* restated and a management earnings forecast was issued.

We obtain the management forecasts of quarterly earnings per share from the First Call database. First Call has been widely used in the extant management forecast literature. This yielded 18,405 management forecast observations of quarterly earnings forecasts. We eliminated 4,630 observations containing multiple forecasts. Finally, we removed forecasts for which

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[6]Alali and Wang (2017) note that restatements and fraud started growing in 2000 and peaked in 2005.

we were unable to obtain the requisite data for our analyses on COMPUSTAT (2,785 observations) or IBES (2,137 observations). Our final sample is comprised of 8,853 management forecast observations made by 1,573 firms.

Irregularities with restatements contain 1,192 restated firm–quarters. We lost 430 restated firm–quarters in First Call due to a non–12/31 fiscal year–end. We delete another 263 restated firm–quarters in First Call due to the restriction of our two forms of management forecasts being selected, point forecasts and range forecasts. We then merge the remaining 167 restated firm–quarter observations with the COMPUSTAT Fundamental Quarterly database and obtain a final sample of 123 restated firm–quarter observations. Table 1 summarizes the steps employed in the data filtering process and the number of forecasts and irregularities remaining in the sample. To be included in our study, the following criteria have to be satisfied:

    a) The firms with irregularities should be listed on the First Call, COMPUSTAT and IBES database.
    b) The company's fiscal year ends in December.

Similar criteria have been employed by other researchers (Ajinkya et al., 1991; Ackert and Athanassakos, 1997, 2003).

Table 1: Sample Selection

Quarterly earnings per share (EPS) forecasts from the First Call database from 2000 through 2005 inclusive	18,405
Observations with multiple forecasts for the same period	(4,630)
Forecast Missing COMPUSTAT data	(2,785)
Forecast Missing IBES data	(2,137)
Number of Management Forecasts in the Final Sample	8,853
Number of Management Forecasts for Firms with an irregularity in the Final Sample	123
Number of Management Forecasts for Firms without an irregularity or Restatement in the Final Sample	8,730
Number of Firms with irregularity in the Final Sample	49
Number of Firms without irregularity or restatement in the Final Sample	1,524

	Restated firm–quarters	Restatement events
Non–duplicate irregularities announced during 2000 to 2005 in the Harris et al. (2009) dataset	1,192	292
Forecast Missing First Call data Fiscal 12/31 year end	(430)	
Forecast Missing First Call data point and range	(263)	
Forecast Missing COMPUSTAT data	(118)	
Forecast Missing IBES data	(22)	
Number of Management Forecasts Firms with an irregularity in the Final Sample	123	49

Table 2 presents the frequency distribution of firm–quarter observations in the fraud sample and control sample across years and quarterly management forecasts across years for firms with irregularities, respectively. Panel A of Table 2 shows an increase in earnings restatements during 2000 to 2004. This is consistent with Hennes et al. (2008) findings that there is an increase in irregularities during 2000 to 2004. Note that the decrease in the irregularity sample in 2005 does not mean that there were fewer restatements in 2005. Rather, it means that our fraud sample in 2005 is incomplete because we limit our fraud sample to irregularities announced before July 2006 as in the HLM dataset.[7] On average, the fraud sample is roughly one percent of the control sample.

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[7]Untabulated analyses suggest that it takes about two years for a fraudulent financial reporting to be restated and filed with the SEC.

Table 2: Frequency Distribution of Fraud and Control Sample

Panel A: Distribution of restated firm–quarter observations with irregularities across years

Fiscal year	Fraud sample		Control sample		Fraud/Control
	Number	Percent	Number	Percent	Percent
2000	7	5.70	718	8.22	0.97
2001	8	6.50	1,468	16.82	0.54
2002	20	16.26	1,662	19.04	1.20
2003	33	26.83	1,507	17.26	2.19
2004	34	27.64	1,741	19.94	1.95
2005	21	17.07	1,634	18.72	1.29
Total	123	100.00	8,730	100.00	

Panel B: Distribution of quarterly management forecasts across years for firms with irregularities

Year	# Forecasts	Point	Range
2000	7	3	4
2001	8	6	2
2002	20	4	16
2003	33	3	30
2004	34	10	24
2005	21	2	19
Total	123	28	95

No observations of quarterly forecasts for firm with irregularities are from 1999. This is likely due to the small number of observations for 1999 in conjunction with the sample selection criteria employed.

Panel B of Table 2 presents the frequency distribution of quarterly management forecasts, the number of firms and the respective number of forecasts for point and range forecasts across years for firms with irregularities. Clearly, the number of management forecasts is increasing steadily over time except in 2005. In Table 3, we present descriptive statistics for our irregularity sample and our control sample across several characteristics.

Table 3: Descriptive Statistics of Firms with Irregularity and Control Sample

Panel A: Irregularity sample

Variable	n	Mean	Std Dev	Q1	Median	Q3
PREC	123	0.2602	0.4405	0.0000	0.0000	1.0000
RANGE	95	0.1139	0.2514	0.0571	0.1250	0.2143
IRRE	123	1.0000	0.0000	1.0000	1.0000	1.0000
SURPRISE	123	0.1407	1.1394	0.0022	0.0064	0.0152
LOSS	123	0.2917	0.4569	0.0000	0.0000	1.0000
NANA	123	2.2554	0.6926	1.7918	2.4849	2.7726
EL	123	0.1346	0.2535	–0.0500	0.1400	0.3300
SIZE	123	7.5731	2.1306	6.1683	7.5474	8.6518
HORIZON	123	3.2257	0.5095	2.9957	3.2189	3.4012
STDEARN	123	0.3678	0.5833	0.1047	0.1834	0.3103

Panel B: Control sample

Variable	n	Mean	Std Dev	Q1	Median	Q3
PREC	8,730	0.2129	0.4094	0.0000	0.0000	0.0000
RANGE	6,964	0.1858	0.7098	0.0571	0.1053	0.2222
IRRE	8,730	0.0000	0.0000	0.0000	0.0000	0.0000
SURPRISE	8,730	0.0303	0.1880	0.0063	0.0000	0.0056
LOSS	8,730	0.1830	0.3867	0.0023	0.0058	0.0158
NANA	8,730	1.8780	0.7145	1.3863	1.9459	2,3979
EL	8,730	0.2830	0.3527	0.0500	0.2400	0.4900
SIZE	8,730	7.0973	1.6265	6.0128	6.9745	8.1816
HORIZON	8,730	3.2758	0.3799	3.0445	3.2581	3.4965
STDEARN	8,730	0.3028	0.6812	0.0837	0.1572	0.3014

Variables are defined in the appendix.

We provide a descriptive summary of the irregularities in which we have management forecast observations for the quarter prior to the quarter of the irregularity and management forecast observations for the same quarter in the year prior to the year of the irregularity. In essence, we are examining whether for the same firm we observe the firm issuing a less precise forecast in the prior period.

As shown in Table 4, the percentages of a switch from less precise to more precise forecast between the prior quarter forecast and the forecast during the irregularity quarter is fifty–one percent (63/123). A similar result is observed when the prior forecast is the forecast in the same quarter but the prior year; the percentage of observations switching from a less precise to a more precise forecast is fifty–two percent (64/123). This evidence suggests that the likelihood of a shift to a more precise forecast occurs in a little over half of the observations when the firms had not already chosen to issue a point forecast. When we include firms that had already chosen to issue a point forecast, around sixty percent of our restatement observations have issued or switched to issuing a point forecast during the period of the irregularity.

Table 4: Management Forecast Precision Changes for Irregularity Observations

Irregularity Year	Irregularity Quarter	(1) One Quarter Forecast Immediately Preceding Period of Irregularity	(2) Same Quarter Forecast but Previous Year Immediately Preceding Period of Irregularity	(3) Forecast in Period of Irregularity	(1)–(3) Less Precise to More Precise	(2)–(3) Less Precise to More Precise
			Precision Type			
2000	1	Other	Other	Point	X	X
	1	Other	Other	Point	X	X
	1	Other	Other	Point	X	X
	3	Range – 0.0285	Range – 0.0298	Range – 0.0238	X	X
	2	Range – 0.1149	Range – 0.2536	Range – 0.4000		
	4	Point	Point	Range – 0.2857		
	2	Range – 0.0136	Range – 0.0138	Range – 0.0129	X	X
2001	3	Range – 0.2857	Other	Point	X	X
	3	Other	Other	Point	X	X
	2	Point	Point	Point		
	3	Range – 0.0654	Range – 0.0425	Point	X	X
	1	Point	Range – 0.0613	Point		X
	2	Point	Point	Point		
	2	Range – 0.0444	Range – 0.0645	Range – 0.1538		
	4	Other	Other	Range – 0.1276	X	X
2002	2	Point	Point	Point		
	1	Range – 0.4615	Range – 0.0259	Point	X	X
	2	Point	Point	Point		
	1	Range – 0.0472	Range – 0.0426	Point	X	X
	1	Point	Point	Range – 0.0540		
	1	Range – 0.0769	Range – 0.1284	Range – 0.1333		
	2	Point	Point	Range – 0.4000		
	1	Range – 0.0909	Range – 0.0298	Range – 0.0618	X	
	1	Range – 0.2512	Range – 0.2000	Range – 0.3333		
	3	Other	Other	Range – 0.2857	X	X
	2	Range – 0.1052	Range – 0.0540	Range – 0.0869	X	
	1	Range – 0.0487	Range – 0.2857	Range – 0.1666		X
	1	Range – 0.0215	Range – 0.0210	Range – 0.0208	X	X
	1	Range – 0.2418	Range – 0.2572	Range – 0.3146		
	2	Range – 0.0361	Range – 0.0325	Range – 0.0294	X	X
	3	Range – 0.0538	Range – 0.0529	Range – 0.0526	X	X
	2	Range – 0.2278	Range – 0.2931	Range – 0.2982		

Year						
	1	Range – 0.0125	Range – 0.0283	Range – 0.0146		X
	1	Range – 0.0134	Range – 0.0132	Range – 0.0128	X	X
	2	Point	Point	Range – 0.1024		
2003	1	Point	Point	Point		
	3	Point	Point	Point		
	2	Point	Point	Point		
	1	Range – 0.0540	Other	Range – 0.0433	X	X
	1	Other	Other	Range – 0.0540	X	X
	3	Range – 0.0122	Range – 0.0344	Range – 0.0111	X	X
	1	Range – 0.1886	Range – 0.1333	Range – 0.1111	X	X
	2	Point	Other	Range – 0.1250		X
	1	Range – 0.0344	Point	Range – 0.1538		
	1	Range – 0.0645	Range – 0.1379	Range – 0.3333		
	4	Range – 0.1098	Range – 0.1779	Range – 0.0923	X	X
	2	Range – 0.0476	Range – 0.0591	Range – 0.2857		
	2	Point	Point	Range – 0.1052		
	3	Range – 0.2857	Range – 0.0857	Range – 2.0000		
	1	Range – 0.0444	Range – 0.1176	Range – 0.1621		
	1	Range – 0.0433	Range – 0.0512	Range – 0.0444		X
	3	Range – 0.0198	Range – 0.0367	Range – 0.0235		X
	1	Range – 0.1064	Range – 0.2174	Range – 0.0748	X	X
	1	Range – 0.0652	Range – 0.0693	Range – 0.0316	X	X
	1	Range – 0.0324	Range – 0.0478	Range – 0.0152	X	X
	2	Point	Range – 0.1382	Range – 0.2418		
	1	Range – 0.0114	Range – 0.0293	Range – 0.0145		X
	4	Range – 0.0185	Range – 0.0237	Range – 0.0103	X	X
	2	Point	Point	Range – 0.0128		
	3	Range – 0.0274	Range – 0.0237	Range – 0.0135	X	X
	2	Point	Point	Range – 0.2583		
	1	Range – 0.0124	Range – 0.0237	Range – 0.0136		X
	2	Range – 0.1735	Range – 0.0498	Range – 0.1243	X	
	3	Range – 0.3274	Range – 0.3962	Range – 0.4617		
	1	Range – 0.1046	Range – 0.2387	Range – 0.0942	X	X
	1	Point	Point	Range – 0.1324		
	1	Range – 0.0358	Range – 0.0124	Range – 0.0195	X	
	2	Range – 0.0164	Range – 0.0895	Range – 0.0824		X
2004	1	Range – 0.1818	Other	Point	X	X
	2	Other	Other	Point	X	X
	3	Point	Point	Point		
	2	Range – 0.0173	Range – 0.0254	Point	X	X
	2	Range – 0.3266	Range – 0.3384	Point	X	X
	1	Point	Point	Point		
	1	Range – 0.0312	Range – 0.0395	Point	X	X
	2	Point	Point	Point		
	4	Range – 0.0633	Range – 0.0629	Point	X	X
	2	Range – 0.0524	Range – 0.0482	Point	X	X
	1	Range – 0.0495	Range – 0.0540	Range – 0.0714		
	2	Range – 0.0833	Range – 0.1818	Range – 0.0571	X	X
	1	Range – 1.6000	Range – 1.2000	Range – 0.6666	X	X
	4	Other	Other	Range – 1.2000	X	X
	1	Range – 0.0689	Range – 0.1111	Range – 0.1176		
	1	Other	Other	Range – 0.3333	X	X
	2	Range – 0.3000	Range – 0.1325	Range – 0.1666	X	
	1	Range – 0.2040	Range – 0.0184	Range – 0.3783		
	1	Point	Range – 0.0307	Range – 0.0645		
	1	Range – 0.1600	Range – 0.0769	Range – 0.0487	X	X
	3	Range – 2.000	Point	Range – 1.0000	X	
	3	Point	Range – 0.0235	Range – 0.6666		

Year						
	1	Range – 0.0174	Point	Range – 0.0125	X	
	2	Range – 0.0265	Range – 0.0263	Range – 0.0183	X	X
	1	Range – 0.0174	Range – 0.0386	Range – 0.0214		X
	1	Other	Range – 0.1672	Range – 0.0428	X	
	1	Point	Range – 0.0208	Range – 0.0146		X
	2	Other	Range – 0.0193	Range – 0.0125	X	X
	3	Point	Point	Range – 0.0113		
	3	Other	Range – 0.0463	Range – 0.0294	X	X
	2	Range – 0.4853	Range – 0.0317	Range – 0.0246	X	X
	1	Other	Range – 0.0248	Range – 0.0153	X	X
	2	Range – 0.0382	Range – 0.0388	Range – 0.4265		
	1	Range – 0.0114	Range – 0.0189	Range – 0.0126		X
2005	2	Other	Point	Point		
	1	Point	Point	Point		
	3	Range – 2.000	Range – 0.3624	Range – 1.5248	X	
	3	Other	Other	Range – 0.2857	X	X
	1	Range – 0.1176	Range – 0.3853	Range – 0.3642		X
	1	Range – 0.0606	Other	Range – 0.0266	X	X
	1	Range – 0.1666	Range – 0.2068	Range – 0.2608		
	1	Range – 0.3157	Range – 0.2500	Range – 0.4206		
	1	Other	Other	Range – 0.0952	X	X
	3	Range – 0.1176	Range – 0.0821	Range – 0.0930	X	
	1	Range – 0.0942	Range – 0.0985	Range – 0.0988		
	1	Other	Range – 0.1923	Range – 0.0714	X	X
	2	Range – 0.1294	Range – 0.1375	Range – 0.1462		
	1	Range – 0.0122	Range – 0.0472	Range – 0.0248		X
	1	Range – 0.2036	Range – 0.0163	Range – 0.0115	X	X
	1	Range – 0.0329	Point	Range – 0.0142	X	
	2	Range – 0.1142	Range – 0.0272	Range – 0.1183		X
	1	Range – 0.0197	Range – 0.0156	Range – 0.0174	X	
	2	Range – 0.0328	Range – 0.0132	Range – 0.0268	X	
	4	Range – 0.0245	Range – 0.0154	Range – 0.0172	X	
	1	Range – 0.1464	Range – 0.1527	Range – 0.1553		
Total					63/123= 51%	64/123= 52%

Range is the maximum point of the management EPS range forecast minus the minimum point of the range deflated by average. *Other* is either minimum (e.g., earnings will be at least \$2.50 per share), maximum (e.g., earnings will be no more than three dollars per share) or qualitative (e.g., earnings will be good) estimates.

Regression Analyses

We estimate two regression models with management forecast precision as the dependent variable and firms with restatement attributes as the independent variables. These two models are as follow.[8] Variables are defined in the appendix.

$$PREC = \alpha_0 + \alpha_1 IRRE + \alpha_2 SURPRISE + \alpha_3 LOSS + \alpha_4 NANA + \alpha_5 EL + \alpha_6 SIZE + \alpha_7 HORIZON + \alpha_8 STDEARN + YEAR\ dummies + \varepsilon \quad (1)$$

$$RANGE = \alpha_0 + \alpha_1 IRRE + \alpha_2 SURPRISE + \alpha_3 LOSS + \alpha_4 NANA + \alpha_5 EL + \alpha_6 SIZE + \alpha_7 HORIZON + \alpha_8 STDEARN + YEAR\ dummies + \varepsilon \quad (2)$$

We measure the precision of management forecasts for two forecast types, either a point forecast or a range forecast. While point forecasts are more precise, range forecasts are less precise. For point forecasts, PREC takes on values equal to one if the form of the management forecast is a point forecast and zero if the form of the management forecast is a range forecast. The coefficient on IRRE in model (1) should be positive. A positive relationship in model (1) suggests that the precision of management forecasts increases with firms with irregularities.

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[8]We apply White's (1980) heteroscedasticity constant standard errors for all regression analyses in our analysis.

In our second analysis, we focus on range forecasts and investigate whether firms with irregularities issued a smaller range forecast (higher precision). RANGE is calculated as the maximum point of the management EPS range forecast minus the minimum point of the range deflated by the average of the end points. The coefficient on IRRE in model (2) should be negative. A negative relationship in model (2) suggests that firms with irregularities tended to issue more precise (smaller range) management earnings forecasts.

Following Lang and Lundholm (1996), we include the absolute value of the earnings surprise (SURPRISE) in our analysis since they find that larger changes in earnings are associated with less accurate forecasts. In terms of precision, Baginski et al. (1993) document a lower earnings response coefficient for less precise forecasts, due to market uncertainty about the unexpected earnings, conveyed in imprecise forecasts. We include the loss indicator variable (LOSS) based on Hwang et al. (1996), who find that forecasts for loss–reporting firms are less accurate than forecasts for profit–reporting firms. In terms of precision choice, we expect that management would change their forecast type if they expect a loss. The loss dummy variable (LOSS) equals one if the actual First Call earnings are negative and zero otherwise. We include size (SIZE) as a proxy for the amount of public information available (Atiase,1985; Lang and Lundholm, 1996) and is associated with a more complex environment, which should increase uncertainty. In terms of precision, management forecast precision could be decreasing in the amount of public information (Baginski and Hassell, 1997) or larger firms could have stronger incentives to build reputations for good disclosure and could issue more precise forecasts in response (King, 1996). This variable is calculated as the natural logarithm of the market value of common equity.

Consistent with Lang and Lundholm (1996), we also include the number of analysts (NANA) following the company issuing the management forecast since they find a positive association between firm size, analysts following, and forecast accuracy. In terms of precision, Baginski and Hassell (1997) found a statistically significant positive relationship between analysts following and management forecast precision, suggesting that firms with greater analyst following to issue more precise forecasts. Earnings volatility (STDEARN) is included based on Kross et al. (1990), who find that analysts' earnings forecast are less accurate for firms with higher long–term earnings volatility. In terms of precision, Baginski and Hassell (1997) found a statistically significant negative relationship between earnings volatility and management forecast precision, suggesting that imprecise forecasts are issued in the presence of greater earnings uncertainty. The earnings per share variable (EL) is based on Eames and Glover (2003), who find that earnings level is related to forecast accuracy.[9] Forecast horizon (HORIZON) is the time between the management forecast and the end of the reporting period being forecasted. It is expected that a forecast announced closer to the actual earnings announcement date (short forecast horizon) is more accurate than a forecast announced much earlier (long forecast horizon). Prior studies (Choi and Ziebart, 2004; Das and Saudagaran, 1998; Brown 1993) have shown that longer horizon forecasts are less accurate. In terms of precision, Baginski and Hassell (1997) found a statistically significant negative relationship between forecast horizon and management forecast precision. Forecast horizon is calculated as the natural logarithm of the number of calendar days between mean forecast announcement date and the actual earnings announcement date. We include yearly indictor variables (YEAR) to control for any time–dependent trends in forecast precision.

Results

Univariate Analyses

In hypothesis H1, we posit that the managers of the firms with intentional misstatements are more likely to release more precise (point) management forecasts while the managers of firms without irregularities or restatements are more likely to issue a less precise (range) management forecasts. For this univariate analysis, we focus on the observations where a range forecast is provided by management analysis since the majority of our observations are range forecasts.

In Table 5, we provide results related to our assertion that irregularities will be associated with more precise range forecasts. For our sample of ninety–five irregularity/restatement observations, the mean range forecast is 0.1139, whereas it is 0.1858 when the observation (n=6964) is a restatement involving no irregularity or there is no restatement. The difference is negative and significant for both t– and Wilcoxon z–tests (t=–2.64 and z=–2.58), suggesting that the magnitude of the range for a range forecast is smaller for firms with an irregularity. We find support that restatement type is linked to a smaller

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[9]We winsorize EL at 5 and –5 to mitigate the influence of outliers.

range management forecast. In summary, this univariate test suggests a link between the forecast precision (reflected in the size of the range forecast) and whether the firm had a reporting irregularity for the period being forecasted.

Table 5: Management Forecast Precision and Firms with Irregularity and Firms with No Restatement: Univariate Comparisons of Managers' Forecast Precision (Range)

Association between Firms with Irregularity and Managers' Forecast Precision		
	(1) **Firms with Irregularity = 1** **(n=95)**	**(2)** **Firms with No Restatement = 0** **(n=6,964)**
Mean of Forecast RANGE	0.1139	0.1858
Difference	t–test	– 2.64 ***
[(1) – (2)]	Wilcoxon test	– 2.58 ***

In Table 6, we provide the Pearson product moment correlations between the variables we use in our regression analyses for our sample of quarterly earnings forecasts. As expected, we observe significant correlations between an irregularity restatement and both the type of forecast and the range of the forecast in the hypothesized direction. Statistically significant correlations in the hypothesized direction are also observed between an irregularity restatement and the width of the range for the management forecasts that are range forecasts. For example, PREC is positively correlated with IRRE (p<0.01), and NANA (p<0.01); while negatively correlated with HORIZON (p<0.01), and no significant relation to LOSS.[10] RANGE is negatively correlated with IRRE (p<0.01). This provides preliminary evidence that firms with a reporting irregularity are more likely to issue a point forecast or a smaller range forecast. Furthermore, none of these correlations appears large enough to present multi–collinearity problems.

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[10]All the significance levels reported in this study are based on a two–tailed test.

Table 6: Pearson Correlation Statistics

	PREC	RANGE	IRRE	SURPRISE	LOSS	NANA	EL	SIZE	HORIZON
IRRE	0.0135***	–0.0117***							
SURPRISE	0.0226**	0.0020	0.0557***						
LOSS	0.0101	0.0396***	0.0331***	–0.0772***					
NANA	0.0869***	–0.0450***	0.0617***	0.0237**	–0.0956***				
EL	–0.0139	–0.1057***	–0.0494***	0.0750***	–0.6324***	0.1795***			
SIZE	0.0901***	–0.0874***	0.0331***	0.0331***	–0.2684***	0.6295***	0.4351***		
HORIZON	–0.0601***	0.0131	–0.0154	–0.0512***	0.0834***	–0.1898***	–0.1072***	–0.2476***	
STDEARN	0.0394***	0.0171	0.0112	0.1759***	0.0671***	0.0658***	0.0057	0.0471***	0.0384***

Variables are defined in the appendix.

A total of 8,853 firm–quarterly observations are used to calculate the correlation between the variables except the correlations with RANGE for which 7.059 observations are used.

*** Indicates significance at one percent level; ** indicates significance at five percent level; * indicates significance at ten percent level in a two–tailed test.

Multivariate Analyses

Since univariate tests are prone to the influence of other variables that can affect management earnings forecasts, we perform analyses using multiple regression and include a number of control variables we previously described.

Irregularity Restatement and Management Forecast Precision

In Table 7, we present our regression results where management earnings forecast (point versus range) is the dependent variable. In particular, we are interested in whether there is a positive coefficient on the irregularity restatements indicator variable (firms with irregularities versus without irregularities or restatements). We use regression model (1) (previously described) to test hypotheses H1, where we include control variables previously found to influence management earnings forecast choice, forecast error, and choice of forecast precision. For model (1), the regression coefficient on IRRE is positive and significant at the p <0.01 level. Even after controlling for variables found to influence management earnings forecasts, the positive relationship between firms with irregularities and management forecast precision exists. This result is consistent with the prediction of H1 that a point forecast by management is associated with a restatement irregularity. The inference is that the earnings forecasts of firms with an irregularity exhibit greater precision in their forecasts at the time they issue the forecast.

Table 7: Multivariate Test: Management Forecast Precision and Firms with Irregularity and Firms with No Restatement

Model (1): $PREC = \alpha_0 + \alpha_1 IRRE + \alpha_2 SURPRISE + \alpha_3 LOSS + \alpha_4 NANA + \alpha_5 EL + \alpha_6 SIZE$
$+ \alpha_7 HORIZON + \alpha_8 STDEARN + YEAR\ dummies + \varepsilon$

	Expected Sign	Model (1)
INTERCEPT	?	–2.5021
		(0.0000)
IRRE (Irregularity)	+	0.4972***
		(0.0000)
SURPRISE	–	1.3186***
		(0.0000)
LOSS	–	0.1434***
		(0.0040)
NANA	+	0.3782***
		(0.0000)
EL	?	0.5654***
		(0.0000)
SIZE	+	–0.0923***
		(0.0000)
HORIZON	–	–0.0557*
		(0.0960)
STDEARN	–	0.0119
		(0.3757)
YEAR 1	?	1.7395***
		(0.0000)
YEAR 2	?	2.0347***
		(0.0000)
YEAR 3	?	0.9939***
		(0.0000)
YEAR 4	?	0.0382
		(0.2947)
YEAR 5	?	1.0677***
		(0.0000)
Log–likelihood Ratio Chi–square		25.6802***
		(0.0188)
Pseudo R2		0.4991

Variables are defined in the appendix.

Model 1 is the ordered–response logit analysis of management forecast precision.

A total of 123 firm–quarter observations of irregularity firms and a total of 8,730 firm–quarter observations of non– restated firms are used in the regression.

*** Indicates significance at one percent level; ** indicates significance at five percent level; * indicates significance at ten percent level in a two–tailed test.

Irregularity Restatement and Management Forecast Range

To test hypotheses H2, we estimate regression model (2) and report our results in Table 8. Recall that this analysis focuses on the magnitude of the range when a range forecast is being issued by management. We calculate RANGE as the maximum point of the management EPS range forecast minus the minimum point of the range deflated by average of the two extremes and focus only on the width of the ranges (smaller ranges are more precise). Our results for model (2) indicate that the regression coefficient estimate on IRRE is negative and significant at the $p <0.01$ level. Again, after controlling for other variables found to impact the size of the range in a management forecast, we find that the width of the management range forecast is linked to whether there was a restatement due to an irregularity. Our inference is that the earnings forecasts of firms with irregularity are associated with a smaller range (more precise) management range forecast.

Table 8: Multivariate Test: Management Forecast Precision (Range Only) and Firms with Irregularity and Firms with No Restatement

Model (2): $RANGE = \alpha_0 + \alpha_1 IRRE + \alpha_2 SURPRISE + \alpha_3 LOSS + \alpha_4 NANA + \alpha_5 EL$
$+ \alpha_6 SIZE + \alpha_7 HORIZON + \alpha_8 STDEARN + YEAR\ dummies + \varepsilon$

	Expected Sign	Model (2)
INTERCEPT	?	0.4202
		(0.0000)
IRRE (Irregularity)	−	−0.0788***
		(0.0000)
SURPRISE	+	−0.8264***
		(0.0000)
LOSS	+	−0.1852***
		(0.0000)
NANA	−	−0.0172**
		(0.0142)
EL	?	−0.2120***
		(0.0000)
SIZE	−	−0.0145***
		(0.0000)
HORIZON	+	−0.0323***
		(0.0045)
STDEARN	+	0.0372***
		(0.0013)
YEAR 1	?	0.0846***
		(0.0000)
YEAR 2	?	0.0878***
		(0.0000)
YEAR 3	?	0.1408***
		(0.0000)
YEAR 4	?	0.0592***
		(0.0004)
YEAR 5	?	0.1990***
		(0.0000)
R^2		0.5329

A total of ninety–five firm–quarter observations of irregularity firms and a total of 6,964 firm–quarter observations of non-restated firms are used in the regression.

In model (2), the inferences remain robust when RANGE is measured as the mid–point of the upper end point of the management EPS range forecast and the lower end point of the range forecast.

*** Indicates significance at one percent level; ** indicates significance at five percent level; * indicates significance at ten percent level in a two–tailed test.

Conclusion

The focus of this study is to examine the association between firms with a reporting irregularity and the precision in the management forecasts issued for the period being forecasted. We identify a sample of irregularity firms and construct a control sample where earnings are not restated. We then compare the precision of the management forecasts with an irregularity with the management forecast precision of firms without irregularities or restatements in the period for which earnings are restated (the restatement period). We contend that firms with an irregularity may either chose to issue a more precise forecast knowing that they would be aggressive in their earnings management or became more aggressive in their earnings management after they had issued a more precise forecast. Our results indicate a relationship between the choice of forecast precision and whether an irregularity is observed. While it may be difficult to predict that a firm will resort to an irregularity if they issue a more precise forecast, our evidence suggests that during our period of analysis a higher level of scrutiny should be employed by an auditor or investor when a firm has chosen to issue a more precise forecast.

In this study, we are unable to discern whether the corporation chooses their forecast precision after having already chosen to be aggressive in their financial reporting (resulting in an irregularity) or are forced to be more aggressive since they have provided a more precise forecast. We suggest that research on predicting the use of accounting irregularities include forecast precision as an explanatory variable.

Appendix: Variable Definitions

(PREC)ISION	= the form of the management forecast, equal to 1 if the form of the management forecast is a point, equal to 0 if the form of the management forecast is a range,
RANGE	= the maximum point of the management EPS range forecast minus the minimum point of the range deflated by average,[11]
IRRE(GULARITY)	= code as 1 for firms with irregularities and 0 otherwise,
SURPRISE	= the absolute value of the difference between this quarter's earnings and last quarter's earnings deflated by stock price,
LOSS	= code as 0 for firm–year observations with positive earnings and 1 otherwise,
NANA	= the natural logarithm of number of analysts following the client,
EL	= earnings per share winsorized at 5 (–5),
SIZE	= the natural logarithm of the market value of common equity,
HORIZON	= the natural logarithm of the number of calendar days between the management' mean forecast announcement date and subsequent actual earnings announcement date,
STDEARN	= the standard deviation of earnings over the previous five years,
YEAR	= the year in which the management forecast is issued (dummies).

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[11] Alternatively, RANGE is measured as the mid–point of the upper end point of the management EPS range forecast and the lower end point of the range forecast. Our regression inferences (reported subsequently) are robust to this alternative approach.

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