# HOW AND WHY DOES REAL EARNINGS MANAGEMENT AFFECT AUDITORS' EVALUATIONS OF MANAGEMENT'S ESTIMATES?

by

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ABSTRACT

Prior research often asserts that, because real earnings management (REM) does not violate Generally Accepted Accounting Principles (GAAP), it is not likely to draw auditor scrutiny. However, informed by Correspondent Inference Theory, I predict and find that observing REM can affect auditors' decisions in audit areas unrelated to REM. This study reports the results of an experiment in which auditors evaluate quantitatively immaterial audit differences arising from management's subjective estimates. I manipulate the presence versus absence of REM, and whether or not the audit difference affects the client's ability to meet an earnings target (i.e., qualitative materiality). Results indicate that, when a quantitatively immaterial audit difference affects the client's ability to meet an earnings target, auditors have a higher propensity to propose an adjustment. Further, regardless of whether or not the audit difference is qualitatively material, auditors are more likely to constrain management's estimates in the presence of REM. Finally, consistent with the notion of a cascading effect of dispositional inferences, I find that auditors' perceptions regarding the aggressiveness of management's disposition mediate the effect of REM on auditors' adjustment decisions. Additional analyses indicate that, when the audit difference is qualitatively material or when REM is present (or both) auditors have a heightened concern that management's estimates are biased. This study contributes to the literature by demonstrating that auditors' altered perceptions, stemming from observing REM, can affect their treatment of audit differences and, ultimately, impact the financial statements.

# DEDICATION

This dissertation is dedicated to my incredibly loving, creative, and supportive wife Jamie. Thank you for letting me follow my dreams and for putting up with the long hours and late nights. Thank you for being an incredible mother to our sweet, energetic, and beautiful little girl, Edie, and our ever-smiling, easy-going, handsome little man, Eli. You have enriched my life beyond my wildest dreams and have helped me be a better man. I love you. I have and always will.

## LIST OF ABBREVIATIONS AND SYMBOLS

| | |
|---|---|
| AEM | Accruals-based earnings management |
| *df* | Degrees of freedom |
| F | Computed value of the f-statistic |
| EPS | Earnings per share |
| GAAP | Generally Accepted Accounting Principles |
| *p*-value | Probability of test statistic |
| PCAOB | Public Company Accounting Oversight Board |
| REM | Real earnings management |
| SEC | Securities and Exchange Commission |
| LLCI | Lower level confidence interval |
| ULCI | Upper level confidence interval |
| < | Less than |
| = | Equal to |

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

# CHAPTER 1

# INTRODUCTION

This study examines whether a client's use of real earnings management (REM) affects how auditors respond to management's estimates. Research indicates that it has become increasingly common for managers to use REM to achieve earnings targets (e.g., Graham et al. 2005; Cohen et al. 2008), and also asserts that REM can impose additional long-term costs on shareholders because of its negative impact on future cash flows and firm value (Graham et al. 2005; Cohen and Zarowin 2010; Kim and Sohn 2013). Accordingly, many describe REM as suboptimal, misleading, and value-destroying (Roychowdhury 2006; Zang 2011; Dichev et al. 2014). Given that auditors attest to the quality of information used by stakeholders, it is important to understand how auditors respond to REM.

Prior research generally posits that, because REM does not violate Generally Accepted Accounting Principles (GAAP), it is not likely to draw auditor scrutiny (Roychowdhury 2006; Cohen et al. 2008; Demers and Wang 2010). Recent research suggests that auditors certainly notice REM and that it affects audit fee decisions (Sohn 2011; Greiner et al. 2013), client retention decisions (Kim and Park 2014), and auditors' professional skepticism (Commerford et al. 2015b). Further, interview-based evidence indicates that many auditors believe that REM is difficult for investors to detect and that it can impair a client's future performance (Commerford et al. 2015a). However, there are limited ways in which auditors can respond to REM. For example, if management minimizes operating expenses (e.g., advertising) in order to meet an earnings target, auditors cannot propose an audit adjustment or require that management increase

its operating expenditures. Nevertheless, when management engages in REM, it could influence how auditors respond to other audit issues.

Based on Correspondent Inference Theory (CIT), I contend that auditors will be more likely to propose audit adjustments related to management's estimates when they observe REM. CIT posits that observers draw inferences about another individual's disposition (e.g., kindness, integrity, aggressiveness) based on the characteristics of the observed individual's behavior (Jones and Davis 1965; Jones and Harris 1967; Ajzen and Holmes 1976). Specifically, CIT posits that when the behavior of the observed individual appears to be discretionary, deviates from expectations, and alters the relevant outcome, observers are likely to make strong inferences about the observed individual. These three behavioral characteristics discussed by CIT can easily be related to the characteristics of REM. Therefore, I expect REM to cause auditors to make strong inferences about management's disposition.

Related psychology research indicates that dispositional inferences create an expectation that the observed individual will behave similarly in other contexts (Newman and Uleman 1993; Nussbaum et al. 2003; Ferguson et al. 2005). This theory suggests that auditors will infer management's disposition based on observed aggressive operating decisions (i.e., REM), and that such inferences will cascade, causing auditors to believe that management's other decisions (e.g., estimates) are also aggressive. Consequently, I investigate whether auditors are more likely to constrain management's estimates in the presence of REM.

I examine this issue in the context of quantitatively immaterial audit differences arising from management's subjective estimates. Staff Accounting Bulletin (SAB) No. 99 and Audit Standard (AS) No. 14 state that, when assessing quantitatively immaterial audit differences, auditors should consider qualitative factors, such as whether a misstatement allows a company to

meet analysts' consensus expectations or other relevant targets (SEC 1999; PCAOB 2010). These standards suggest that the presence of a qualitative factor may indicate that management is making accounting choices and estimates in a biased manner. There for the presence of a qualitative factor should increase the likelihood that auditors adjust quantitatively immaterial audit differences. Contrary to audit guidance, prior studies suggest that auditors are not likely to require full adjustment of quantitatively immaterial audit differences if doing so would cause a client's earnings to fall below analysts' consensus earnings forecasts (Libby and Kinney 2000; Ng and Tan 2003; Ng 2007; Ng and Tan 2007). However, these studies were conducted prior to the issuance of SAB No. 99, AS No. 14, or in contexts where these standards had not been implemented. Therefore, it is possible that auditors in the current U.S. audit environment do not exhibit the same reluctance to adjust audit differences that are arguably qualitatively material.

Pursuant to the Sarbanes-Oxley Act (SOX) and the creation of the PCAOB, regulators' scrutiny of auditors appears to be stronger now than ever before. Therefore, consistent with the guidance provided in SAB No. 99 and AS No. 14, I predict that auditors will be more likely to adjust a quantitatively immaterial audit difference when the audit difference impacts the client's ability to meet an earnings target. That is, I predict that auditors will treat an audit difference as qualitatively material when the difference impacts the client's ability to meet an earnings target. I also predict an interactive effect such that, when either the audit difference is qualitatively material or when REM is present (or both), auditors will have a relatively high likelihood of adjusting management's estimate compared to when the audit difference is not qualitatively material and REM is absent.

To examine these issues, I conduct a 2x2 between-subjects experiment, manipulating the presence versus absence of REM and the qualitative materiality of an audit difference (i.e.,

whether or not the audit difference affects the client's ability to meet an earnings target). Using audit managers and partners as participants, I ask auditors to make a decision related to a quantitatively immaterial audit difference arising from management's estimate for the allowance for doubtful accounts. Results indicate that, when a quantitatively immaterial audit difference affects the client's ability to meet an earnings target, auditors have a higher propensity to propose an adjustment. Additionally, REM causes auditors to have a higher propensity to adjust audit differences, whether or not the audit difference is qualitatively material. This finding indicates that either the presence of REM or the presence of a qualitative factor can increase the likelihood that auditors adjust quantitatively immaterial audit differences. Finally, consistent with a cascading effect of dispositional inferences, I find that the perceived aggressiveness of management mediates the effect of REM on auditors' adjustment decisions. Additional analyses show that, when the audit difference is qualitatively material or when REM is present (or both) auditors have a heightened concern that management's estimates are biased. These results demonstrate that the use of REM alters auditors' perceptions of management and management's decisions in such a way that it causes auditors to be more likely to constrain management's estimates, which ultimately impacts externally reported financial information.

This study's findings inform practice and research in several ways. This is the first study to consider how management's use of REM alters auditors' perceptions in such a way that it affects how they evaluate management's estimates. This study also contributes to both the accounting and psychology literature by providing evidence that there is a cascading effect of dispositional inferences, which may be particularly relevant in audit contexts because auditors continually evaluate management's decisions and make conclusions about the implications of those decisions on the audit. The inferences that auditors make about management's disposition

based on observed actions are likely to have far-reaching effects and may impact other audit decisions, which may help explain why REM is positively associated with audit fees (Sohn 2011; Greiner et al. 2013) and auditor resignations (Kim and Park 2014).

This paper also contributes to the literature investigating auditor decisions related to qualitative materiality. Prior research in this area generally indicates that auditors are not likely to adjust quantitatively immaterial audit differences when doing so would cause the client to miss an earnings target. However, the results of this study indicate that, in today's audit environment, auditors are *more* likely to adjust quantitatively immaterial differences when they affect the client's ability to meet an earnings target than when they do not. These results suggest that the audit environment has changed since the passage of AS No. 14 and other relevant guidance, and that auditors are now more responsive to qualitative materiality issues.

Finally, this study may be particularly informative to the earnings management and auditing literature. Archival research indicates that, in recent years, the level of REM is increasing while the relative level of accruals-based earnings management (AEM) is decreasing (Cohen et al. 2008). The prevailing explanation offered by research for the inverse trends in the levels of AEM and REM is that, due to increased auditor scrutiny of management's estimates and accruals, managers have chosen to rely more on REM to achieve earnings targets (e.g., Ewert and Wagenhofer 2005; Cohen et al. 2008, Chi et al. 2011). However, this study's findings suggest that auditor reactions to REM also contribute to the inverse relationship between AEM and REM observed in archival data, because auditors are more likely to constrain management's accruals in the presence of REM.

The remainder of the paper includes background and hypothesis development in Chapter 2; discussion of the experimental design in Chapter 3; and the results are reported in Chapter 4.

Chapter 5 reports the results of additional analyses. Chapter 6 discusses the implications of the findings for accounting research and also discusses opportunities for future research.

# CHAPTER 2

# BACKGROUND AND HYPOTHESIS DEVELOPMENT

## Earnings Management Literature

Academic research on earnings management is well established. Research has shown that executives have significant incentives to meet targets, including concerns about company value, litigation, personal wealth, and career concerns (Graham et al. 2005). The extant literature suggests that companies will manage their earnings in order to avoid losses, earnings decreases, and missing analyst expectations (e.g., Burgstahler and Dichev 1997;Matsumoto 2002; and Burgstahler and Eames 2006). Similarly, Kasznik (1999) provides evidence that companies manage earnings in order to avoid missing management earnings guidance that had been previously communicated to the market. Graham et al. (2005) surveyed 401 financial executives and found that that the two most important earnings benchmarks are quarterly earnings from the same quarter last year and the analyst consensus estimate for earnings. Their evidence also indicates that over 80 percent of executives believe that meeting targets helps build credibility with the market and helps to maintain or increase stock price.

Managers appear to be concerned with the value of their company's stock and appear willing to manage earnings in order to preserve that value. Research shows that companies that incentivize their executives with compensation that is sensitive to the company's stock price are more likely to meet or bear analyst expectations, and they also tend to have higher levels of earnings management through accruals (Cheng and Warfield 2005; Bergstresser and Philippon 2006). The extensive evidence of management's willingness to manage earnings suggests that

there are significant benefits to doing so. Research indicates that there is a market premium to meeting or beating analyst earnings expectations (Lopez and Rees 2002; Bartov et al 2002). Bartov et al. (2002) indicate that the premium is only marginally reduced if the company is suspected to have met targets by managing earnings. In summary, the extant literature clearly shows that there are incentives that motivate companies to manage their earnings and that executives actions are consistent with those incentives.

To date, the majority of earnings management research has focused on how managers use the discretion inherent in accruals-based accounting to impact earnings targets (Healy and Wahlen 1999; and Dechow and Skinner 2000; Habib and Hanson 2008). More recently, academic research has identified real earnings management (REM) as a way to alter earnings.[1] Roychowdhury (2006) defines real earnings management as "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations." Though Roychowdhury (2006) directly defines REM, his paper is not the only paper to identify the use of operating decisions as a way to manage earnings. Schipper (1989) defines earnings management as non-neutral intervention in the financial reporting process and goes on to state that, "a minor extension of this definition would encompass 'real' earnings management, accomplished by timing investment or financing decisions to alter reported earnings or some subset of it."

REM is distinct from accounting-based earnings management (AEM) because REM includes operating decisions that impact cash flows whereas AEM does not. Also, the use of REM can impact the fundamental operating activities and strategies of the company in ways that

[1] For a comprehensive review of the real earnings management literature through 2007, see Xu et al. (2007).

AEM does not. Though most of the earnings management research investigates issues around AEM, some studies suggest the use of REM should be equally as concerning.

**Discretionary Expenses**

According to survey data reported by Graham et al. (2005), 80 percent of executives admit that they are willing to reduce discretionary spending on items such as advertising and research and development (R&D) in order to meet an earnings target. Similarly, interview-based findings from Commerford et al. (2015a) suggest that the use of REM through discretionary expenses is the method of REM most often observed by auditors. Consistent with the qualitative evidence, archival research suggests that management will underinvest in R&D in order to avoid year-over-year earnings decreases and negative earnings surprises (Baber et al. 1991; Perry and Grinaker 1994; Bange and DeBondt 1998). Evidence indicates that discretionary expenses can be used by executives to protect their own economic interests. Dechow and Sloan (1991) find that CEOs reduce spending on R&D toward the end of their tenure to increase short-term earnings, suggesting that CEOs seek to maximize their own wealth. Their study also indicates that the use of stock-based compensation and elongated CEO succession strategies can mitigate this practice to some extent.

The literature also suggests that those charged with governance attempt to deter underinvestment in R&D. For example, research has provided evidence that compensation committees shield CEO compensation from the income-decreasing effects of R&D expenditures (Duru et al. 2002; Cheng 2004). Additionally, the use of R&D reductions to meet targets is also diminished when institutional ownership is high (Bushee 1998). However, evidence from prior research suggests that the investment strategy of the underlying institutional ownership is an

important factor in understanding the incentives to use R&D to meet earnings benchmarks. Bushee's (1998) findings suggest that companies that are owned by institutions that have high portfolio turnover and use momentum strategies are more likely to reduce R&D to avoid earnings decreases. This finding also suggests that, at least some, institutional investors and those charged with governance tend to view this practice as undesirable. Overall, the research suggests that it is not uncommon for companies to reduce spending on R&D in an effort to meet earnings benchmarks. Given the findings from Dechow and Sloan (1991) and Bushee (1998), it appears that this practice is motivated by managers and shareholders having a short-term, rather than long-term, investment focus.

Similar to the use of R&D, the research indicates that managers can also use their discretion over marketing and advertising expenses to opportunistically alter earnings. Cohen et al. (2010) analyze data concerning actual dollars spent on advertising and show that managers, on average, reduce advertising to avoid losses and earnings decreases. However, results also indicate that more mature firms will actually increase advertising in an effort to boost revenues and meet earnings benchmarks. Mizik (2010) presents results indicating that when faced with the potential to miss earnings expectations, managers will inflate earnings by reducing expenditures on marketing and R&D. Chapman and Steenburgh (2011) uses supermarket scanner data combined with financial data to show that soup manufacturers increase advertisements at the fiscal quarter-end in order to increase earnings. Overall, the archival research on the use of discretionary expenses to meet earnings benchmarks is consistent with the survey evidence presented by Graham et al. (2005).

**Discounting and Production Activities**

Though the use of discretionary expenses appears to be the most commonly used method of REM, Graham et al. (2005) discusses other methods that managers use to manage earnings. Graham et al. (2005) indicates that 39 percent of executives are willing to use price discounts to encourage customers to make more purchases in the current period. Similarly, Commerford et al. (2015a) find that sales discounting is second-most common method of REM observed by auditors. Consistent with the survey evidence, Chapman and Steenburgh (2011) show that soup manufacturers increase marketing promotions, which ultimately results in price discounting, at quarter-end in order to increase sales. In the same way, cross sectional evidence from Roychowdhury (2006) suggests that firms will give sales discounts in order to meet earnings benchmarks. Research has also presented evidence consistent with firms overproducing inventory in order to spread fixed costs over a larger number of units resulting in lower reported cost of goods sold (Thomas and Zhang 2002; Roychowdhury 2006).

**Sales of Assets and Investments**

Companies also can opportunistically time the sales of assets in a way that has an advantageous impact on the financial statements. In regards to earnings, Warren Buffett is on record in the 2010 annual report as saying, "It is almost always meaningless at Berkshire. Regardless of how our businesses might be doing, [we] could – quite legally – cause net income in any given period to be almost any number we would like" (Berkshire 2010). Buffett was referring to the ability to discretionarily sell investments and immediately recognize gains and losses. More recently, during the second quarter of 2012, JP Morgan Chase & Co sold $25 billion in profitable securities resulting in a $1 billion gain, which was used to partially offset a

$2 billion loss resulting from poor derivative investments (Henry 2012). In reference to these transactions, Lynn Turner, the former chief accountant of the Securities Exchange Commission (SEC) said, “They really made two stupid decisions” (Henry 2012). The first was investing in the risky derivatives. He went on to say, “The second is selling assets with high income that they can’t replace.” The anecdotal evidence is consistent with survey evidence from Graham et al. (2005), which indicates that 20 percent of executives are willing to sell investments or other assets at a gain in order to increase earnings. Similarly, Bartov (1993) presents evidence that is consistent with the use of asset sales to smooth earnings. Research has also suggested that managers use swaps and derivative investments to smooth earnings (Hand 1989; Barton 2001; Pincus and Rajgopal 2002). Whether it is through the use of discretionary expenses, price discounts, overproduction, or asset sales, the research suggests that firms do in fact engage in REM to alter earnings.

**Effects of REM on Future Performance**

Survey evidence in Graham et al. (2005) indicates that 55 percent of executives are willing to delay starting a project in order to meet an earnings target, even if this entails a small sacrifice in economic value. This suggests that the use of REM might have a negative impact on the future performance of the firm. Though the survey evidence suggests that there is a future economic cost, there is conflicting evidence within the research on how the use of REM impacts the future performance of the company.

Some research considers REM to be “good” earnings management, suggesting that managers are making prudent business decisions (Parfet 2000). Gunny (2010) examines whether the use REM to meet earnings targets is associated with the future performance of the company

and finds that over the three subsequent years, firms using REM to meet earnings targets actually have significantly higher industry-adjusted ROA than firms that meet earnings targets but do not use REM to do so. The author concludes that this is consistent with managers using REM to signal future firm value or managers making real improvements to the company. Using matched-sample analysis, Taylor and Xu (2010) show that on average, the use of REM does not have a negative impact on the company's performance over the subsequent three years. Assuming that three years is a long enough to capture the full effects of using REM, these studies suggest that companies who engage in REM are no worse off in the future than similar companies who do not engage in REM.

In contrast, some research asserts that REM can impose additional long-term costs on shareholders because of its negative impact on future cash flows and firm value (Graham et al. 2005; Roychowdhury 2006; Cohen and Zarowin 2010; Kim and Sohn 2013). For example, Kim and Sohn (2013) find that a company's cost of capital is positively associated with the extent of REM used, suggesting that the market demands a higher risk premium for firms that choose to engage in REM. The increased cost of capital may inhibit the company's ability to find favorable sources of capital and could be detrimental to the long-term success of the company. Additionally, research in marketing has found that the use of price promotions has been shown to make consumers more price sensitive, encouraging them to wait for deals and then stockpile goods (Mela et al. 1997; Mela et al. 1998). Similarly, Kopalle et al. (1999) shows that increased promotions can reduce baseline sales, increase consumer price sensitivity, and diminish the company's ability to use such promotions to gain market share.

Other studies have shown that the immediate benefits to earnings from using REM are eventually negated, suggesting that firms might be better off by missing an earnings expectation

rather than using REM to meet the expectation (Chapman and Steenburgh 2011 and Mizik 2010). Mizik (2010) also compares the abnormal returns of firms who appear to be using REM with that abnormal return of firms that have high discretionary accruals. The results suggest that the REM firms have abnormal returns that are 26 percent more negative than the abnormal returns for firms using AEM. Similarly, Cohen and Zarowin (2010) show that declines in ROA subsequent to seasoned equity offers are more attributable to the use of REM than the use of AEM. These studies suggest that the use of REM is detrimental to the future performance of the company and that the consequences for using REM are more severe than the consequences for using AEM.

Even if the use of REM is solely motivated by beating short-term earnings targets, it is possible that it has little impact on the company's long-term value. For example, if a company reduces R&D expenditures at the end of a quarter, management might choose to increase expenditures in the following quarter to offset the REM. This perspective is consistent with the views expressed by Parfet (2000) and with the evidence provided by Gunny (2010). However it is also possible that the delay in R&D investment may cause the company to miss potential investments and growth opportunities, which eventually has a negative impact that company's value. Although there is mixed evidence in the literature, a large portion of the research suggests that, at the very least, there is potential for long-term consequences due to the use of REM.

**Substituting REM for AEM**

There is an emerging stream of research that investigates the tradeoffs and preferences between REM and AEM. The evidence suggests that AEM and REM can be substituted for each other to manage earnings (Cohen et al. 2008 and Zang 2011). Findings in Zang (2011) suggest

that managers use REM throughout the year. After year-end, when the effects of the REM are known, managers appear to adjust the level of AEM to obtain the desired outcome. Through survey responses and interviews with executives, Graham et al. (2005) reports that the majority of participants preferred to manage earnings through real actions as opposed to accounting actions. Evidence from Demers and Wang (2012) suggests that CEOs will prefer different methods depending on the stage of their career. The authors find that young CEOs use less income-increasing AEM and REM relative to older CEOs. Also, younger CEOs appear to prefer using AEM rather than REM. The authors posit that this result is consistent with young CEOs preferring the "lesser of two evils" due to career concerns. In general, the research tends to view the two methods of earnings management as substitutes for each other. However, the research also suggests that the two methods can be used in tandem to achieve the same desired outcome (e.g., Zang 2012).

**Auditors and Earnings Management**

Research in accounting indicates that auditors are likely to constrain the use of AEM. Survey evidence from Nelson et al. (2002) indicates that auditors adjusted 44 percent of attempts to use earnings management. When the AEM attempt had an income-increasing effect, the percentage of adjustments increased to 52 percent. Consistent with the survey evidence, Hirst (1994) suggests that auditors are likely to constrain attempts made by management to increase earnings and will even constrain efforts to decrease earnings when there are clear incentives to do so. Similarly, Kinney and Martin (1994) show that audit-related adjustments have a predominantly negative effect on pre-audit net earnings and net assets, suggesting that audits directly reduce positive bias in financial reporting.

Archival studies have also examined the relationship between audit quality and discretionary accruals. Using actual audit hours, Caramanis and Lennox (2008) find that increased auditor effort reduces the extent to which clients use income-increasing AEM. The extant literature has also investigated the association between auditor quality and AEM, finding that BigN auditors and specialist auditors constrain the use of AEM (Becker et al. 1998; Krishnan 2003). Though these papers suggest that auditors do constrain the use of AEM, very little is known about how auditors respond to the use of REM.

The extant literature indicates that an unintended consequence of constraining the use of AEM is that managers rely more on REM to alter earnings (Ewert and Wagenhofer 2005; Tan and Jamal 2006; Cohen et al. 2008; Bartov and Cohen 2009; and Chi et al. 2011). Cohen et al. (2008) shows that prior to Sarbanes-Oxley (SOX), the use of AEM was on the rise. However, after SOX, the level of AEM appears to decline while the level of REM increases. Ewert and Wagenhofer (2006) use analytical models to show that when the use of AEM is constrained it is optimal for managers to increase the use of REM. Using a computer-based experiment with financial managers as participants, Tan and Jamal (2006) find that when accounting discretion is restricted, managers will smooth earnings by reducing long-term investments with variable returns (e.g., R&D) and increasing their investment in short-term assets with stable returns. These papers suggest that increased auditor scrutiny on AEM, through SOX, has resulted in managers replacing AEM with REM.

In an effort to more directly examine the relationship between auditors and REM, Chi et al. (2011) examines the association between auditor quality and REM. Using audit fees, BigN firms, and city industry specialization as proxies for higher quality auditors, Chi et al. (2011) finds that high quality auditors are negatively associated with AEM. In contrast, higher quality

auditors are positively associated with REM. Their results also present evidence that longer auditor tenure is associated with lower levels of AEM but higher levels of REM. These results suggest that auditors might not restrict the use of REM.

**Auditors and Real Earnings Management**

Research generally posits that, because REM does not violate GAAP, it is not likely to draw auditor scrutiny (Roychowdhury 2006; Cohen et al. 2008; Demers and Wang 2010). For example, Roychowdhury (2006) states that, "…accrual manipulation is more likely to draw auditor or regulator scrutiny than real decisions about pricing and production." Additionally, Nelson et al. (2002) shows that only 21 percent of attempts to manage earnings through structured transactions are adjusted by auditors.[2] However, though auditors are not likely to constrain the use of REM through audit adjustments, auditors might be responding to its use in other ways.

It is possible that auditors respond to the use of REM in ways that are difficult to observe through empirical analysis. For example, interview-based evidence indicates that auditors certainly notice REM (Commerford et al. 2015a). Further, it can negatively impact the level of "comfort" that the auditor has regarding the engagement and in can impact how the audit is conducted (Commerford et al. 2015a). Similarly, recent experimental evidence indicates that REM increases auditor professional skepticism (Commerford et al. 2015b). Specifically, using audit partners and managers as participants, Commerford et al. (2015b) find that when clients are known to be altering earnings through discretionary expenses, auditors perceive higher levels of

[2] Nelson et al. (2002) identify structured transactions as those that involve a change in the timing or nature of a contract, transaction or activity, as opposed to involving a judgment or estimation process. The authors also note that their definition for structured transactions includes real earnings management as defined by Schipper (1989).

fraud risk and risk of material misstatement. Additionally, auditors indicated that they are more likely to increase audit testing in the account used to engage in REM.

Additionally, archival research has recently started to examine how REM affects auditor decisions (Sohn 2011; Greiner et al. 2013; Kim and Park 2014). Both Sohn et al. (2011) and Greiner et al. (2013) suggest that audit fees increase with a client's use of REM. Recent research also suggests that auditors are less likely to retain clients that engage in REM (Kim and Park 2014). Although these findings are consistent with the notion that REM influences auditors' perceptions of both the client and its actions, it is not possible to observe a causal link between REM and these auditor decisions using archival methods. I extend this line of research by experimentally investigating whether REM impacts auditor responses to subjective audit issues (e.g., management's estimates). By using an experimental approach, I can also observe a more direct relationship between the use of REM and auditor judgments and decisions.

In this study, I investigate how REM affects auditor decisions in the context of quantitatively immaterial audit differences arising from management estimates. However, before examining the effects of REM, I first examine how the presence of a qualitative materiality factor can alter auditor responses to quantitatively immaterial audit differences.

**Auditors and Qualitative Materiality (H1)**

In 1999, with the issuance of SAB No. 99, the SEC expressed concerns that auditors were solely relying on quantitative thresholds for determining the materiality of audit differences and misstatements. Both SAB No. 99 and AS No. 14 indicate that auditors should consider the surrounding circumstances when evaluating management's estimates and related audit differences (SEC 1999, PCAOB 2010). Therefore, auditors should consider not only quantitative

thresholds, but also qualitative factors that may influence the materiality of a given audit difference. The standards indicate that even relatively small (i.e., quantitatively immaterial) audit differences might be material when considering the impact that difference has on the company's financial results. For example, auditors should consider whether a misstatement obscures a company's failure to meet analysts' consensus expectations or other financial reporting targets, such as debt covenants. Both SAB No. 99 and AS No. 14 provide several examples of qualitative factors which may lead the auditor to believe that management making bias estimates, or even intentionally misstating accounting balances. This audit guidance suggests that, when an audit difference impacts a client's ability to meet an earnings target (i.e., qualitatively material), auditors should be more likely to propose an adjustment of that audit difference.

However, prior research suggests that auditors frequently do not adjust quantitatively immaterial misstatements, if doing so causes a client's earnings to fall below analysts' consensus earnings forecast (Libby and Kinney 2000; Ng and Tan 2003; Ng 2007; Ng and Tan 2007). For example, Libby and Kinney (2000) manipulate the consensus earnings per share (EPS) forecast such that full adjustment of a subjective audit difference results in reported earnings slightly above or below the earnings forecast. Results indicate that audit differences are *less* likely to be adjusted if they cause EPS to fall below analysts' forecast. Similarly, across all experimental conditions, Ng (2007) and Ng and Tan (2007) report that, in the absence of explicit qualitative materiality guidance (similar to that described in SAB No. 99), only eight percent and seven percent of participants, respectively, adjust subjective audit differences that affect the client's ability to meet the consensus EPS forecast. When provided with explicit qualitative materiality guidance, those proportions rise to 45 percent and 35 percent, respectively. Likewise, Ng and

Tan (2003) find that only 26 percent of their participants believe that a similar audit difference will be recorded.

Although this research suggests that auditors are reluctant to adjust quantitatively immaterial audit differences when doing so causes a client to miss an earnings target, the existing studies were conducted prior to the release of SAB No. 99, AS No. 14, or similar audit guidance. The SEC issued SAB No. 99 in 1999; however, the PCAOB did not issue AS No. 14 until 2010. Libby and Kinney (2000) candidly state that their study was conducted prior to the issuance of SAB No. 99 and that its passage "could dramatically affect the behavior exhibited" in their study.

Both Ng (2007) and Ng and Tan (2007) were conducted subsequent to the passage of SAB No. 99, but they note that they used Singapore auditors as participants and that, at the time when their experiment was conducted, guidance similar to SAB No. 99 had not been issued in Singapore. Additionally, even though Ng and Tan (2003) use U.S. auditors in a post-SAB No. 99 audit environment, their experimental design does not allow one to draw inferences regarding an auditor's propensity to book an audit difference when it impacts the client's ability to meet an earnings target versus when it does not. Likewise, Ng (2007) and Ng and Tan (2007) are not able to make a similar comparison. Therefore, it is not clear whether the results in prior research on qualitative materiality hold in today's audit environment. Consequently, I examine whether, in the current audit environment, auditors are more likely to propose an adjustment related to a quantitatively immaterial audit difference when that audit difference is qualitatively material.

With the passage of the SOX and the advent of the PCAOB, U.S. auditors are under more regulator scrutiny than ever before (Joe et al. 2011). Therefore, the passage of AS No. 14 is likely to have changed how auditors view and respond to qualitative materiality factors. Thus,

consistent with SAB No. 99 and AS No. 14, I predict that the presence of a qualitative materiality factor will cause auditors to question whether management's estimate is biased. Consequently, auditors will be more likely to propose adjustments related to quantitatively immaterial audit differences when the audit difference impacts the client's ability to meet an earnings target (i.e., when it is qualitatively material) versus when it does not. This hypothesis is formally stated as follows:

> **H1:** Auditors are more likely to adjust a quantitatively immaterial audit difference when it is qualitatively material.

**REM and the Cascading Effect of Dispositional Inferences (H2)**

The presence of REM may also affect how auditors respond to these quantitatively immaterial audit differences. Similar to how the presence of a qualitative materiality factor may cause auditors to believe that management's estimates are biased, Correspondent Inference Theory (CIT) suggests that auditors' responses to REM could be attributable to concerns regarding the aggressiveness of management's disposition. CIT posits that individuals tend to think that "you are what you do." Thus, observers are likely to draw inferences about an individual's disposition (e.g., kindness, integrity, aggressiveness) based on the characteristics of observed behavior (Jones and Davis 1965; Jones and Harris 1967; Ajzen and Holmes 1976). The theory posits that dispositional inferences are most likely when the observed behavior of an individual appears to be volitional, and when the behavior deviates from the observer's expectations for the observed individual's behavior (Jones and Davis 1965; Jones and Harris 1967). Further, these dispositional inferences affect how observers respond to the individual's specific observed action (Dweck et al. 1993).

Consistent with CIT, accounting research demonstrates that the nature of management's actions affects auditor perceptions of management's disposition, and that the dispositional inferences influence how the auditor responds to those specific actions (Wong-On-Wing et al. 1989; Reckers and Wong-On-Wing 1991; Commerford et al. 2015b). For example, Reckers and Wong-On-Wing (1991) manipulate whether or not a discretionary management estimate advantageously alters an earnings trend and whether or not the estimation process deviates from industry norms. Results indicate that both factors lead auditors to make inferences regarding management's motives, which then influences the auditor's perception of materiality and their likelihood of agreeing with managements estimate. Similarly, Commerford et al. (2015b) find that, when management engages in REM, auditors perceive management as exhibiting weaker tone-at-the-top, and that these negative perceptions of management cause auditors to increase testing in the account used to facilitate REM. This finding is consistent with CIT as REM represents volitional operating decisions that one would not expect management to make during the course of normal business operations (Roychowdhury 2006).

However, existing research has not examined whether auditors' inferences about management can cascade, affecting unrelated audit areas. For example, can observing REM through operating expenses change how auditors respond to subjective accounting issues (e.g., management estimates)? Related psychology research suggests that dispositional inferences can create an expectation that the target individual will behave similarly in other contexts (Newman and Uleman 1993; Nussbaum et al. 2003; Ferguson et al. 2005). Consistent with this notion, Commerford et al. (2015a) provide interview-based evidence indicating that most auditors assert that, when they observe REM, they also suspect that the client is using AEM.

Consequently, I predict that the dispositional inferences developed by auditors after observing one management action will affect how they respond to other management actions (i.e., the cascading effect of dispositional inferences). Specifically, I predict that, in the presence of REM, auditors will perceive management as having an aggressive disposition. Further, as a consequence of the dispositional inference regarding the aggressiveness of management, auditors will be more likely to constrain management's estimates by proposing income-decreasing adjustments. Informed by CIT, I formally state the following hypothesis:

**H2:** Auditors are more likely to constrain management's estimates in the presence of REM than in its absence.

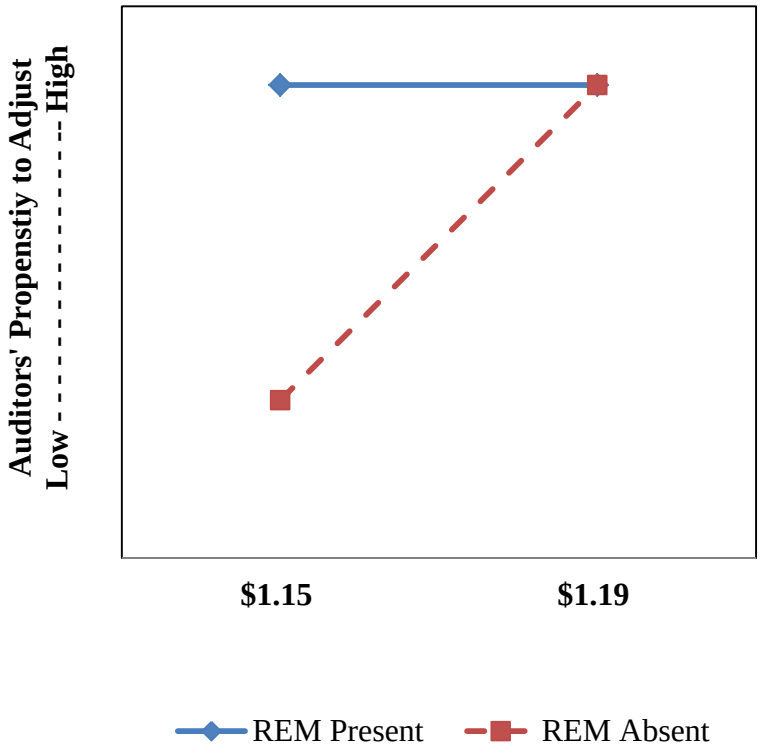
**The Interactive Effect (H3)**

Both the presence of REM and the presence of a qualitative materiality factor are predicted to influence how auditors respond to management's estimates. Considering the main effects hypothesized in H1 and H2 combined, it is expected that, when either one (or both) of the factors examined in this paper (i.e., qualitative materiality or REM) are present, auditors will have a relatively high propensity to adjust quantitatively immaterial audit differences compared to when neither factor is present. Figure 1 provides a depiction of the main effects and interaction effect suggest by the combination of H1 and H2. This interaction hypothesis is stated formally as:

**H3:** In the presence of REM, auditors have a high likelihood of adjusting a quantitatively immaterial audit difference, even when the audit difference is not qualitatively material.

**FIGURE 1**

**Hypothesized Results**




**The Mediating Role of Dispositional Inferences (H4)**

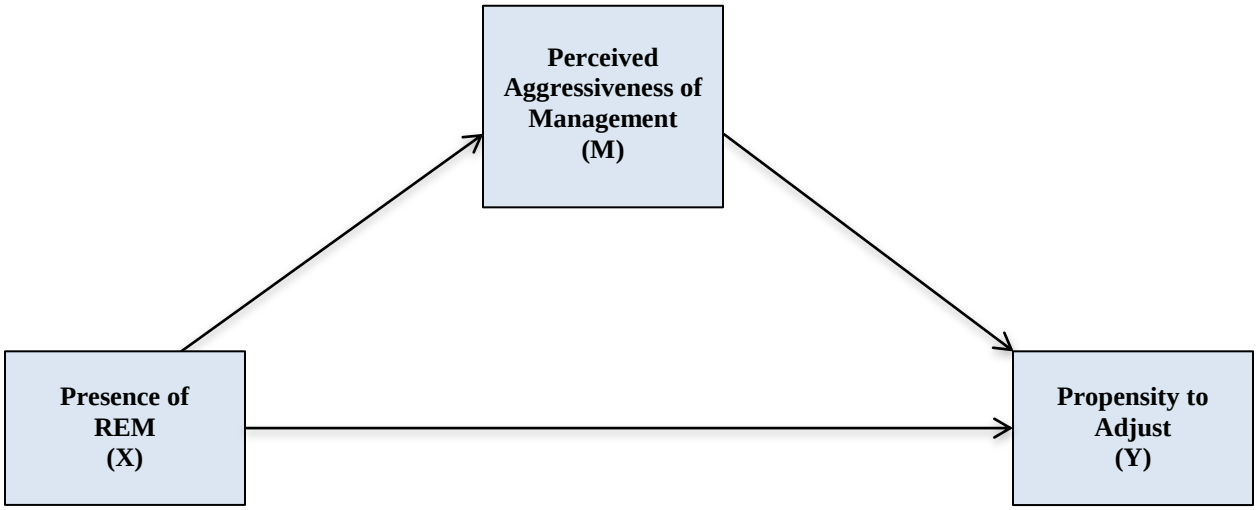
H2 predicts that auditors will be more likely to constrain management's estimates in the presence of REM than in its absence. This effect is predicted to occur as a result of cascading dispositional inferences. Therefore, in order to provide support for this proposed effect, I conduct mediation analysis. The cascading effect of dispositional inferences suggests the relationship between observing REM and proposed audit adjustments is mediated by the perceived aggressiveness of management. More specifically, REM causes auditors to perceive management as having an aggressive disposition, which then increases auditors' propensity to adjust

management's estimates. Therefore, I investigate whether the predicted relationship between REM and auditors' propensity to propose income-decreasing audit adjustments is mediated by the perceived aggressiveness of management. Figure 2 provides a depiction of the proposed mediation model. My hypothesis is formally stated as follows:

**H4:** The hypothesized relationship between REM and auditors' proposed adjustments is mediated by auditors' perceptions of the aggressiveness of management.

**FIGURE 2**

**Hypothesized Conceptual Model of Mediation**



# CHAPTER 3

# METHOD

## Participants

Participants for this study were obtained with the assistance of the Center for Audit Quality (CAQ). Auditors from eight international public accounting firms (including auditors from each of the Big 4 firms) participated in the study. A recruitment email, provided to the CAQ, invited auditors to participate in the study and provided a hyperlink to the case materials, which auditors accessed electronically through Qualtrics. The CAQ personnel forwarded this email to contacts at each of the firms. All participating auditors were assured that their identity and the identity of their firm would be confidential.

One-hundred and nineteen auditors accessed the study and provided complete responses. To ensure that participants had an adequate amount of experience in dealing with proposed audit adjustments, participants were asked to indicated whether, in a typical year, they were likely to make decisions related to proposed audit adjustments on an eleven-point Likert scale (0 = very unlikely; 11 = very likely). The majority of participants had extensive experience in dealing with audit adjustments (mean = 9.4). However, seven participants responded below the midpoint of the eleven-point scale and are excluded from the main analyses. Additionally, one participant's response was identified as an extreme outlier and was excluded. Lastly, 36 cases were excluded from the final sample because of failed manipulation checks.[3] See the Results section for further discussion about manipulation checks. The final sample includes responses from 75 experienced

[3] Additional analyses are conducted which examine how results differ when responses from participants who failed manipulation checks and with limited adjustment experience are included.

auditors, consisting of 15 managers, 43 senior managers, and 17 partners.[4] See Table 1 for demographic information for the final sample. Overall, participants reported a mean of approximately 12 years of audit experience and indicated that, in a typical year, they spent about 49 percent of their time working on public audit clients.

**TABLE 1**

**Demographic Information**

**Final Sample (n = 75)**

| | Demographics by Job Position | | | |
|---|---|---|---|---|
| | Manager | Senior Manager | Partner | Overall |
| Number of participants | 15 | 43 | 17 | 75 |
| Average years of audit experience | 7.2 | 10.8 | 19.8 | 12.3 |
| Likelihood of making decisions regarding proposed adjustments | 8.9 | 9.8 | 10.7 | 9.8 |
| Percentage of typical year spent auditing public companies | 55.0 | 52.4 | 37.7 | 49.4 |

This table provides descriptive statistics on demographic information of participants. Participants assessed their likelihood of involvement in decisions related to proposed audit adjustments on an eleven-point scale (1 = very unlikely; 11 = very likely).

[4] Two participants selected "Other" when indicating their position title. One indicated that they were a managing partner with 13 years of experience and the other had 14 years of experience. For the purposes of this study, both are categorized as partners.

**Experimental Audit Case**

Each participant assumed the role of manager on the financial statement audit of Active Tech Sportswear, Inc. (ATS), a hypothetical publicly-traded sports apparel company that "designs, develops, markets, and distributes branded performance apparel, footwear, and accessories for men, women, and youth."[5] The background information describes ATS as a company that is average-sized for its industry and that has exhibited steady growth. Participants are also told that their firm has audited ATS for "several years" and that "past audit reports have always expressed an unqualified opinion." This information was included so that participants would have a fairly neutral perspective on ATS as an audit client. Additionally, the background information explains that, "ATS's management believes that continued effective product development and promotion is essential for the company to be successful." This was included so that participants understood that marketing and advertising was an important aspect of ATS's business strategy. After reviewing the background information, participants then review ATS's financial statement information, including ATS's unaudited earnings and analysts' consensus forecast for EPS. This information is adapted from case materials developed by Libby and Kinney (2000) and Nelson et al. (2005). See Figure 3 presents the financial information provided to participants in all versions of the case materials.[6]

[5] See Appendix A for the complete research instrument.
[6] The hypothetical company described in the case materials used by both Libby and Kinney (2000) and Nelson et al. (2005) is an auto parts manufacturer. For this study, the case materials were adapted for a similarly sized apparel company. Additionally, financial information was loosely based on an actual publicly-traded sports apparel company.

**FIGURE 3**

**Financial Information**

The following summary financial information includes all relevant ***unaudited*** balances for the current year (period ended 12/31/2013). This financial information is not intended to be complete.

| **EPS** | **$1.20 per share** |
|---|---|
| Shares outstanding | 150 million |
| | |
| Sales | $1,800 million |
| Pre-tax earnings | $265 million |
| Net earnings | $180 million |
| | |
| Accounts receivable, net | $210 million |
| Total current assets (including A/R) | $912 million |
| Total assets | $1,200 million |
| Current liabilities | $218 million |
| Total liabilities | $460 million |
| Total equity | $740 million |

I employ a 2x2 between-subjects factorial design in which I manipulate the whether or not an observed audit difference is qualitative materiality and the presence or absence of REM. Qualitative materiality is manipulated by varying whether or not a quantitatively immaterial audit difference affects the client's ability to meet the analysts' consensus EPS forecast. This is accomplished by manipulating the EPS forecast at one of two levels ($1.15 or $1.19), while holding constant across all conditions the financial statement information, including the company's annual unadjusted earnings ($1.20 per share). See Figure 4 for an illustration of the full experimental design.

**FIGURE 4**

**Experimental Design**

| Real Earnings Management | EPS Consensus Forecast: **$1.15** | EPS Consensus Forecast: **$1.19** |
|---|---|---|
| **Present** | (1)<br>Unadjusted EPS: $1.20 per share<br>Estimate-related audit difference: $0.02<br>Fully Adjusted EPS: $1.18 (*above* forecast)<br>REM Earnings Benefit: $0.02 increase | (2)<br>Unadjusted EPS: $1.20 per share<br>Estimate-related audit difference: $0.02<br>Fully Adjusted EPS: $1.18 (*below* forecast)<br>REM Earnings Benefit: $0.02 increase |
| **Absent** | (3)<br>Unadjusted EPS: $1.20 per share<br>Estimate-related audit difference: $0.02<br>Fully Adjusted EPS: $1.18 (*above* forecast)<br>REM Earnings Benefit: none | (4)<br>Unadjusted EPS: $1.20 per share<br>Estimate-related audit difference: $0.02<br>Fully Adjusted EPS: $1.18 (*below* forecast)<br>REM Earnings Benefit: none |

In the case, participants learn about the existence of a subjective audit issue arising from management's estimate for the allowance for doubtful accounts. In all conditions, participants are told that the magnitude of the difference (approximately $3 million or $0.02 per share) is less than the quantitative materiality threshold for the current ATS audit engagement.[7] Therefore, for all conditions, if full audit adjustment were made, adjusted earnings would be $1.18. Consequently, in the condition in which the EPS forecast is $1.19, full adjustment prevents the company from reaching its earnings target. However, in the condition in which the EPS forecast is $1.15, full adjustment does not impact the company's ability to achieve its earnings target.

In order to operationalize the presence (absence) of REM, participants review observations from the audit team regarding management's operating decisions. In the conditions in which REM is present, the case materials indicate that management significantly reduced

[7] Participants are also told that the audit difference is less than other common thresholds for materiality (e.g., 5% of pretax earnings and 0.5% or total assets).

advertising expenditures during the fourth quarter of the current year. This form of REM is chosen as it appears to be the method most commonly used by managers (Graham et al. 2005) and the method most commonly observed by auditors (Commerford et al. 2015a). Case materials specify that the advertising expense was lower than expected (based on historical trends and amounts previously budgeted by management). The case materials state that audit evidence suggests that "ATS's management reduced actual advertising expenditures late in 2013 in order to report more favorable net income," but that, based on other audit procedures and conversations with management, the audit team is "very confident that the reported advertising expense for 2013 is properly stated." Participants are informed that the audit team estimates that management's advertising decisions increased earnings by approximately $0.02 per share.

In the conditions in which REM is absent, participants are told that the reported advertising expense is in line with the audit team's expectations based on historical trends and previous budgets. Additionally, participants are told that there were no significant changes to ATS's advertising strategy during the year. Participants in this condition also are informed that the audit team is very confident that the advertising expense is properly stated.

All participants are asked to indicate the magnitude of the adjustment that they would propose related to the audit difference.[8] Consistent with Ng and Tan (2003), the adjustment magnitude is converted to a dichotomous variable for hypothesis testing. The dichotomous variable is coded based on whether or not auditors propose full adjustment of the audit difference (full adjustment coded as 1, otherwise 0). In all conditions, full adjustment reduces the client's EPS by $0.02. Given that the audit difference is quantitatively immaterial, the magnitude of the audit adjustment is not important. Instead, it is more informative to analyze whether the amount

[8] Joe et al. 2011 find that only 24.2 percent of proposed audit adjustments are waived, suggesting that proposed audit adjustments are predictive of the adjustments that are ultimately booked by management.

of the adjustment reduces reported EPS from $1.20 to $1.18. A full adjustment (i.e., $0.02 per share) will cause the client to miss the analysts' consensus EPS forecast when the EPS forecast is $1.19, but not when the EPS forecast is $1.15.[9]

Additionally, I ask auditors about their perceptions of the aggressiveness of management in order to investigate whether a cascading effect of dispositional inferences explains why REM affects auditors' adjustment decisions. Specifically, using a nine-point Likert scale (1 = not at all aggressive; 9 = highly aggressive), I asked participants, "How aggressive is ATS's management with regard to achieving financial reporting targets?" Participants are asked several additional questions which are designed to provide additional support for interpreting the responses of the participants. Finally, all participants responded to manipulation check questions and questions about their relevant audit experience.

[9] Any audit adjustment greater than $2,333,500 can cause reported EPS to fall by $0.02, if the resulting EPS is rounded to the nearest cent. However, statistical analyses using $2,333,500 as the threshold for creating the dichotomous dependent variable yields identical results, as there were no proposed adjustments between $2,333,500 and $3,000,000. The vast majority of participants (96 percent) proposed either full adjustment of $3,000,000 or no adjustment at all.

# CHAPTER 4

# RESULTS

## Manipulation Checks

One-hundred and nineteen auditors accessed the study and provided complete responses. As previously discussed, there were 112 participants whose responses indicated that they were relatively likely to be involved in decisions regarding proposed audit adjustments. I also ask several questions in order to gauge the effectiveness of the experimental manipulations. First, I ask participants to correctly recall the value of the analysts' consensus EPS forecast as either $1.15 or $1.19. It is important that participants are able to correctly identify the EPS forecast because it determines whether or not the audit difference is qualitatively material based on the guidance in SAB No. 99 and AS No. 14. Nine participants did not correctly answer this manipulation check and were excluded from subsequent analyses. [10]

The second manipulation in the study is the presence or absence of REM. In conditions where REM is present, participants are told that the advertising expense was lower than expected based on historical trends and budgeted amounts. Additionally, they are told that the decline in advertising was due management's efforts to report more favorable net income, but that they were very confident that the amount reported for advertising was properly stated. Therefore, in order to gauge the effectiveness of the REM manipulation, I ask three manipulation check questions. First, I ask participants to correctly identify whether or not the advertising expense was consistent with expectations based on historical trends and budgets. Second, using a nine-

[10] One additional case was excluded due to the participant proposing an audit adjustment of $30.5 million even though the potential audit difference was only $3 million.

point Likert scale (1 = extremely unlikely; 9 = extremely likely), I asked participants, "What is the likelihood that management used its discretion over advertising expenditures to report more favorable net income and EPS for 2013?" Third, I asked participants whether or not they agree (1 = strongly disagree; 9 = strongly agree) with the statement that, "Based on audit testing and conversations with management, the *amount* reported for ATS's 2013 advertising expense was properly stated."

Most participants correctly interpreted the REM manipulation. Of the remaining responses, ninety-one percent of participants were able to correctly indicate that advertising expense was lower than expected when REM was present and consistent with expectation when REM was absent. The likelihood that management used discretionary expenses to report more favorable earnings was assessed as higher in the presence of REM versus its absence (7.3 and 4.4, respectively; $p$-value < 0.01).[11] Additionally, across all conditions, perceptions that advertising expense was properly stated were significantly higher than the scale midpoint (mean = 7.1 versus scale midpoint of 4.5; $p$-value < 0.01), and these perceptions did not differ in the presence vs. absence of REM ($p$-value = 0.94).

However, nine participants were not able to correctly identify whether or not the advertising expense was consistent with expectations based on historical trends and budgets. An additional 10 participants assessed the likelihood that management used advertising expenses to report more favorable earnings as above the midpoint in the absence of REM. Seven additional participants indicated that they were concerned that advertising expense was not properly stated (i.e., their responses were below the midpoint of the scale).

Failure to answer the manipulation check questions correctly may indicate a lack of attention and/or a misunderstanding of the case materials. Consequently, I eliminate the

[11] Throughout the paper, reported $p$-values are two-tailed unless noted otherwise.

responses from all of these participants from further analyses because they did not correctly interpret the experimental manipulations. One of the main objectives of this study is to examine how auditor decisions are affected by REM (i.e., discretionary business decisions which deviate from normal operations and are motivated by earnings targets, but that are properly accounted for in the financial statements). By excluding responses from individuals who did not correctly answer the manipulation checks, I ensure that the included participants have interpreted management's advertising decisions as an attempt to use REM. Excluding these responses also reduces noise in the statistical analyses. In Chapter 4, I conduct additional analyses to examine how results differ when these participant responses are included.

**Tests of Hypotheses**

In order to test my hypotheses, I first examine the proportion of auditors that choose to fully adjust the audit difference, by experimental condition, and conduct logistic regression. Table 2, Panel A reports descriptive statistics regarding the proportion of auditors proposing full adjustment of the audit difference. I also present the proportions graphically, by experimental condition, in Figure 5. When REM is absent and the audit difference is not qualitatively material, only 47 percent of auditors propose full adjustment. The proportion of auditors proposing full adjustment is relatively higher in the other three conditions, with proportions ranging from 75 percent to 90 percent.

Recall that H1 predicts that auditors will be more likely to propose adjustments related to quantitatively immaterial audit differences when the audit difference is qualitatively material. H2 predicts that auditors will be more likely to constrain management's estimates (i.e., propose an income-decreasing adjustment) in the presences of REM. H3 hypothesizes an interaction effect

in which the proportion of auditors proposing full adjustment relatively high when either one (or both) of the experimental factors (i.e., qualitative materiality or REM) are present, while the proportion of auditors proposing full adjustment will be lowest when REM is absent and the audit difference is not qualitatively material (i.e., the EPS forecast is $1.15).

**TABLE 2**

**Analysis of Auditor Adjustment Decisions**

**Final Sample (n = 75)**

**Panel A: Proportion of Participants Proposing Full Adjustment by Condition**

| | EPS Forecast | | |
|---|---|---|---|
| | $1.15 | $1.19 | Collapsed Across EPS Forecast |
| REM Present | Cell 1<br>90.0%<br>(18/20) | Cell 2<br>75.0%<br>(15/20) | 82.5%<br>(33/40) |
| REM Absent | Cell 3<br>47.1%<br>(8/17) | Cell 4<br>88.9%<br>(16/18) | 68.6%<br>(24/35) |
| Collapsed Across REM | 70.3%<br>(26/37) | 81.6%<br>(31/38) | |

**Panel B: Logistic Regression**

| **Efffect** | **Wald** | ***df*** | ***p*-value** |
|---|---|---|---|
| REM | 6.77 | 1 | 0.009 |
| EPS Forecast | 6.05 | 1 | 0.014 |
| REM*EPS Forecast | 6.70 | 1 | 0.010 |

Table 2, Panel A provides descriptive statistics, by experimental condition, for the proportion of auditors proposing full adjustment of the audit difference. Panel B reports the results of the related logistic regression.

**FIGURE 5**

**Auditor Adjustment Decision Proportions**

**Final Sample (n = 75)**

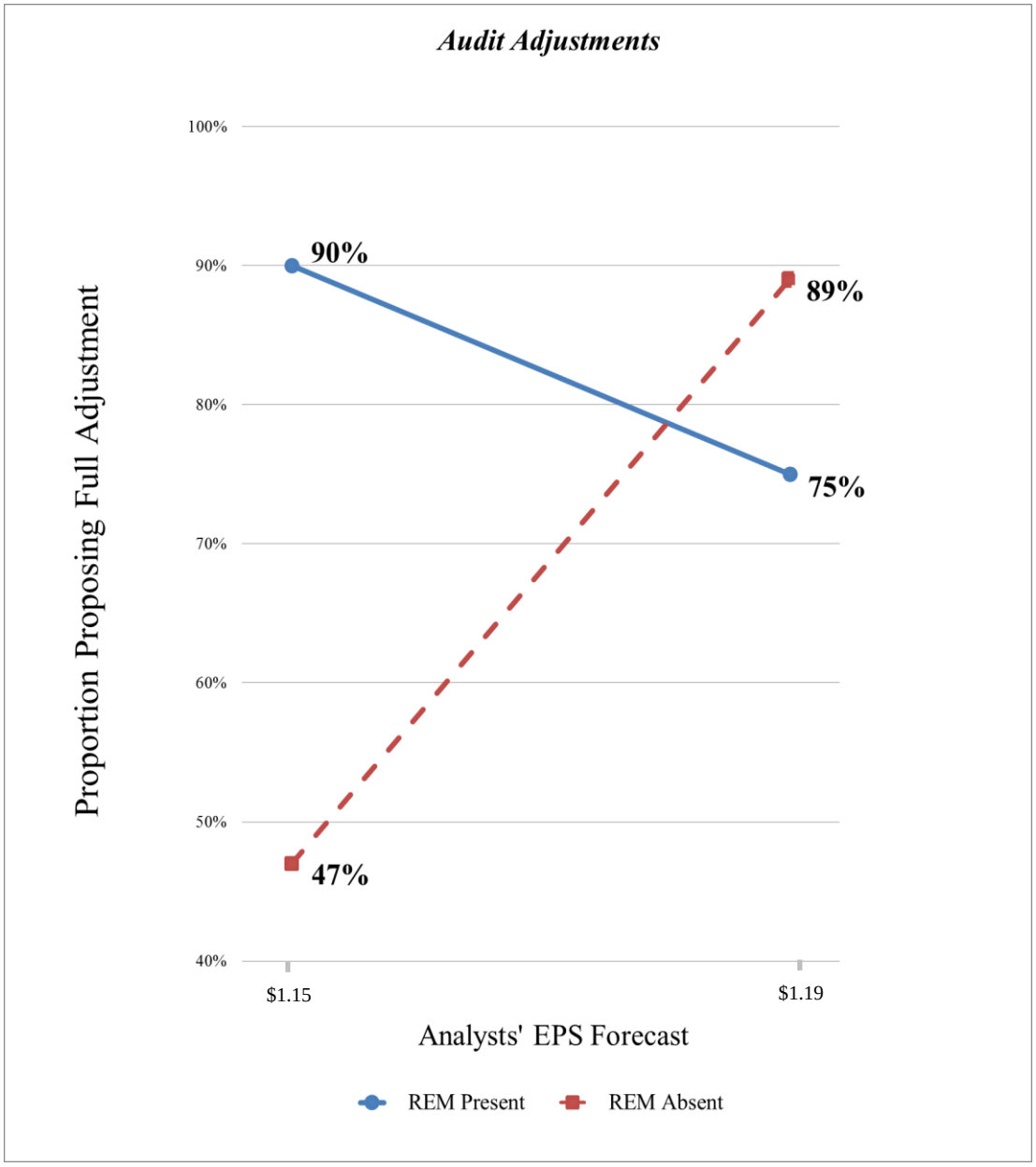



Figure 5 presents the proportion of auditors that propose full adjustment of the audit difference by experimental condition. These proportions are also reported in Table 2, Panel A.

Table 1, Panel B reports the results of the logistic regression.[12] Consistent with H1, there is a significant main effect for EPS Forecast (*p*-value = 0.01), indicating that auditors are more likely to adjust quantitatively immaterial audit differences when the audit difference affects the client's ability to meet an EPS forecast relative to when it does not. Similarly, consistent with H2, the main effect of REM is significant (*p*-value < 0.01), indicating that auditors are more likely to constrain management's estimates in the presence of REM. As hypothesized in H3, results also indicate a significant interaction effect (*p*-value < 0.01).

Table 3, Panel B reports the results of planned comparisons using Fisher's Exact Tests. The proportion for each experimental condition is included in Table 3, Panel A for reference purposes. The first three comparisons contrast the proportion of participants proposing full adjustment in the condition in which REM is absent and the EPS forecast is $1.15 (Cell 3) to the proportions in each of the other three conditions, separately. Comparison 4 contrasts the proportion of participants proposing full adjustment in Cell 3 to the proportion in all other conditions combined. Comparisons 1, 3, and 4 are highly significant (all *p*-values = 0.01 or less, one-tailed) and Comparison 2 is marginally significant (*p*-value = 0.08, one-tailed). In addition, as expected, Comparisons 5 through 7 are not significant (all *p*-values > 0.41), indicating that the three conditions in which auditors have higher propensities to propose full adjustment do not differ from each other. Consistent with the relationships predicted by H1, H2, and H3, these results indicate when an audit difference is qualitatively material and/or when the client uses REM, it increases the likelihood that auditors will constrain management's estimates by proposing an audit adjustment that reduces EPS by $0.02.

[12] As most participants (96 percent) proposed either full adjustment or no adjustment, the use of a dichotomous measure within logistic regression is most appropriate. However, ANOVA analyses using the magnitude of the audit adjustment also are inspected in additional analyses.

**TABLE 3**

**Results of Planned Contrasts**

**Final Sample (n = 75)**

**Panel A: Proportion of Participants Proposing Full Adjustment by Condition**

| | EPS Forecast | |
|---|---|---|
| | $1.15 | $1.19 |
| REM Present | Cell 1 | Cell 2 |
| | 90.0% | 75.0% |
| | (18/20) | (15/20) |
| REM Absent | Cell 3 | Cell 4 |
| | 47.1% | 88.9% |
| | (8/17) | (16/18) |

**Panel B: Planned Comparisons Between Conditions**

| **Comparison** | **Contrast Value** | ***df*** | **Fisher's Exact Test *p*-value** |
|---|---|---|---|
| (1) Cell 1 vs. Cell 3* | 42.9% | 1 | < 0.01 |
| (2) Cell 2 vs. Cell 3* | 27.9% | 1 | 0.08 |
| (3) Cell 4 vs. Cell 3* | 41.8% | 1 | 0.01 |
| (4) Cell 3 vs. All Other Cells* | 36.6% | 1 | < 0.01 |
| (5) Cell 2 vs. Cell 4 | -13.9% | 1 | 0.41 |
| (6) Cell 1 vs. Cell 2 | 15.0% | 1 | 0.41 |
| (7) Cell 1 vs. Cell 4 | 1.1% | 1 | 1.00 |

Table 3, Panel A provides descriptive statistics, by experimental condition, for the proportion of auditors proposing full adjustment of the audit difference. Panel B reports the results of the related planned comparisons between conditions.

* Denotes comparisons which use one-tailed *p*-values due to directional hypotheses. All other reported *p*-values are two-tailed.

## Mediation Analysis

H4 predicts that REM indirectly influences auditors' adjustment decisions sequentially through the perceived aggressiveness of management. To test this hypothesis, I conducted a mediation analysis (Model 4 in PROCESS) following procedures described by Hayes (2013). The paths for the mediation model are illustrated in Figure 6 and their corresponding coefficients and 95% confidence intervals are provided in Table 4.

**FIGURE 6**

**Mediation Model**

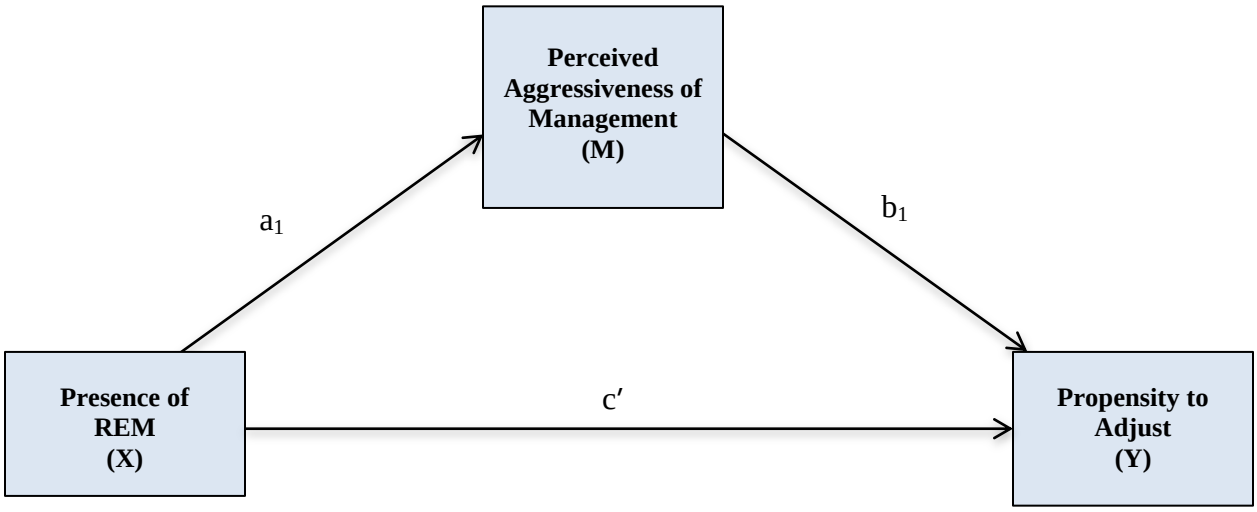



Figure 6 is an illustration of the mediation model in which the perceived aggressiveness of management (M) is expected to mediate the relationship between REM (X) and auditors' propensity to propose full adjustment of quantitatively immaterial audit differences (Y). Analysis was conducted following procedures described by Hayes (2013). Path coefficients, indirect effects, and confidence intervals are reported in Table 4.

**TABLE 4**

**Mediation Analysis Results**

**Final Sample (n = 75)**

**Panel A: Model Results**

| Path Estimate | Coefficient (Std. Error) | *p*-value | Lower Limit Confidence Interval | Upper Limit Confidence Interval |
|---|---|---|---|---|
| $a_1$ | 1.42 (0.28) | < 0.01 | 0.873 | 1.970 |
| $b_1$ | 0.52 (0.25) | 0.04 | 0.035 | 1.005 |
| c' | 0.07 (0.65) | 0.91 | -1.193 | 1.337 |

**Panel B: Indirect Effect of REM on Proposed Audit Adjustments**

| | Effect (Std. Error) | Lower Limit Confidence Interval | Upper Limit Confidence Interval |
|---|---|---|---|
| Indirect effect of Perceived Aggressiveness | 0.74 (0.48) | 0.038 | 1.811 |

This table provides the results of mediation analysis following the procedures outlined by Hayes (2013). The level of confidence for all reported confidence intervals is 95 percent.

Results indicate that, when testing for mediation, the indirect effect of REM on auditors' proposed adjustments through the perceived aggressiveness of management was significant (i.e., the confidence interval does not include zero), supporting H4 (95% CI = LL: 0.038; UL: 1.811). Therefore, when REM is present, auditors perceive management as more aggressive ($a_1$ is

positive). As a consequence of this dispositional inference, auditors are more likely to propose an income-decreasing adjustment relating to management's estimate for the allowance for doubtful accounts ($b_1$ is positive). These findings support H4 and are consistent with the notion of a cascading effect of dispositional inferences, whereby the dispositional inferences resulting from REM increases the likelihood that auditors will constrain management's estimates.

# CHAPTER 5

# ADDITIONAL ANALYSES

## Magnitude of Audit Adjustments

The primary dependent variable of interest in this study is a binary variable based on whether or not participants propose a full adjustment of the audit difference, which reduces reported EPS from $1.20 to $1.18. In other words, are auditors willing to propose an adjustment that reduces EPS by $0.02? As 96 percent of participants proposed either full adjustment or no adjustment at all, analyzing the results using binary logistic regression is most appropriate. However, ANOVA analyses using the magnitude of the audit adjustment should yield similar results.

Table 5 presents the ANOVA results for the magnitude of proposed audit adjustments. Those results are also presented graphically in Figure 7. As expected, analyses using the magnitude of the proposed audit adjustment yield very similar results to analyses using the proportion of auditors proposing full adjustment. The pattern of the means shown in Figure 7 is very similar to that using the dichotomous measure (shown in Figure 5). Consistent with H1, H2, and H3, results indicate main effects for REM and for EPS forecast that are moderately significant ($p$-value = 0.07 and 0.08, respectively) and a highly significant interaction ($p$-value < 0.01). When REM is present, the average proposed audit adjustment is $2.70 million and 2.35 million when the EPS forecast is $1.15 and $1.19, respectively. Additionally, when REM is absent and the audit difference is qualitatively material (i.e., the EPS forecast is $1.19) the average adjustment is $2.67 million. Any audit adjustment greater than $2.33 million can cause

reported EPS to fall by $0.02, if the resulting EPS is rounded to the nearest cent. Therefore, in the three conditions where auditors are expected to be most likely to constrain management's estimates, the average adjustment is enough to reduce earnings by $0.02. In contrast, when the audit difference is not qualitatively material (i.e., the EPS forecast is $1.15) and REM is absent the average adjustment is $1.56 million, which only reduces EPS by $0.01. These results suggest that more likely to constrain management's estimate when REM is present or when the audit difference is qualitatively material (or both). These results also provide additional support for H1, H2, and H3.

**TABLE 5**

**Additional Analyses: Magnitude of Audit Adjustments**

**Final Sample (n = 75)**

**Panel A: Mean (Std. Dev.)**

| | EPS Forecast | | |
|---|---|---|---|
| | $1.15 | $1.19 | Collapsed Across EPS Forecast |
| | Cell 1 | Cell 2 | |
| REM Present | $2.70<br>(0.92)<br>n = 20 | $2.35<br>(1.23)<br>n = 20 | $2.52<br>(1.09)<br>n = 40 |
| | Cell 3 | Cell 4 | |
| REM Absent | $1.56<br>(1.48)<br>n = 17 | $2.67<br>(0.97)<br>n = 18 | $2.13<br>(1.35)<br>n = 35 |
| Collapsed Across REM | $2.18<br>(1.32)<br>n = 37 | $2.50<br>(1.11)<br>n = 38 | |
| Overall | $2.34<br>(1.22)<br>n = 75 | | |

**Panel B: ANOVA Results**

| | F | *p*-value |
|---|---|---|
| REM | 2.34 | 0.07 |
| EPS Forecast | 1.97 | 0.08 |
| REM*EPS Forecast | 7.38 | < 0.01 |

Table 5, Panel A provides descriptive statistics for the dollar amounts (in millions) of the proposed audit adjustments. Panel B reports the related ANOVA results. All p-values are one-tailed due to directional expectations.

**FIGURE 7**

**Magnitude of Audit Adjustments**

**Final Sample (n = 75)**

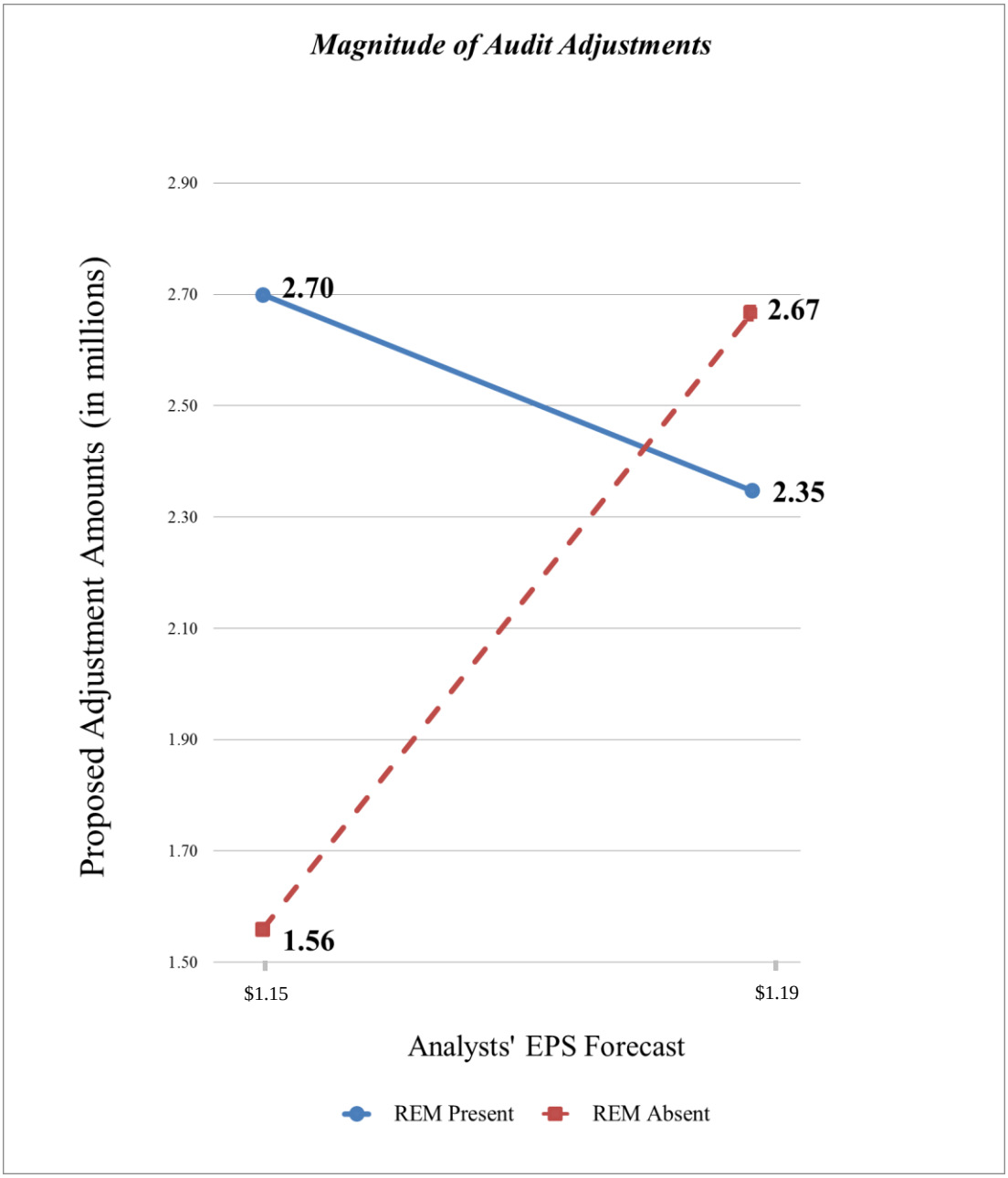



Figure 7 presents the dollar amounts (in millions) of the proposed audit adjustments by experimental condition. Related statistical results are reported in Table 5.

**Perceptions of Good Faith Estimate**

For additional evidence regarding how REM affects auditors' perceptions of management's estimates, I investigate whether or not participants believe that management's estimate was made in good faith. Although not specifically hypothesized, I expect auditors to question the integrity of management's estimates in presence of REM. Similarly, relative to when the EPS forecast is $1.15, I would expect auditors to less comfortable with management's estimates when the EPS forecast is $1.19. Consequently, I expect an interactive effect, such that when either one (or both) of the factors examined in this paper (i.e., qualitative materiality or REM) are present, auditors will be more likely to question the integrity of management's estimates. On a nine-point Likert scale, participants are asked to indicate to what extent they agree or disagree with the statement that management's estimate for the allowance for doubtful accounts was made in good faith (1 = strongly disagree; 9 = strongly agree). Results are presented in Table 6 and in Figure 8.

**TABLE 6**

**Additional Analyses: Perceptions of Good Faith Estimate**

**Final Sample (n = 75)**

**Panel A: Mean (Std. Dev.)**

| | EPS Forecast | | |
|---|---|---|---|
| | $1.15 | $1.19 | Collapsed Across EPS Forecast |
| REM Present | Cell 1 | Cell 2 | |
| | 4.80<br>(1.20)<br>n = 20 | 4.90<br>(1.65)<br>n = 20 | 4.85<br>(1.42)<br>n = 40 |
| REM Absent | Cell 3 | Cell 4 | |
| | 6.71<br>(1.40)<br>n = 17 | 5.50<br>(1.54)<br>n = 18 | 6.09<br>(1.58)<br>n = 35 |
| Collapsed Across REM | 5.68<br>(1.60)<br>n = 37 | 5.18<br>(1.61)<br>n = 38 | |

**Panel B: ANOVA Results**

| | F | *p*-value |
|---|---|---|
| REM | 13.77 | < 0.01 |
| EPS Forecast | 2.68 | 0.05 |
| REM*EPS Forecast | 3.74 | 0.03 |

Table 6 provides descriptive statistics and ANOVA results for the extent to which participants agree or disagree with the statement that management's estimate was made in good faith (1 = strongly disagree; 9 = strongly agree). All p-values are one-tailed due to directional expectations.

**FIGURE 8**

**Perceptions of Good Faith Estimate**

**Final Sample (n = 75)**

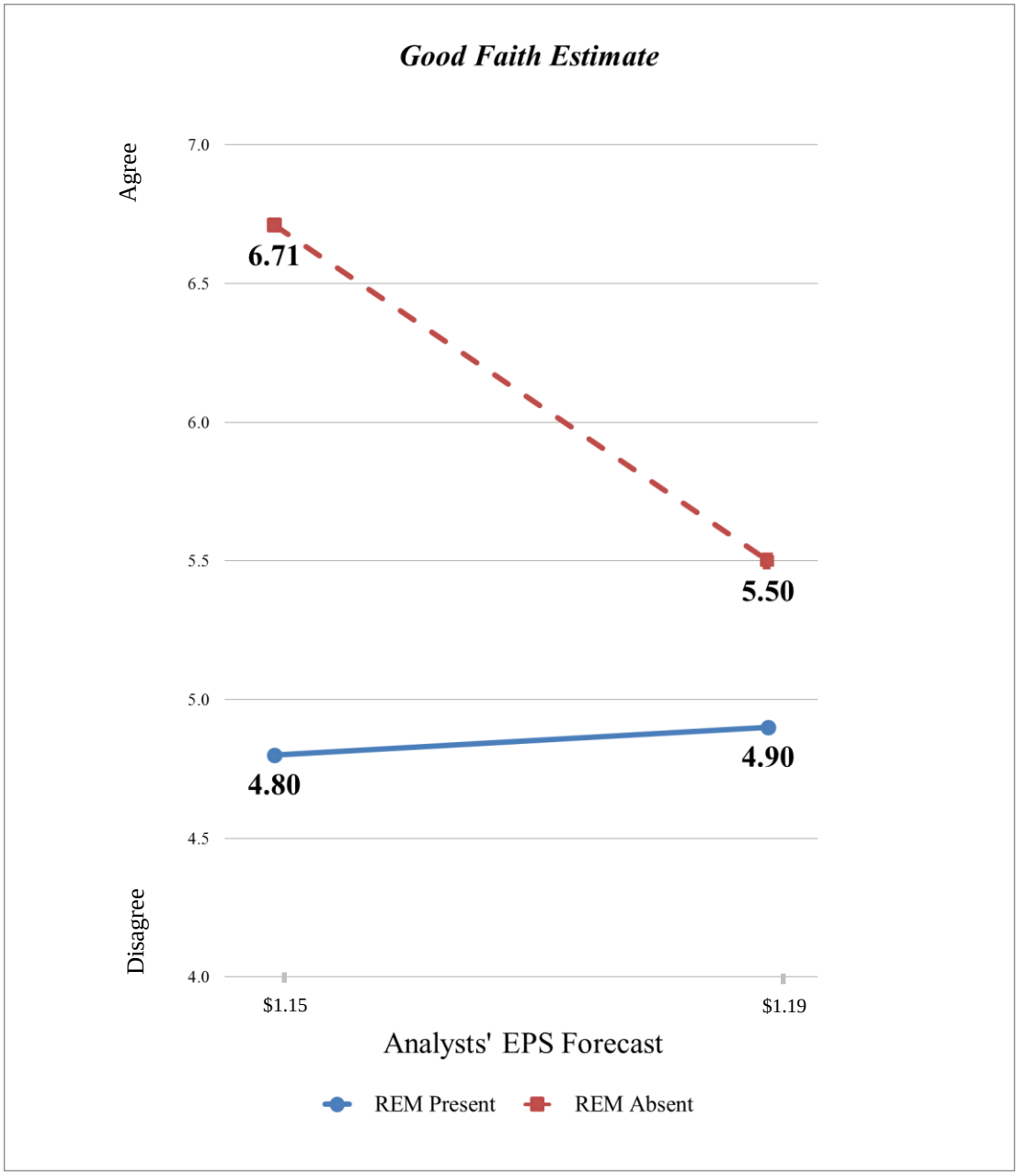



Figure 8 presents the extent to which participants agree or disagree with the statement that management's estimate was made in good faith (1 = strongly disagree; 9 = strongly agree). Related statistical results are reported in Table 6.

The pattern of the means reported in Table 6, Panel A is consistent with expectations. Auditors are most likely to agree that management's estimates are made in good faith in the absence of REM and when the EPS forecast is $1.15. Relative to the condition where REM is absent and the forecast is $1.15, auditors are more likely to disagree with that same statement when REM is present or when the EPS forecast is $1.19. Consistent with expectations, and consistent with the results based on participants' proposed adjustments, ANOVA results reported in Table 6, Panel B indicate significant main effects for both independent variables. Additionally, there is significant interaction between the two independent variables. These results indicate that auditors are more concerned about the integrity of management's estimates in the presence of REM. Additionally, even in the absence of REM, when the audit difference is qualitatively material (i.e., the EPS forecast is $1.19), auditors appear to be more concerned about the integrity of management's estimates. Overall, these results provide additional evidence that REM alters auditors' perceptions about management's estimates.

**Perceived Fairness of Financial Reporting**

In this paper, I contend that REM alters auditors' perceptions of the aggressiveness of management's estimates, which then increases the likelihood that they will constrain management's estimates. However, an alternative explanation the observed results could be that auditors believe the financial reporting benefits derived from REM are unfair to company shareholders.

Extensive research in psychology, management, and economics relating to fairness suggests that, in a variety of contexts, individuals tend to prefer equitable and fair outcomes (Adams 1965; Kahneman et al. 1986; Fehr and Schmidt 1999; Folger and Cropanzano 2001;

Miller 2001; Schweitzer and Gibson 2007). For example, prior accounting research shows that fairness impacts audit committee members' decisions in that they are more likely to support auditors' proposed adjustments when members perceive that failure to record the proposed adjustment is less fair to shareholders (Bierstaker et al. 2012).

Recent interview-based evidence suggests that many auditors believe that REM can impair a company's future performance and that it is misleading to financial statement users (Commerford et al. 2015a). Therefore, an alternative explanation for this study's results could be that the presence of REM influences auditors' perceptions of fairness to shareholders, which then leads auditors to constrain management's estimates in an effort to restore fairness.

Related research concerning fairness suggests that, when individuals observe outcomes that they perceive to be unfair, they are more likely to take actions to restore fairness (Piron and Fernandez 1995; Crompanzano et al. 2003; Skarlicki and Kulick 2005). However, as previously discussed, auditors cannot respond directly to REM, so auditors may seek to restore fairness through other means. Specifically, auditors may be more likely to constrain management's estimates as an attempt to offset the earnings benefit derived from REM. In other words, auditors are more likely to constrain management's estimates, not because they are specifically concerned about management's estimates, but because they are attempting to disallow the financial reporting benefit provided by REM. By doing so, auditors may believe that they have restored fairness by ensuring that financial statement users are not making decisions based on misleading financial results.

For this alternative explanation to be valid, auditors' perceptions of fairness, as opposed to the perceived aggressiveness of management, should mediate the relationship between REM and proposed audit adjustments. To examine this issue, I must capture the extent to which

auditors perceive that the unadjusted financial statements are "fair" to users. Following Bierstaker et al. (2012), using a nine-point Likert scale (1 = very unfair; 9 = very fair), I asked participants, "To what extent are 2013 unadjusted earnings (i.e., net earnings of $180 million; EPS of $1.20 per share) fair to the interests of current ATS shareholders?"[13]

Table 7 reports the descriptive statistics and ANOVA results for participants' perceptions of fairness. Results indicate that participants perceive the fairness of unadjusted financial information as significantly lower in the presence of REM ($p$-value < 0.01). However, both the main effect for EPS Forecast and the interaction are not significant ($p$-value = 0.38 and 0.71, respectively). Additionally, mediation analyses (untabluated) were conducted following procedures described by Hayes (2013). The resulting bootstrapped confidence interval for the indirect effect of perceived fairness on the propensity to fully adjust audit differences includes zero (95% CI = LL: -0.343; UL: 0.711), indicating that participants' perceptions of fairness do not mediate the relationship between REM and auditors' adjustment decisions.

Although REM appears to influence perceived fairness, the mediation results do *not* support the alternative explanation that, in the presence of REM, auditors constrain management's estimates to a greater extent in an effort to restore fairness. Rather, REM appears to affect auditor decisions through a cascading effect of dispositional inferences.

[13] Perceptions of fairness might be more accurately measured if I asked participants to make their assessments prior to proposing an audit adjustment. However, in order to reduce potential demand effects in the primary variable of interest (proposed adjustment), I ask participants to make their assessments after proposing an adjustment.

**TABLE 7**

**Additional Analyses: Perceived Fairness of Financial Results**

**Final Sample (n = 75)**

**Panel A: Mean (Std. Dev.)**

| | EPS Forecast | | |
|---|---|---|---|
| | $1.15 | $1.19 | Collapsed Across EPS Forecast |
| REM Present | Cell 1 | Cell 2 | |
| | 5.60 | 5.40 | 5.50 |
| | (1.67) | (1.76) | (1.69) |
| | n = 20 | n = 20 | n = 40 |
| REM Absent | Cell 3 | Cell 4 | |
| | 7.00 | 6.50 | 6.74 |
| | (1.58) | (1.86) | (1.72) |
| | n = 17 | n = 18 | n = 35 |
| Collapsed Across REM | 6.24 | 5.91 | |
| | (1.75) | (1.87) | |
| | n = 37 | n = 38 | |

**Panel B: ANOVA Results**

| | F | *p*-value |
|---|---|---|
| REM | 9.85 | < 0.01 |
| EPS Forecast | 0.77 | 0.38 |
| REM*EPS Forecast | 0.14 | 0.71 |

This table provides descriptive statistics and ANOVA results for participants' perceptions about the fairness of financial reporting results. Participants are asked to assess the extent to which they believe the company's unadjusted earnings are fair current shareholders of the company, using a nine-point Likert scale (1 = very unfair; 9 = very fair). All reported p-values are two-tailed.

**Manipulation Check Failures**

Of the 118 auditors who provided complete responses, seven participants indicated that they had relatively limited experience in dealing with audit adjustments and were excluded from the main analyses of the paper. [14] Additionally, 36 cases were excluded from the main analyses because participants failed one or more of the manipulation checks. As a result, the final sample included responses from 75 participants and a total of 43 (36 percent) responses were excluded from the main analyses. In this section, I reexamine the results of the study when all 118 complete responses are included in the analyses.

Table 8, Panel A reports descriptive statistics regarding the proportion of auditors proposing full adjustment of the audit difference for all responses (hereafter, the "full sample"). These proportions are also presented graphically, by experimental condition, in Figure 9. For comparison, Table 8, Panel A also reports the same proportions for the final sample. The proportions for the final sample are consistent with those presented in Table 2, Panel A.

When comparing the proportions of auditors proposing full adjustment in the full sample to the proportions in the final sample, it can be seen that there is virtual no change in Cell 1 (approximately 90% in both). However, the proportion in Cell 3 increases slightly from 47 percent in the final sample to 52 percent in the full sample. Additionally, the proportion in Cell 4 decreases slightly from 89 percent in the final sample to 86 percent in the full sample. The largest difference between the two samples occurs in Cell 2. For the final sample, when REM is present and the audit difference is qualitatively material (i.e., the EPS forecast is $1.19), 75 percent of auditors propose full adjustment. In the full sample, that proportion decreases to 67 percent. Consequently, the pattern of means for the full sample is more consistent with a

[14] The response in which the participant proposed an audit adjustment of $30.5 million was excluded from the additional analyses as it is an extreme outlier.

disordinal interaction, as opposed to the hypothesized pattern shown in Figure 1 and the pattern observed in the final sample. See Figure 9 for a graphical depiction of the results for the full sample.

The associated planned comparisons for the full sample (shown in Table 8, Panel B) are largely consistent with those for the final sample (shown in Table 3, Panel B). However, the results for two key comparisons differ when analyzing all 118 responses. Specifically, when REM is present and the audit difference is qualitatively material, auditors are expected to more likely to propose full adjustment when compared to when REM is absent and audit difference is not qualitatively material (Cell 2 versus Cell 3). This expectation is tested in Comparison 2. Table 3, Panel B indicates that, for the final sample, Comparison 2 is moderately significant (*p*-value = 0.08, one-tailed). However, as indicated in Table 8, Panel B, Comparison 2 is not significant in the full sample (*p*-value = 0.18, one-tailed). Additionally, based on H3, it is expected that auditors will have a high propensity to adjust management's estimate when REM is present, regardless of the EPS forecast. For the final sample, this expectation is supported, in part, by the fact that Comparison 6 in Table 3, Panel B is not significant (*p*-value = 0.41). However, for the full sample, Comparison 6 indicates that, when REM is present, auditors are actually *less* likely to fully adjust when the audit difference is qualitatively material (i.e., the EPS forecast is $1.19) than when it is not (i.e., the EPS forecast is $1.15; *p*-value = 0.03).

**TABLE 8**

**Additional Analyses: All Available Responses**

**Full Sample (n = 118) versus Final Sample (n = 75)**

**Panel A: Proportion of Participants Proposing Full Adjustment by Condition**

| | **All Responses (n = 118)** | | **Final Sample (n = 75)** | |
|---|---|---|---|---|
| | EPS Forecast | | EPS Forecast | |
| | $1.15 | $1.19 | $1.15 | $1.19 |
| REM Present | Cell 1 | Cell 2 | Cell 1 | Cell 2 |
| | 90.3% | 66.7% | 90.0% | 75.0% |
| | (28/31) | (20/30) | (18/20) | (15/20) |
| REM Absent | Cell 3 | Cell 4 | Cell 3 | Cell 4 |
| | 51.7% | 85.7% | 47.1% | 88.9% |
| | (15/29) | (24/28) | (8/17) | (16/18) |

**Panel B: Planned Comparisons Between Conditions – All Responses (n = 118)**

| **Comparison** | **Contrast Value** | **df** | **Fisher's Exact Test *p*-value** |
|---|---|---|---|
| (1) Cell 1 vs. Cell 3* | 38.6% | 1 | < 0.01 |
| (2) Cell 2 vs. Cell 3* | 15.0% | 1 | 0.18 |
| (3) Cell 4 vs. Cell 3* | 36.8% | 1 | < 0.01 |
| (4) Cell 3 vs. All Other Cells* | 29.2% | 1 | < 0.01 |
| (5) Cell 2 vs. Cell 4 | -21.8% | 1 | 0.13 |
| (6) Cell 1 vs. Cell 2 | 23.6% | 1 | 0.03 |
| (7) Cell 1 vs. Cell 4 | 1.8% | 1 | 0.70 |

Table 8, Panel A provides descriptive statistics for the proportion of auditors proposing full adjustment of the audit difference in both the full sample and the final sample. The full sample includes all 118 participant responses, including those who failed manipulation check questions. Panel B reports the related planned comparisons for the full sample.

* Denotes comparisons which use one-tailed *p*-values due to directional hypotheses. All other reported *p*-values are two-tailed.

**FIGURE 9**

**All Available Responses**

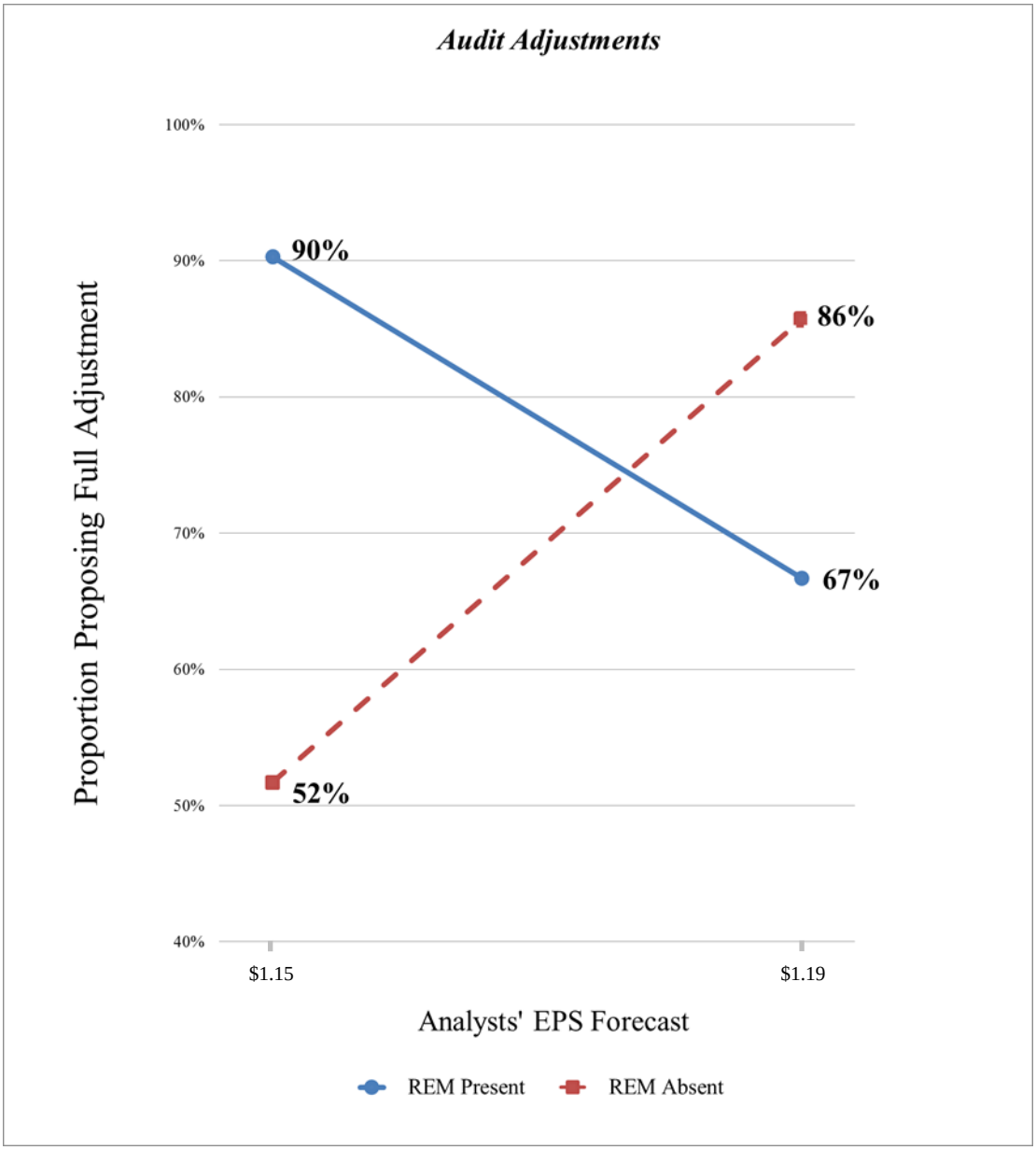



Figure 9 presents the proportion of auditors that propose full adjustment of the quantitatively immaterial audit difference by experimental condition when all 118 participant responses are included. These proportions are also reported in Table 8, Panel A.

In total, the results using the full sample are largely consistent with the results using the final sample. Specifically, consistent with H1, in the absence of REM, managers are more likely to adjust management's estimate when the audit difference is qualitatively material (i.e., the EPS forecast is $1.19). Additionally, consistent with H2 and H3, even when the audit difference in not qualitatively material, auditors are more likely to adjust the audit difference when REM is present rather than absent. However, when REM is present *and* the EPS forecast is $1.19, results for the full sample differ from those using the final sample. Comparing the final sample to the full sample, the proportion of auditors proposing full adjustment in Cell 2 declined from 75 percent to 67 percent. Additionally, Comparison 6 and Comparison 2 have differing results when using the full sample rather than the final sample. For the final sample used in the main analyses, auditors are more likely to adjust the audit difference when either one (or both) of the experimental factors (i.e., qualitative materiality or REM) are present. However, for the full sample auditors are more likely to adjust when either factor is present, but not necessarily when both are present. In other words, for the final sample, I conclude that auditors still have a relatively high likelihood of proposing a full adjustment when REM is present and the audit difference is qualitatively material. When including all available responses in the analyses, the nature of the interactive effect appears to differ and it is more difficult to conclude that, when both experimental factors are present, auditors still have a relatively high likelihood of proposing a full adjustment. Therefore, to some extent, the findings of this study are dependent on the exclusion of responses from participants who do not correctly interpret the experimental manipulations.

**Partners versus Managers**

Prior related research indicates that auditor rank and experience can significantly affect how auditors respond to audit differences resulting from management's estimates. For example, Trotman et al. (2009) find that, when dealing with audit differences, partners propose larger adjustments than managers and that partners are less likely to concede. McCracken et al. (2009) find that managers are more likely to use a concessionary or compromising negotiating strategy when dealing with audit differences. Both of these studies indicate that partners and managers respond differently to potential audit differences relating to management's estimates.

Similarly, both Brown and Johnstone (2009) and Fu et al. (2011) find that, at times, auditors with lower negotiation experience are more likely to acquiesce to the client's preferences than more experienced auditors. For instance, Brown and Johnstone (2009) find that, for a high-risk client, auditors with lower negotiation experience are more likely to achieve negotiated outcomes that consistent with the client's aggressive preference than more experienced auditors. Interestingly, their findings also indicate that less experienced auditors are more likely to concede to client preferences when the client risk level is high versus low. Their results suggest that, when dealing with high-risk clients, less experienced auditors perceive a heightened sense of client pressure which leads to smaller audit adjustments.

Given that prior research shows that auditor rank and experience can influence auditors' adjustment decisions, I investigate how the results of this study may differ between partners and managers. The full sample includes 91 partners and senior managers (hereafter, "partners") and

26 managers.[15] Table 9 and Figure 10 report the results of statistical analyses for all partner responses, while Table 10 and Figure 11 report the results for all manager responses.[16]

The results for partner responses, reported in Table 9, are consistent with the results reported in the main analyses of the study. Consistent with expectations, when REM is absent and full adjustment of the audit difference does not affect the client's ability to meet the EPS forecast, only 50 percent of partners propose full adjustment. The proportion of partners proposing full adjustment is relatively higher in the other three conditions, with proportions ranging from 78 percent to 89 percent. Planned comparisons reported in Table 9, Panel B are also consistent with expectations and consistent with the results reported in the main analyses.

[15] One manager chose not to respond to the demographic question asking for the participant's rank.
[16] Alternatively, the sample can be split between auditors with less than 10 years of experience and those with 10 years or more of experience. Results and conclusions do not significantly differ when the sample is cut in this alternative manner.

**TABLE 9**

**Additional Analyses: Partner and Senior Managers**

**Panel A: Proportion of Participants Proposing Full Adjustment by Condition (n = 91)**

| | EPS Forecast | | |
|---|---|---|---|
| | $1.15 | $1.19 | Collapsed Across EPS Forecast |
| REM Present | Cell 1 | Cell 2 | |
| | 88.9% | 78.3% | 84.0% |
| | (24/27) | (18/23) | (42/50) |
| REM Absent | Cell 3 | Cell 4 | |
| | 50.0% | 81.0% | 65.9% |
| | (10/20) | (17/21) | (27/41) |
| Collapsed Across REM | 72.3% | 79.5% | |
| | (34/47) | (35/44) | |

**Panel B: Planned Comparisons Between Conditions**

| **Comparison** | **Contrast Value** | **df** | **Fisher's Exact Test *p*-value** |
|---|---|---|---|
| (1) Cell 1 vs. Cell 3* | 38.9% | 1 | < 0.01 |
| (2) Cell 2 vs. Cell 3* | 28.3% | 1 | 0.05 |
| (3) Cell 4 vs. Cell 3* | 31.0% | 1 | 0.04 |
| (4) Cell 3 vs. All Other Cells* | 33.1% | 1 | < 0.01 |
| (5) Cell 2 vs. Cell 4 | - 2.7% | 1 | 1.00 |
| (6) Cell 1 vs. Cell 2 | 10.6% | 1 | 0.44 |
| (7) Cell 1 vs. Cell 4 | 7.9% | 1 | 0.68 |

Table 9, Panel A provides descriptive statistics for the proportion of partners and senior managers proposing full adjustment of the audit difference. Panel B reports the related planned comparisons.

* Denotes comparisons which use one-tailed *p*-values due to directional hypotheses. All other reported *p*-values are two-tailed.

**FIGURE 10**

**Partner and Senior Manager Responses**

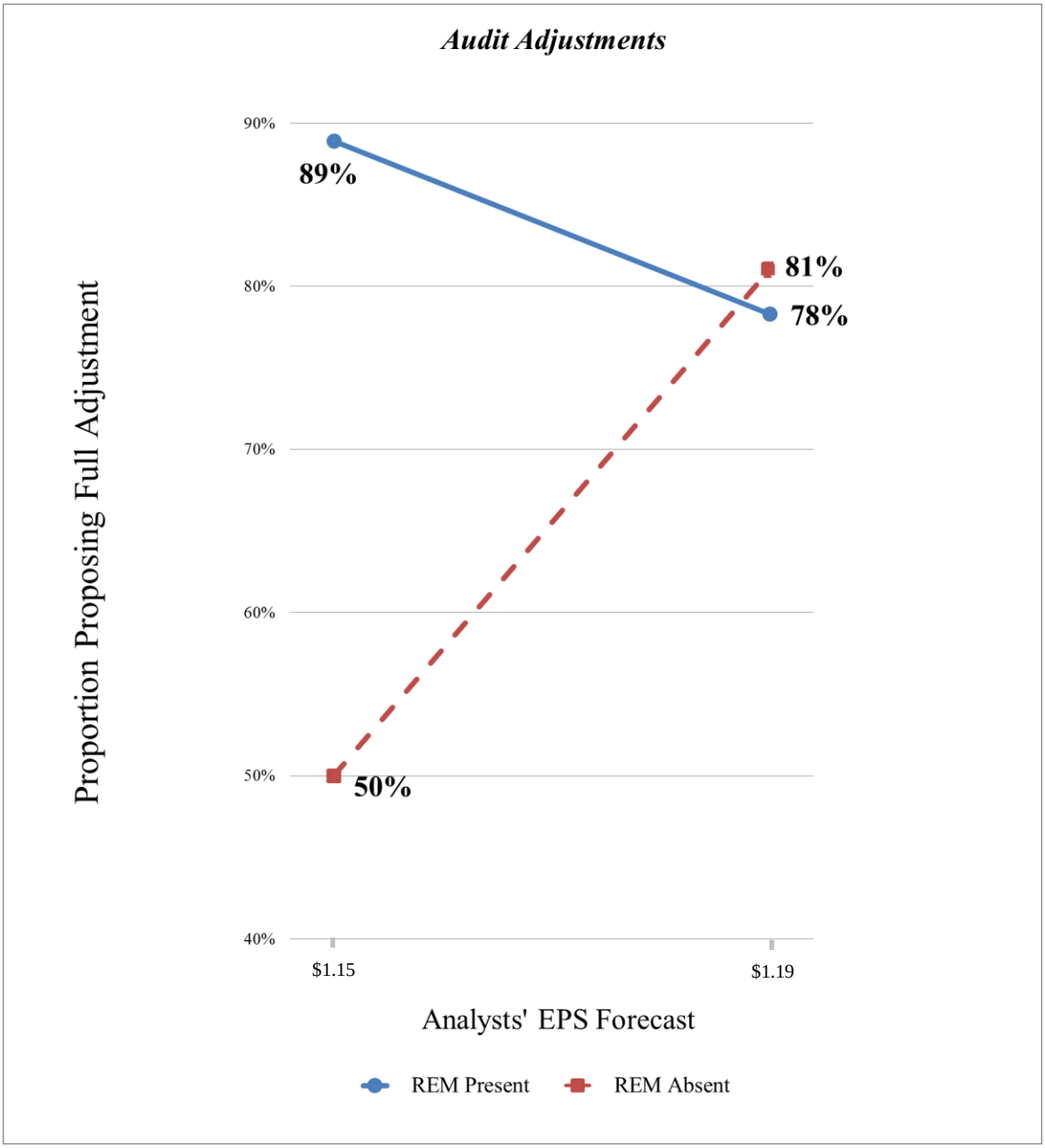



Figure 10 presents the proportion of partners and senior managers that propose full adjustment, by experimental condition. These proportions are also reported in Table 9, Panel A.

Table 10 reports the results for the 26 managers. Examining the manager responses depicted in Figure 11, and comparing to the partner responses depicted in Figure 10, it is easy to see that the responses for managers differ from those of partners. In the condition where REM is absent and the EPS forecast is $1.15, the proportion of managers that fully adjust is still relatively low (56 percent). Additionally, when either REM is present or the EPS forecast is $1.19, the proportion of managers that full adjust is relatively high (100 percent in both conditions). However, when REM is present *and* the EPS forecast is $1.19, the proportion of managers proposing a full adjustment drops to 29 percent. These proportions and the related planned comparisons in Table 10, Panel B are suggestive of a disordinal interaction between the experimental manipulations. Additionally, it appears that the manager responses are primarily responsible for the disordinal pattern of the means observed in full sample (shown in Figure 9).

**TABLE 10**

**Additional Analyses: Managers**

**Panel A: Proportion of Participants Proposing Full Adjustment by Condition (n = 26)**

| | EPS Forecast | | |
|---|---|---|---|
| | $1.15 | $1.19 | Collapsed Across EPS Forecast |
| REM Present | Cell 1 | Cell 2 | |
| | 100% | 28.6% | 54.5% |
| | (4/4) | (2/7) | (6/11) |
| REM Absent | Cell 3 | Cell 4 | |
| | 55.6% | 100% | 73.3% |
| | (5/9) | (6/6) | (11/15) |
| Collapsed Across REM | 69.2% | 61.5% | |
| | (9/13) | (8/13) | |

**Panel B: Planned Comparisons Between Conditions**

| **Comparison** | **Contrast Value** | **df** | **Fisher's Exact Test *p*-value** |
|---|---|---|---|
| (1) Cell 1 vs. Cell 3* | 44.4% | 1 | 0.18 |
| (2) Cell 2 vs. Cell 3* | -27.0% | 1 | 0.29 |
| (3) Cell 4 vs. Cell 3* | 44.4% | 1 | 0.09 |
| (4) Cell 3 vs. All Other Cells* | 15.0% | 1 | 0.37 |
| (5) Cell 2 vs. Cell 4 | - 71.4% | 1 | 0.02 |
| (6) Cell 1 vs. Cell 2 | 71.4% | 1 | 0.06 |
| (7) Cell 1 vs. Cell 4 | 0.0% | 1 | 1.00 |

Table 10, Panel A provides descriptive statistics for the proportion of managers proposing full adjustment of the audit difference. Panel B reports the related planned comparisons.

* Denotes comparisons which use one-tailed *p*-values due to directional hypotheses. All other reported *p*-values are two-tailed.

**FIGURE 11**

**Manager Responses**

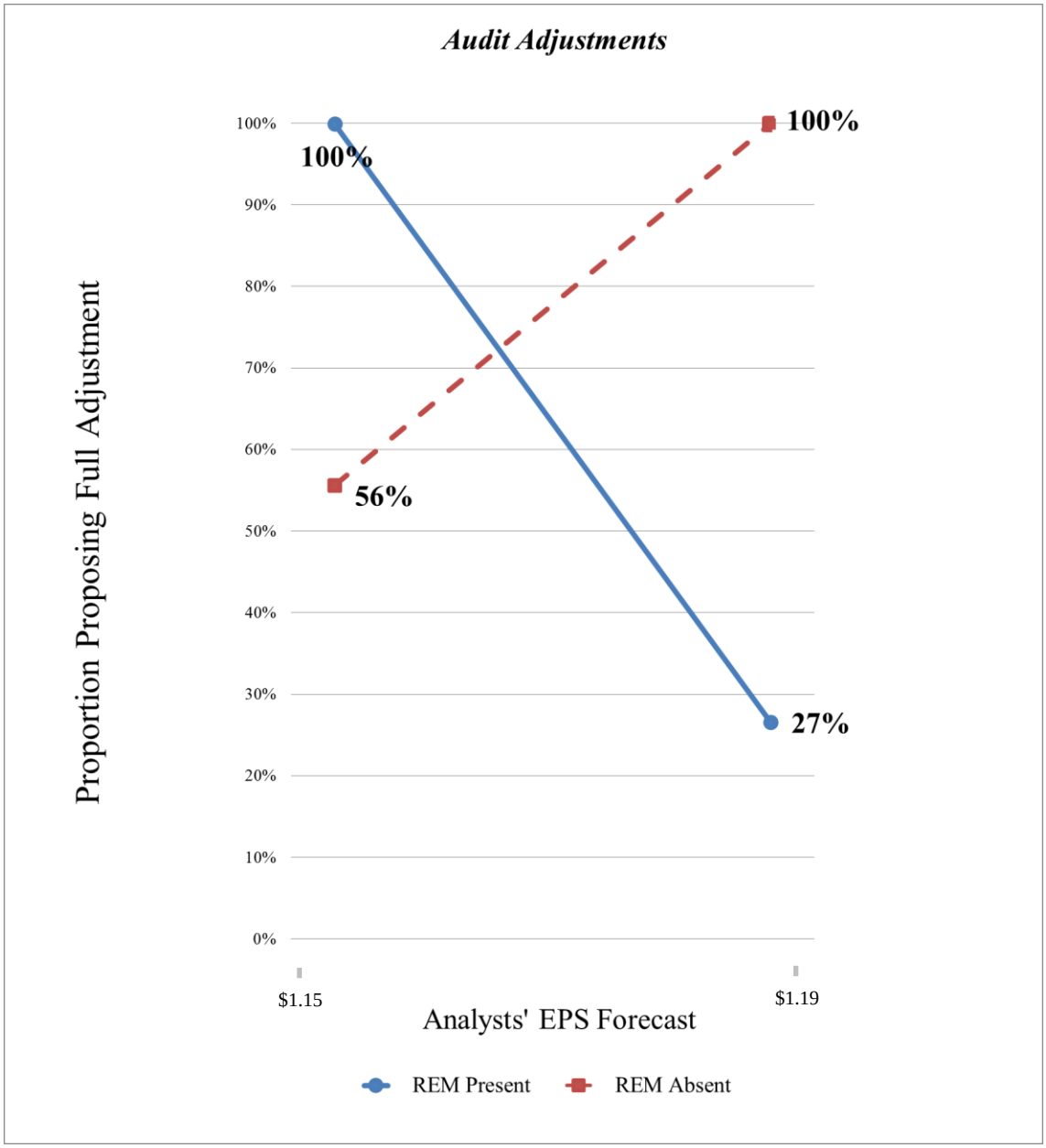



Figure 11 presents the proportion of auditors that propose full adjustment by experimental condition when analyzing partner and senior manager responses. These proportions are also reported in Table 9, Panel A.

Commerford et al. (2015b) find that REM causes auditors to perceive higher levels of risk. Additionally, results from Brown and Johnstone (2009) indicate that less experienced auditors are more likely to concede to the client's preferences when there is high engagement risk compared to when there is low engagement risk, and compared to judgments of more experienced auditors. Therefore, it is possible that when full adjustment of the audit difference impacts the client's ability to meet the EPS forecast (i.e., the audit difference is qualitatively material) *and* REM is present, it causes managers to perceive higher engagement risk and exhibit behavior similar to that observed by Brown and Johnstone (2009). Specifically, when both factors are present it appears that most managers are not willing to adjust management's estimate by an amount that would cause the client to miss their EPS forecast. However, consistent with Brown and Johnstone (2009), partners are more willing to adjust management's estimates by an amount that reduces EPS by $0.02, even when REM is present and full adjustment affects the client's ability to meet the EPS forecast. Overall, it appears that managers and partners respond very differently in scenarios where audit differences are qualitatively material and REM is present.

# CHAPTER 6

# CONCLUSION

## Contribution and Implications

This study's findings are informative to practice and research in several ways. This is the first study to consider how management's use of REM causes auditors to respond differently to other audit issues. Results indicate that management's use of REM alters auditors' perceptions of management in such a way that it causes auditors to constrain management's estimates. This finding contributes to both the accounting and psychology literature by providing evidence that dispositional inferences will cascade, affecting how individuals interpret subsequently observed actions. During the course of an audit, auditors must continually evaluate management's decisions. Therefore, it is likely that that the cascading effect of dispositional inferences is pervasive in the audit context and this effect may offer an additional explanation as to why REM is positively associated with audit fees (Sohn 2011; Greiner et al. 2013) and auditor resignations (Kim and Park 2014). More broadly, the results of this study provide evidence that auditor reactions to REM can have a direct impact on externally reported financial information.

I also extend accounting research examining auditor decisions related to qualitative materiality. Prior research suggests that auditors are reluctant to require adjustments relating to quantitatively immaterial audit differences when they cause the client missing an earnings target. However, the results of this study indicate that auditors are more likely to adjust quantitatively immaterial differences when they are qualitatively material than when they are not. This finding

suggests that subsequent to the passage of SAB No. 99 and AS No. 14, auditors are more likely to incorporate qualitative factors into their audit adjustment decisions.

Finally, this paper also contributes to the earnings management and auditing literature. Prior accounting research largely has relied on archival methods to examine the relationship between earnings management and auditor decisions. One challenge in using archival methods to study REM is that the presence of REM must be inferred based on observed statistical anomalies in operational results. Furthermore, existing proxies for REM do not allow researchers to differentiate strategic business decisions from deliberate attempts to report more favorable earnings. By using an experimental approach, I can ensure that REM is actually occurring and observed by participants, which allows me to demonstrate a more direct relationship between the use of REM and auditor judgments and decisions.

Additionally, archival research indicates that the level of REM is increasing while the relative level of AEM is decreasing (Cohen et al. 2008). Research widely suggests that these trends are attributable to increased auditor scrutiny of management's estimates and accruals, which has prompted managers to rely more on REM to achieve earnings targets (e.g., Ewert and Wagenhofer 2005; Cohen et al. 2008, Chi et al. 2011). However, this study finds that when management uses REM, it causes auditors to constrain management's accruals to a greater extent, which suggests that auditor reactions to REM also contribute to the inverse relationship between AEM and REM that is observed in the archival data.

**Limitations and Future Research Opportunities**

The findings of this study are subject to some limitations. First, participants are not subject to typical pressures and incentives that are usually present in the audit environment.

Additionally, to some extent, the results of this study are dependent upon excluding responses from individuals that do not correctly interpret the experimental manipulations. However, including those responses would be expected to add noise the analyses. For example, it would not be reasonable to expect individuals who do not fully interpret management's actions as REM to respond in the same manner as those who don't.

Potential limitations of this study also provide some opportunities for future research. First, this study only examines auditor decisions related to quantitatively immaterial audit differences. Future research can investigate how REM impacts audit differences that are quantitatively material. Second, the results of this study indicate that auditors' perceptions of fairness do not mediate the relationship between REM and their adjustment decisions. Future research could investigate how perceived fairness may motivate other auditor decisions. Third, the results of additional analyses reveal that audit partner and managers appear to respond differently when REM is present and the audit difference is qualitatively material. However, the analyses for the managers are based on only 26 responses. Therefore, future research could more directly examine how audit manager and partners respond differently to REM and qualitative materiality issues. Additionally, such research could also include process measures to more adequately capture why manager and partners respond differently. Finally, I focus on how auditors respond to REM; future research could also examine factors that influence management's decision to engage in REM.

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# APPENDIX A

## RESEARCH INSTRUMENT

This appendix presents screenshots of the research instrument (beginning on the next page) provided to participants. Participants were provided with a link used to access the case information through Qualtrics. Text boxes (in red font) were added to the screenshots to clarify where necessary.

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**Instructions**

Please assume that you are managing the 2013 audit engagement for Active Tech Sportswear, Inc. (ATS).

In the following case, you will be provided with background information and financial statement information for ATS. Then, you will respond to a series of questions related to the ATS audit.

When completing the case, please keep in mind that there are no correct answers.

Also, please be aware that the case is not intended to include all of the information that would be available if you were in a real-world situation. Therefore, for purposes of this study, base your answers only on the information provided.

Lastly, please do not use the back button on your internet browser as doing so may prevent you from properly completing the case.

Next Page

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**Company Background Information**

Your audit client, Active Tech Sportswear, Inc. (ATS), is an apparel company that designs, develops, markets, and distributes branded performance apparel, footwear, and accessories for men, women, and youth. ATS was founded in 1996, and it is headquartered in the Eastern United States. ATS went public in 2003. It operates on a national scale, with its products available for purchase at a variety of retailers.

ATS is of average-size compared to other companies in its industry. It historically has been profitable, and has exhibited steady growth in earnings over the past five years. Independent analysts predict continued growth for the company in the coming years.

ATS's management has identified and discussed business risks in prior annual reports, including the ever-present possibility that it may fail to enhance its brand, expand its customer base, or develop successful new products. ATS's management believes that continued effective product development and promotion is essential for the company to be successful.

Your firm has audited ATS for several years—you have been a part of the audit team during the past three years. Past audit reports have always expressed an unqualified opinion.

Next Page

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**Conditions with EPS target of $1.15**

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***Please use the following link to download a pdf file containing the financial information presented below. You may want to use this as a reference throughout the case:*** ATS Financial Information.pdf

**Analysts' Consensus EPS Forecast**

ATS's stock is publicly-traded, and it has a moderate analyst following. One of management's important goals is maintaining and increasing the value of its stock. For 2013 (the year being audited), analysts' consensus EPS forecast for ATS is:

Analysts' EPS Forecast: ***$1.19 per share***

**Financial Information**

The following summary financial information includes all relevant ***unaudited*** balances for the current year (period ended 12/31/2013). This financial information is not intended to be complete.

| **EPS** | **$1.20 per share** |
|---|---|
| Shares outstanding | 150 million |
| | |
| Sales | $1,800 million |
| Pre-tax earnings | $265 million |
| Net earnings | $180 million |
| | |
| Accounts receivable, net | $210 million |
| Total current assets (including A/R) | $912 million |
| Total assets | $1,200 million |
| Current liabilities | $218 million |
| Total liabilities | $460 million |
| Total equity | $740 million |

Next Page

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**Conditions with EPS target of $1.19**

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***Please use the following link to download a pdf file containing the financial information presented below. You may want to use this as a reference throughout the case:*** ATS Financial Info.pdf

**Analysts' Consensus EPS Forecast**

ATS's stock is publicly-traded, and it has a moderate analyst following. One of management's important goals is maintaining and increasing the value of its stock. For 2013 (the year being audited), analysts' consensus EPS forecast for ATS is:

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| Total liabilities | $460 million |
| Total equity | $740 million |

Next Page

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Please answer the following questions about ATS and its audit. When answering these questions, define "normal" as the typical publicly-traded audit client of a size similar to that of ATS (approximately $1,800 million in sales, $1,200 million in assets) with which you are familiar.

Assess ATS's 2013 operating performance.

| Much Weaker than Normal | | | | Normal | | | | Much Stronger than Normal |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Assess ATS's financial condition as of 12/31/13.

| Much Weaker than Normal | | | | Normal | | | | Much Stronger than Normal |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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**Conditions with REM present**

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**Information about the 2013 ATS Audit**

As in prior years, audit testing indicates that ATS's internal controls over financial reporting in 2013 are designed and operating effectively. All testing of internal controls over financial reporting has been completed by competent staff and reviewed to your satisfaction.

As part of the audit, your audit team examined ATS's operating expenses, including advertising expense; ATS's management and those charged with governance believe that executing its advertising plan is critical to the company's long-term success. Your audit team noted that, based on ATS's historical trends, reported advertising expense in 2013 is significantly lower than expected; it also is significantly lower than the amount that ATS's management had budgeted. All relevant audit testing of the advertising expense has been completed and reviewed to your satisfaction.

Quarterly analyses indicate that the unexpected decrease is attributable to management's decision to significantly reduce advertising expenditures during the fourth quarter of 2013. Based on conversations with ATS's management, the results of planned audit procedures, and the results of additional substantive testing to provide assurance that the advertising expense account is fairly stated, ***you and your audit team are very confident that reported advertising expense for 2013 is properly stated.***

Your audit team's conversations with management suggest that ATS's management reduced actual advertising expenditures late in 2013 in order to report more favorable net income. Your audit team estimates that ***management's reduction of advertising expenditures during the fourth quarter resulted in a $0.02 after-tax increase in ATS's reported earnings per share for 2013.***

In addition to examining ATS's advertising expense, your audit team evaluated *all other* operating expenses, performing all planned audit procedures necessary to provide reasonable assurance that the accounts are fairly stated. These accounts were all consistent with expectations based on historical trends and budgeted amounts. Consequently, your audit team concluded that *all* operating expenses, including advertising, are properly stated.

Next Page

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**Conditions with REM absent**

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**Information about the 2013 ATS Audit**

As in prior years, audit testing indicates that ATS's internal controls over financial reporting in 2013 are designed and operating effectively. All testing of internal controls over financial reporting has been completed by competent staff and reviewed to your satisfaction.

As part of the audit, your audit team examined ATS's operating expenses, including advertising expense; ATS's management and those charged with governance believe that executing its advertising plan is critical to the company's long-term success. Your audit team noted that, based on ATS's historical trends, reported advertising expense in 2013 is consistent with expectations; it also is consistent with the amount that ATS's management had budgeted. All relevant audit testing of the advertising expense has been completed and reviewed to your satisfaction.

Quarterly analyses and your audit team's conversations with management confirm that there were no significant changes to ATS's advertising strategy in 2013. Based on conversations with ATS's management and the results of planned audit procedures to provide assurance that the advertising expense account is fairly stated, ***you and your audit team are very confident that reported advertising expense for 2013 is properly stated.***

In addition to examining ATS's advertising expense, your audit team evaluated *all other* operating expenses, performing all planned audit procedures necessary to provide reasonable assurance that the accounts are fairly stated. These accounts were all consistent with expectations based on historical trends and budgeted amounts. Consequently, your audit team concluded that *all* operating expenses, including advertising, are properly stated.

Next Page

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**Potential Audit Difference—Allowance for Doubtful Accounts**

Your audit team has completed field work for the 2013 ATS audit, and there is only one unresolved potential audit difference. The difference involves management's 2013 estimate of the allowance for doubtful accounts.

ATS sells its products to a variety of customers, which makes the collectability of accounts receivable somewhat difficult to predict. Your audit team performed all planned audit procedures for ATS's 2013 allowance for doubtful accounts, including analyzing subsequent collections and inspecting significant customer balances. As part of this testing, your audit team developed a range within which it believes the allowance should fall. You have reviewed the relevant workpapers and agree with your team's evaluation of the allowance for doubtful accounts.

Your audit team believes that ATS's recorded allowance is outside the team's expected range by an amount that ***overstates 2013 net earnings by approximately $3 million*** **(i.e., approximately $0.02 per share after taxes)**. However, this amount is less than the quantitative materiality threshold for the 2013 ATS audit, and less than other common thresholds for materiality (e.g., 5% of pretax earnings and 0.5% of total assets). Management believes that its estimate is reasonable and would prefer not to make an audit adjustment.

**Adjustment Amount**

In terms of the after-tax impact on earnings (i.e., $0 to $3 million), by what amount (if any) would you propose to adjust ATS's allowance for doubtful accounts?

Using a value between 0 and 3000000, please indicate in the text box below the amount you wish to propose as an adjustment *(e.g., an adjustment of $1.5 million should be entered as "1500000" without commas or quotations).*

Next Page

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Your proposed adjustment was: $3000000 (or $3 million ). Therefore, reported EPS after the adjustment would be $1.18 per share.
This is correct.
This not the answer I intended to provide. I would like to adjust my answer.
Next Page
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How strongly do you believe that ATS's management should record your proposed adjustment?

Not at all Strongly — Very Strongly

Given that ATS's management likely will not want to make an adjustment to the allowance for doubtful accounts, what is the minimum adjustment amount that you would consider acceptable?

What do you think is the likely adjustment amount that you would expect to be made after discussing the issue with ATS's management?

Next Page

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Management's 2013 estimate for the allowance for doubtful accounts was made in good faith.

| Strongly Disagree | | | | | | | | Strongly Agree |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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***Consider the unadjusted financial statements (i.e., no adjustment has been made to the allowance for doubtful accounts).*** To what extent are 2013 unadjusted earnings (i.e., net earnings of $180 million; EPS of $1.20 per share) fair to the interests of current ATS shareholders?

| Very Unfair | | | | | | | | Very Fair |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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***Consider the financial statements adjusted to reflect your proposed adjustment of $3 million.*** To what extent are the 2013 adjusted earnings (i.e., net earnings of $177 million; EPS of $1.18 per share) fair to the interests of current ATS shareholders?

| Very Unfair | | | | | | | | Very Fair |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ◉ | ○ | ○ | ○ | ○ |

Next Page

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**In general, how would you characterize management's decisions related to advertising expenditures on *each* of the following dimensions?**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Unfair | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Fair ○ |
| Misleading | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Not Misleading ○ |
| Unjust | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Just ○ |

Next Page

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How aggressive is ATS's management with regard to achieving financial reporting targets?

| Not at all Aggressive | | | | | | | | Highly Aggressive |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

How committed is ATS's management to setting a proper "tone at the top"?

| Not at all Committed | | | | | | | | Very Committed |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

How would an independent and objective third party judge the ethics of ATS's management?

| Very Unethical | | | | | | | | Highly Ethical |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Please assess the risk that ATS's other accounting estimates are ***unreasonable*** (e.g., allowance for inventory obsolesence, estimated warranty liability).

| Very Low | | | | | | | | Very High |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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How aggressive were management's advertising decisions?

| Not at all Aggressive | | | | | | | | Highly Aggressive |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Management had the shareholders' best interest in mind when it made decisions related to advertising expenses.

| Strongly Disagree | | | | | | | | Strongly Agree |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

To what extent does ATS`s management have a short-term versus long-term focus?

| Short term Focused | | | | | | | | Long term Focused |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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How much influence did management's operating decisions (e.g., advertising expenditures) have on your evaluation of ATS's estimate for the allowance for doubtful accounts?

| No Influence at All | | | | | | | | Very Influential |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

How much influence did the proximity of ATS's unadjusted EPS to the consensus analysts' forecast have on your evaluation of ATS's estimate for the allowance for doubtful accounts?

| No Influence at All | | | | | | | | Very Influential |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

How much influence did concern for the risk of litigation against your firm have on your evaluation of ATS's estimate for the allowance for doubtful accounts?

| No Influence at All | | | | | | | | Very Influential |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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## About this Case

For 2013, the analysts' consensus ***EPS forecast*** for ATS was:

- $1.15
- $1.19

Based on audit testing and conversations with management, the ***amount*** reported for ATS's 2013 advertising expense was properly stated.

| Strongly Disagree | | | | | | | | Strongly Agree |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Compared to historical trends and budgeted amounts, the 2013 reported advertising expense was:

- Lower than expected
- Consistent with expectations
- Higher than expected

What is the likelihood that management used its discretion over advertising expenditures to report more favorable net income and EPS for 2013?

| Extremely Unlikely | | | | | | | | Extremely Likely |
|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Next Page

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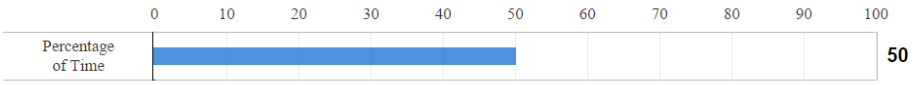
**The following questions concern you and your experiences. This information will not be used in any way to identify you or your employer.**

How many years have you been in public accounting?

Current position in your public accounting firm.

- Manager
- Senior Manager
- Partner/Principal
- Other

**In a typical year, what percentage of your time is spent auditing public clients?**




**In a typical year, how likely are you to make decisions related to proposed audit adjustments?**

Very Unlikely — Very Likely

Next Page

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We thank you for your time spent taking this survey.
Your response has been recorded.
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# APPENDIX B

# IRB CERTIFICATION

May 1, 2014

Office for Research

Institutional Review Board for the Protection of Human Subjects

THE UNIVERSITY OF ALABAMA RESEARCH

Ben Commerford, CPA
Culverhouse School of Accountancy
College of Commerce & Business Administration
The University of Alabama
Box 870220

Re: IRB # EX-14-CM-064 "Do Auditors Constrain the Earnings Impact of Real Earnings Management?"

Dear Mr. Commerford:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your protocol has been given exempt approval according to 45 CFR part 46.101(b)(2) as outlined below:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and
(ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Your application will expire on April 30, 2015. If your research will continue beyond this date, complete the relevant portions of Continuing Review and Closure From. If you wish to modify the application, complete the Modification of an Approved Protocol Form. When the study closes, complete the appropriate portions of FORM: Continuing Review and Closure.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

[redacted]

Carpantato T. Myles, MSM, CIM, CIP
Director & Research Compliance Officer
Office for Research Compliance
The University of Alabama

358 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-0127
(205) 348-8461
FAX (205) 348-7189
TOLL FREE (877) 820-3066

IRB Project #: EX-14-CM-064

APR 21 2014 PM 12:51

**UNIVERSITY OF ALABAMA**
**INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS**
**REQUEST FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS**

**I. Identifying information**

| | Principal Investigator | Second Investigator | Third Investigator |
|---|---|---|---|
| Names: | Ben Commerford | Rich Houston | Rick Hatfield |
| Department: | Culverhouse College of Accountancy | Culverhouse College of Accountancy | Culverhouse College of Accountancy |
| College: | Culverhouse College of Commerce & Business Administration | Culverhouse College of Commerce & Business Administration | Culverhouse College of Commerce & Business Administration |
| University: | University of Alabama | University of Alabama | University of Alabama |
| Address: | Box 870220 | Box 870220 | Box 870220 |
| Telephone: | 205-348-8392 | 205-348-8392 | 205-348-8392 |
| FAX: | 205-348-8453 | 205-348-8453 | 205-348-8453 |
| E-mail: | bpcommerford@cba.ua.edu | rhouston@cba.ua.edu | rhatfiel@cba.ua.edu |

Title of Research Project: Do Auditors Constrain the Earnings Impact of Real Earnings Management?

Date Submitted: 4/21/14
Funding Source: Culverhouse College of Commerce & Business Administration and Culverhouse School of Accountancy

| Type of Proposal | ☒ New | ☐ Revision | ☐ Renewal<br>Please attach a renewal application | ☐ Completed | ☑ Exempt |
|---|---|---|---|---|---|
| | | | Please attach a continuing review of studies form | | |
| | | Please enter the original IRB # at the top of the page | | | |

UA faculty or staff member signature: [redacted]

**II. NOTIFICATION OF IRB ACTION** (to be completed by IRB):
Type of Review: _____ Full board _____ Expedited

**IRB Action:**
___ Rejected Date: _____
___ Tabled Pending Revisions Date: _____
___ Approved Pending Revisions Date: _____
✓ Approved-this proposal complies with University and federal regulations for the protection of human subjects.
Approval is effective until the following date: 4-30-15
Items approved: ___ Research protocol (dated_____)
___ Informed consent (dated_____)
___ Recruitment materials (dated_____)
___ Other (dated_____)

Approval signature [redacted] Date 5/1/2014