STANDARD PRECISION AND AGGRESSIVE FINANCIAL REPORTING:
THE INFLUENCE OF INCENTIVE HORIZON

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Running Head: Standard Precision and Earnings Management Behavior: The Influence of Incentive Horizon

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ABSTRACT: The extant literature on standard precision suggests that financial statement preparers are less likely to make aggressive financial reporting decisions under less precise, principles-based accounting standards as compared to under more precise, rules-based accounting standards. We extend this line of research by examining how the incentive horizon of financial statement preparers influences earnings management behavior. Consistent with prior literature, we find evidence that more precise standards lead to more income-increasing earnings management behavior than do less precise standards when the incentive horizon is short-term in nature. However, when the incentive horizon is long-term, more precise standards are associated with financial reporting decisions that reduce income relative to less precise standards. Importantly, the findings demonstrate that the effects of standard precision are changed by the incentive time horizon, and the market implications of standard precision cannot be fully understood when precision is studied without considering the incentives of decision makers.

Keywords: standard precision, rules-based standards, principles-based standards, incentive time horizon

JEL Classification: M41, M48, G38
I. INTRODUCTION

Proponents of rules-based standards suggest that greater standard precision improves comparability between companies by providing bright-line tests and thresholds that reduce the need for judgment in the application of standards (Schipper 2003; Shortridge and Myring 2004; McCarthy and McCarthy 2014). Reductions in the amount of judgment needed to apply standards are expected to decrease opportunities to manage earnings (Wüstemann and Wüstemann 2010). However, existing empirical evidence does not support this point of view. Instead, the prior literature suggests that managers tend to leverage rules in order to structure transactions to be consistent with their personal incentives rather than the true economic substance of the transaction (Imhoff and Thomas 1988). Financial statement preparers are also more inclined to engage in aggressive financial reporting under more precise standards relative to less precise standards (Agoglia, Doupnik and Tsakumis 2011).

While empirical research supports the view that less precise standards can increase reporting quality and reduce aggressive reporting, the prior research has consistently examined the decisions of financial statement preparers who faced short-term incentives. The purpose of this study is to investigate whether the incentive time horizon (i.e., whether incentives emphasize short-term or long-term firm goals) will moderate the relationship between standard precision and earnings management behavior. If the effects of standard precision on financial preparers’ decisions change with the incentive time horizon, then debates about the costs and benefits of standard precision are currently being informed by an incomplete story.

The structure of employee incentives can encourage a focus on short-term profitability or long-term growth, and as a result, structuring incentives is a critical decision for top management. Indeed, for compensation to properly motivate employees to work towards achieving firm strategic
objectives, the incentive structure should align with the strategic focus of top management (Schuler and MacMillan 1984; Balkin and Gomez-Mejia 1990). For example, short-term incentives (such as unrestricted stock grants or stock options) may incentivize employees to prioritize short-term profitability and encourage aggressive financial reporting, potentially at the expense of long-term growth (Dechow and Sloan 1991; Narayanan 1996; Antia, Pantzalis and Park 2010). In contrast, restricted forms of compensation (such as stock grants and options with vesting and/or holding requirements) may extend the incentive time horizon of management, reduce myopic behavior (Chava and Purnanandam 2010; Bebchuk and Fried 2010), and potentially discourage income-increasing earnings management behavior (Johnson, Ryan and Tian 2009). Consistent with prior literature, we expect that a firm’s choice of incentive structure will influence financial statement preparers’ likelihood to engage in income-increasing earnings management behavior, and that these effects will interact with standard precision.

In this study, we examine the effect of incentive horizon and standard precision on financial statement preparers’ reporting decisions. Specifically, we extend the Agoglia et al. (2011) study by investigating the effects of incentive time horizon on a financial statement preparer’s financial reporting decisions. We propose that when the incentive time horizon is short-term, financial statement preparers applying less precise standards will be less likely to engage in income-increasing earnings management behavior. When the incentive time horizon is long-term, however, the effects of standard precision will reverse because these incentives signal top managements’ preference for long-term growth, rather than short-term performance. Thus, financial statement preparers applying more precise accounting standards will engage in less income-increasing earnings management behavior relative to those applying a less precise accounting standard when long-term incentives suggest a desire to pursue long-term growth.
To accomplish our objectives, we conduct a 2 x 2 between-participants experiment with 135 experienced financial statement preparers, over half of whom are Chief Financial Officers. Participants complete a lease classification case where we manipulate standard precision (more precise or less precise) and the time horizon of incentives (short-term or long-term). We find a significant interaction between standard precision and time horizon of incentives on a financial statement preparer’s reporting decisions. More specifically, our results show that when the time horizon of incentives focuses financial statement preparers on long-term performance goals, a more precise, rules-based standard regime results in less income-increasing earnings management behavior. Our highly experienced participants change their response relative to standard precision in the face of different incentive time horizons.

This study makes several contributions. Prior research on standard precision suggests that less precise standards (i.e., principles-based) better constrain income-increasing earnings management behavior by preparers as compared to more precise standards (i.e., rules-based). Our findings reveal an important effect of the time horizon of decisions that is created by top management’s incentive structure. Specifically, when the incentive structure emphasizes short-term performance, we find results consistent with prior literature, in that less precise standards are associated with less income-increasing financial reporting by preparers. However, when the incentive structure emphasizes long-term performance, we find that more precise standards are associated with less income-increasing financial reporting by preparers. This result has important implications. First, it suggests that the effects of standard precision on earnings management behavior cannot be fully understood without first considering the preparer’s incentive structure. Further, our findings indicate that the migration of financial reporting standards towards a less precise regime may not reduce earnings management behavior, particularly given the increasing
use of incentive structures that include components designed to promote greater emphasis on long-term performance, such as holding requirements for stock compensation.

The remainder of this study is organized as follows. Section II provides background information and develops our hypothesis. Sections III describes the experiment used to test our hypothesis. Section IV provides our experimental results, and Section V discusses our conclusions, implications, limitations of our research, and suggestions for future research.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Standard Precision

In 2009, it appeared that the United States was positioned to fully transition U.S. accounting standards to IFRS at the recommendation of the SEC Advisory Committee on Improvements to Financial Reporting (SEC 2008a). As a result, the SEC issued a roadmap which illustrated the transition process (SEC 2008b). However, only two standards have been revised to date. In May 2014, a joint task force of the FASB and IASB released an updated standard on revenue recognition, which aims to address the fundamental differences between revenue recognition standards originally promulgated as U.S. GAAP versus IFRS.\(^1\) The newly issued standard replaces the transaction- and industry-specific guidelines of the previous revenue recognition standard with a more principles-based approach. This development is notable because it represents the first converged standard between the FASB and IASB. Many believed that the FASB-IASB task force working on revising the lease accounting standards would follow and that a second converged standard would be issued. However, in early 2016, the two Boards issued

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\(^1\) In August, 2015, the FASB issued Accounting Standards Update (ASU) No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, which delayed the effective date of the standard by one year.
revised lease accounting standards that, despite containing several commonalities\(^2\), illustrate the divergent perspectives of the two standard-setting bodies. In general, U.S. GAAP is primarily comprised of rules-based standards, which provide more precise guidance for preparers. While in contrast, IFRS is primarily comprised of principles-based standards, which provide less precise guidance for preparers and are designed to allow a greater degree of judgment in determining the accounting treatment that best represents the underlying economic reality of a transaction.

It is important to note that the issue of standard precision is not limited to issues of IFRS vs U.S. GAAP. Rather, accounting standard precision varies not only between standard systems, but also within standard systems. For example, while IFRS is regarded as a principles-based standard system that relies on less precise guidance, there are standards within IFRS which are rules-based and are more precise in nature. Examples of rules-based standards within IFRS are IAS 39 — *Financial Instruments: Recognition and Measurement* and IFRS 2 — *Share-Based Payment*.

Advocates for rules-based standards maintain that the precise guidance offered by rules-based standards provides a common knowledge base and set of assumptions to be used in reporting decisions (Schipper 2003; Shortridge and Myring 2004; McCarthy and McCarthy 2014). The precise criteria of rules-based standards are intended to remove judgment from the classification process and improve comparability between firms (Shortridge and Myring 2004). Further, it is generally believed that adherence to rules-based standards helps to shield financial statement preparers from criticism for aggressive financial reporting decisions (Benston, Bromwich and Wagenhofer 2006). However, it is also possible that the bright-line rules and thresholds encourage

\(^2\) The IASB revised lease accounting standard, IAS 17 *Leases*, and FASB revised standard, ASC 840 *Accounting for Leases*, both contain similar definitions of a lease, as well as similar “day one” treatment for accounting for a lease at its inception.
opportunistic transaction structuring designed to circumvent the true spirit of standards.\(^3\) Further, dissimilar transactions that are forced into the same accounting treatment may, in fact, threaten comparability across organizations (McCarthy and McCarthy 2014).

Advocates for principles-based standards believe that less precise standards allow recorded transactions to reflect their true economic substance, which ultimately leads to greater understandability of financial statements (Shortridge and Myring 2004; McCarthy and McCarthy 2014). A perceived weakness of principles-based standards is that financial statement preparers may not apply such standards consistently, as there is a greater degree of interpretation and judgment involved in determining the appropriate accounting treatment (McCarthy and McCarthy 2014). Additionally, incentives may be present that influence the behavior of financial statement preparers (Nelson 2003; Wüstemann and Wüstemann 2010) because the opportunity to select preferential accounting treatments may be greater under principles-based standards (McCarthy and McCarthy 2014).

In that spirit, several studies related to accounting standard precision examine factors that can affect reporting decisions made by financial statement preparers. Agoglia et al. (2011) use a case in which participants are asked to determine the appropriate classification of a lease. They find that participants applying a principles-based standard are significantly less likely to report aggressively than those applying a rules-based standard. Peytcheva (2018) examines a similar issue with a task that has frequently been employed in the psychology literature to examine the role of standard precision and ambiguity of evidence. The task, developed by Jastrow (1899, 1900), asks

\(^3\) For example, Imhoff and Thomas (1988) document a significant decline in capital leases and corresponding increase in operating leases by companies that were previously capital-lease intensive following the release of Financial Accounting Standards Board (FASB)’s Statement of Financial Accounting Standard (SFAS) No. 13 *Accounting for Leases*. This standard required capital leases to be treated as assets and debt, which moved the disclosure of such from the footnote disclosures to the balance sheet.
participants to classify the subject of a photograph as either a duck or a rabbit and offers economic incentives that favor classifying the animal as a rabbit. The study operationalizes the standard precision construct by providing either rules-based or principles-based guidelines for classification. The study also manipulates the frame and magnification of the photograph to operationalize the ambiguity of evidence. Peytcheva (2018) finds that there is no difference between participants classifying the photograph consistent with their economic incentives (i.e., as a rabbit) under principles-based standards and rules-based standards when the evidence is relatively clear. However, when evidence is more ambiguous, principles-based standards are associated with fewer participants classifying the photograph in a manner that is consistent with their incentives.

Psaros and Trotman (2004) also find support for more aggressive reporting under a rules-based reporting regime. They examine the effect of incentives on a manager’s decision to report aggressively. They employ a case in which participants are asked to determine whether or not consolidation of financial statements is necessary and manipulate whether incentives exist that favor not consolidating the financial statements. The authors find that marginally more participants elect not to consolidate the financial statements when presented with rules-based standards. Similar to the other studies, the results suggest that financial statement preparers are more likely to report aggressively and in a manner that is consistent with their own personal incentives under rules-based standards.

Financial Incentive Structure

Agency problems are conflicts of interest that exist in a relationship when one party is expected to act in another party’s best interest (Jensen and Meckling 1976). Within financial accounting, the agency problem is often presented as a conflict of interest between company
management and the shareholders of the firm. Managerial ownership is viewed as one potential solution to the long-standing agency problem. Specifically, if members of management have an ownership stake in the company, their interests align more closely with those of investors (Jensen and Meckling 1976; Morck, Shleifer and Vishny 1988). However, as the proportion of management’s wealth tied to company performance via stock-based compensation increased considerably in the 1990’s, stock-based compensation also shouldered the blame for many high-profile accounting frauds. That is, stock-based compensation can provide incentives to improve short-term financial results through aggressive and potentially fraudulent financial reporting (Bebchuck and Fried 2003). This view is supported by studies that find that stock-based compensation is positively associated with management’s likelihood to engage in earnings management behavior (Cheng and Warfield 2005; Bergstresser and Philippon 2006).

Cheng and Warfield (2005) investigate the relationship between management equity incentives and earnings management. They find that managers with high equity incentives are more likely to report earnings that just meet or beat analysts’ forecasts and are less likely to report negative earnings surprises. They also find that when management has consistently high equity incentives from stock-based compensation, management is less likely to report large positive earnings surprises. Chava and Purnanandam (2010) similarly demonstrate that executives choose financial policies based on risk-seeking incentives provided by stock-based compensation. Taken together, these findings suggest that stock-based compensation provides an incentive for management to act in a self-interested manner.

The findings that stock-based compensation can encourage self-interested behavior often involve management short-termism. Marginson and McAuley (2008) define management short-termism as a preference for actions in the near term that have detrimental consequences for the
long-term. Specifically, managers may prioritize their own financial interests by focusing on short-term results at the expense of long-term growth and profitability that may be more optimal for the firm and shareholders (Dechow and Sloan 1991; Narayanan 1996; Antia et al. 2010).\textsuperscript{4} To address the problem of management short-termism, Bebchuck and Fried (2010) propose a series of restrictions on stock-based compensation, such as vesting restrictions and unwinding limitations that, if adopted, would extend the time horizon of management incentives.

Johnson, Ryan and Tian (2009) examine the relationship between the type of equity incentive and the occurrence of corporate fraud. They find that executives of fraud firms have a greater percentage of compensation in the form of unrestricted stockholdings relative to executives at non-fraud firms and that unrestricted stockholdings are the largest incentive source relative to other forms of compensation. In a sense, unrestricted stockholdings can shorten the incentive time horizon of management. For example, Gopalan et al. (2014) find that shorter CEO pay duration (based on the vesting schedule of restricted stock grants and options) is associated with greater incentive to manipulate short-term performance, whereas longer CEO pay duration is associated with a lesser extent of income-increasing accruals. These findings are attributable to the incentive time horizon of the CEO, as pay duration represents a financial incentive which affects the incentive time horizon of management.

Taken together, these studies indicate that stock-based compensation that lacks restrictions on the sale of stock grants or exercise of options encourage management short-termism by providing a financial incentive based on short-term performance. This behavior is often inconsistent with the long-term interests of the company or its shareholders. However, vesting

\textsuperscript{4} It should be noted that this concept differs from myopia, which is difficulty assessing long-term consequences (Strotz 1956).
periods and stock holding requirements can be effective for reducing management short-termism by extending the incentive time horizon for management.

**Hypothesis Development**

Agoglia et al. (2011) employ a decision case that provides only short-term incentives for financial preparers to engage in earnings management. Therefore, we expect to replicate their findings in an experimental condition that involves a short-term incentive horizon (i.e., when there are no holding requirements for stock-based compensation). Consistent with the prior research, we expect that when financial statement preparers’ are focused on short-term goals, the preparers will be more likely to manage earnings when applying more precise accounting standards than financial statement preparers applying less precise accounting standards.

Agoglia et al. (2011) construct the argument that less precise standards will result in less earnings management than more precise standards based upon theories of justification. In essence, aggressive accounting choices are expected to be more difficult to justify to auditors and regulators when standards are less precise. Maines (2007) indicates that the bright-line rules in more precise standards make it easier for firms to justify earnings management, as long as these bright lines are not crossed. Further, Nelson et al. (2002) state that regulators are more likely to second-guess discretionary accounting choices, and preparers will be more concerned about their ability to justify accounting choices to regulators when standards are less precise, relative to more precise. The results of Agoglia et al. (2011) and their debriefing analyses support the proposition that preparers are concerned about their ability to justify accounting choices to regulators when standards are precise and incentives favor short-term performance goals.
We propose that justification concerns will shift away from regulatory oversight when the time horizon of earnings management decisions changes from short-term to long-term, particularly when a long-term decision time horizon creates incentives to maximize long-term performance. The direction of earnings management (income-increasing or income-decreasing) is known to be dependent on the incentives of the preparers (Barth et al. 1999; DeFond and Jiambalvo 1993). When executives’ incentive structures reward long-term performance, the executives will be focused more on maximizing long-term firm value, rather than short-term profitability. In this environment, preparers will be concerned about their ability to justify any decisions that sacrifice long-term value for short-term gain.

Financial preparers can recognize the incentives of their superiors, and decision makers have been shown in both dictator games and laboratory experiments to make decisions that are consistent with others’ incentives. For example, evidence from dictator games indicates that dictators will sacrifice personal wealth in order to benefit others (e.g., Bohnet and Frey 1999; Hoffman, McCabe, and Smith 1996). That is, decisions makers consider the preferences of others during dictator games. Experimental evidence in accounting provides more direct evidence that subordinates recognize their superior’s incentives and make decisions consistent with these incentives. For example, recent research by Brink, Gouldman, Rose, and Rotaru (2019) demonstrate that subordinates internalize their superiors’ incentive structures and are more likely to manage earnings that favor long-term performance when their superiors have incentives tied to long-term performance. Thus, executive incentive structures that reward long-term firm performance will shift preparers’ motivation and attention to their ability to justify decisions to their executives. Preparers will no longer have significant incentives to make accounting choices
that maximize short-term profitability, but they will face pressures from executives to maximize long-term value.

At the same time, concerns about justifying decisions to regulators or auditors should decline significantly when incentives favor long-term performance because preparers no longer face pressures to increase short-term profitability. Consider that auditors and regulators are typically more concerned with earnings management that is intended to boost short-term profitability, relative to earnings management activities that are long-term (Gigler, Kanodia, Sapra and Venugopalan 2014; Francis and Krishnan 1999). Indeed, SAS No. 99 explicitly alerts auditors to be aware of excessive pressure on management to meet short-term analyst expectations and/or press releases when assessing the risk of fraud (AICPA 2002). When preparers have fewer concerns about justifying accounting choices to auditors and regulators, they become free to use the flexibility of less precise standards to pursue long-term goals. Taken together, the shifts in concerns to pleasing superiors by pursuing long-term performance goals and decreased needs to justify decisions to regulators suggest two different effects of changing the incentive horizon.

When incentives are short-term, preparers will be concerned about justifying decisions to auditors and regulators, and the bright-line rules in more precise standards will facilitate earnings management. However, when incentives of executives favor long-term performance, preparers will be more concerned about making decisions that promote long-term performance and will have fewer tendencies to engage in income-increasing earnings management.

**Hypothesis 1:** When the incentive horizon is long-term, financial statement preparers will be less likely to engage in income-increasing earnings management behavior than when the incentive horizon is short-term.

In addition, we would expect the decrease in income-increasing earnings management to be more pronounced when standards are less precise, relative to more precise. This expectation
results from two factors. First, prior research finds that less precise standards result in more income-increasing earnings management behavior than more precise standards when the incentive horizon is short-term. Therefore, there is more opportunity for earnings management behavior to be reduced by increasing the incentive horizon when standards are less precise, relative to more precise. Second, managing accounting choices such that they do not increase short-term earnings (such as not choosing to capitalize a lease because of the beneficial effects for long-term performance goals) is likely to yield less regulatory oversight than managing choices to maximize short-term earnings. As a result, preparers facing long-term incentive horizons, relative to short-term horizons, will have decreased concerns about oversight and the economic substance of transactions. Decreased concerns about regulators and economic substance will provide more perceived freedom to take advantage of the flexibility inherent in less precise standards. The expected effects in Hypotheses 1 and 2 are presented in Figure 1.

**Hypothesis 2:** When the incentive horizon changes from short-term to long-term, decreases in income-increasing earnings management behavior will be more pronounced when standards are less precise, relative to more precise.

[INSERT FIGURE 1 ABOUT HERE]

### III. RESEARCH METHOD

**Participants and Design**

Participants in the study are 135 experienced financial statement preparers consisting of chief financial or accounting officers, controllers, heads of finance, and other senior managerial accounting positions from both the United States and Bangladesh. Fifty-nine participants are from

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5 The survey asked the participants’ to indicate their current positions in an open ended format. Thirty-five responses were coded as heads of finance, which included the following: Director of Finance, Head of Accounting, Head of Finance, VP of Finance or Accounting, Senior VP of Finance or Accounting, Executive VP of Finance or Accounting.
the United States, while seventy-six are from Bangladesh. It was important to have participants from two different standard regimes, one with experience under a more precise regime (U.S. GAAP) and one with less precise accounting standards (Bangladesh Accounting Standards\(^6\)), to reduce the likelihood that our results are driven by familiarity with a particular standard regime. The participants had an average of 18 years of professional work experience, which was important given that our experiment requires participants to make a decision that would typically be made by experienced financial statement preparers.\(^7\)

To test our hypothesis, we conduct an experiment that asks participants to assume the role of the financial statement preparer for a fictitious company in order to make a lease classification decision, partially replicating the Agoglia et al. (2011) study.\(^8\) Within the experiment, we manipulate our constructs of interest: \textit{STANDARD\_PRECISION} and \textit{INCENTIVE\_HORIZON}.\(^9\)

The variable \textit{STANDARD\_PRECISION} is manipulated at two levels: more precise and less precise accounting standard. Participants in the more precise standard condition are provided with rules-based lease capitalization criteria from ASC 840 \textit{Leases} (i.e., lease must be classified as a capital lease if the lease term is equal to 75 percent or more of the expected economic useful life of the asset). Participants in the less precise standard condition are provided with principles-based lease capitalization criteria from IAS 17 – \textit{Accounting for Leases} (i.e., lease must be classified as

\(^6\) With the exception of IFRS 9 (which is currently under review), all Bangladesh Accounting Standards (BAS) have adopted all International Accounting Standards and International Financial Reporting Standards as of 2015.

\(^7\) With respect to the demographics of our participants (e.g., gender, number of years work experience) there were no significant differences between conditions and, when included in our analyses, the demographic variables were neither significant nor altered the conclusions we draw.

\(^8\) This study received proper approval from an institutional review board prior to data collection.

\(^9\) We also manipulated the psychological construct of future self-continuity for the financial statement preparers using a prime developed by Hershfield et al. (2012) as a second method of lengthening participants’ incentive horizon. We anticipated a potential interactive effect of future-self continuity and standard precision on a financial statement preparer’s decision to report aggressively. Preliminary analyses revealed there is no significant main or interactive effects of self-continuity, and the self-continuity measure is not considered further and collapsed within the analyses.
a capital lease if the lease term is for the major part of the expected economic useful life of the asset). The independent variable \( \text{STANDARD\_PRECISION} \) is an indicator variable where zero represents the more precise treatment condition and one represents the less precise treatment condition.

It should be noted that the lease classification guidance provided to participants is from prior leasing standards, which were superseded after administration of the experiment. A joint task force of the FASB and IASB issued revised standards for accounting for leases (FASB issued ASC 842 on February 25, 2016 to replace ASC 840 and IASB issued IFRS 16 on January 13, 2016 to replace IAS17). The new leasing standards are presently in effect. The fact that our experiment is based on a previous standard does not limit its generalizability for three main reasons. First, the standards were current at the time of the experiment. Second, our study is a partial replication and extension of the Agoglia et al. (2011) study, which is commonly cited as evidence that more precise standards lead to more earnings management. In order to replicate and extend this study, it is important to employ the same lease task such that the results are comparable. Third, the objective of this study is to examine the construct of standard precision rather than the impact of any particular accounting or lease standard. To ensure that our results are driven by the precision of accounting standard rather than any other variations in the case context, choosing guidance with as few differences as possible is essential. Given that there are more substantial differences between ASC 842 and IFRS 16, this would have potentially been problematic. Further, the construct of standard precision remains important and relevant, given that there remain standards...
that differ in precision between the two standard systems (e.g. ASC 810 and IFRS 10) and within a standard system.\footnote{ASC 810-10 – Consolidation uses a threshold of 50 percent to determine control of an entity, whereas IFRS 10 – Consolidated Financial Statements uses principles-based terminology referencing the effective power of the parent company.}

The independent variable, \textit{INCENTIVE\_HORIZON} is manipulated at two levels: short-term and long-term. Participants in the short-term condition are told that a significant portion of management’s compensation is paid in stock that can be sold at any time. In the long-term condition, participants are told that a significant portion of management’s compensation is paid in stock that cannot be sold for five years or more. The independent variable \textit{INCENTIVE\_HORIZON} is an indicator variable where zero represents the short-term treatment condition and one represents the long-term treatment condition.

\textbf{Procedures}

The first page of the instrument collects demographic information about the participants. Next, participants are asked to assume the role of controller for a fictitious company. Participants receive background information about the company’s financial health, indicating that the company is just shy of reaching its consensus analyst forecasted earnings for the year. All participants are told that company executives’ bonuses and a significant portion of their salaries are paid in stock. Each participant then receives either the short-term or long-term \textit{INCENTIVE\_HORIZON} manipulation.

The instrument provides information about a lease classification issue that the financial statement preparer is facing. The case contains lease classification criteria, and the experimental

\footnote{Folsom, Hribar, Mergenthaler and Peterson (2016) analyze U.S. accounting standards to determine the extent to which each standard includes principles. They find that U.S. accounting standards vary in precision from heavily rules-based (e.g. ASC 815 – Derivatives, ASC 715 – Compensation – Retirement Benefits, and ASC 410 – Asset Retirement and Environmental Obligations) to largely principles-based (e.g. ASC 330 – Inventory and ASC 606 – Revenues from Contracts with Customers).}
manipulation includes either rules-based or the principles-based *STANDARD PRECISION*. Each participant is told that, for the decision at hand, they are to assume the only relevant criterion is the ratio of the lease term to the expected economic useful life of the leased asset. Participants are also provided with the following definitions, which are consistent with both ASC 840 and IAS 17:

- **“Lease term”** is defined as the fixed non-cancelable term of the lease plus all periods covered by bargain renewal options.
- **“Bargain renewal options”** allow the lessee to renew the lease for a rental sufficiently lower than the fair rental of the property such that exercise of the option appears, at the inception of the lease, to be reasonably assured.

The case facts state that the lease has a non-cancelable lease term of seven years, with the option to renew the lease for an additional year. The participant must first judge whether the rate for the additional year represents a bargain renewal option to determine if the additional year should be included in the lease term, and then judge whether the lease meets the criteria for capitalization provided by the lease standard.

Participants receive a summary of the financial effects of each of the two accounting treatments. The summary demonstrates that the capitalization of the lease provides less favorable financial results, whereas classifying the lease as an operating lease will increase projected earnings to meet the consensus analyst forecast. Thus, management has a short-term incentive to record the lease as an operating lease.

Participants then assess the likelihood that they would classify this lease as an operating lease or a capital lease on a ten-point scale where one represents “Definitely classify as an operating lease” and ten represents “Definitely classify as a capital lease.” The participant’s lease classification decision is the dependent variable (*LEASE_CLASSIFICATION*). After responding to the dependent measure, participants respond to attention check and debriefing questions.12

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12 The instrument also contained information about the Research & Development budget of the firm. This portion of the instrument was designed to detect any potential for preparers to switch between real and accruals-based earnings.
IV. RESULTS

Hypotheses Tests

Our first hypothesis predicts that when the incentive horizon is long-term, financial statement preparers will be less likely to engage in income-increasing earnings management than when the incentive horizon is short-term. The hypothesis is tested using a 2 X 2 ANOVA, and results are reported in Table 1 Panel B. The dependent variable is the lease classification decision, where participants indicate their decision on a ten-point scale, where one equals “definitely classify as an operating lease” and ten indicates “definitely classify as a capital lease.” The independent variables are STANDARD_PRECISION and INCENTIVE_HORIZON.

To test our first hypothesis, we examine the main effect of INCENTIVE_HORIZON. The main effect is not statistically significant (p = 0.374). However, there is a statistically significant interaction between STANDARD_PRECISION and INCENTIVE_HORIZON (p = 0.026), which is presented graphically in Figure 2. The interaction effect reveals that interpretation of the main effect of INCENTIVE_HORIZON is problematic. To specifically test whether the decrease in tendency to capitalize the lease decreases for less precise standards, we conduct a simple effects test that compares the lease classification decision made when the horizon is short-term and standards are less precise (mean = 6.929) to the decision when the horizon is long-term and the standards are less precise (mean = 5.094). This difference is statistically significant (p = 0.014) and in the predicted direction, partially supporting the first hypothesis. While the slope of the line for the more precise standards is not as expected in Figure 2 (i.e., a positive slope instead of management under our experimental conditions. Detailed analyses revealed no evidence of switching between forms of earnings management, and there were no statistically significant effects for the alternative dependent variable that captured attempts at real earnings management. Therefore, these results are not tabulated. On average, participants in all treatment conditions cut approximately $1 million from R&D, indicating that participants used R&D to reach earnings targets, and then they employed the lease classification decision to reach CEO bonus targets.
negative or no slope), the positive change is not statistically significant (p = 0.336). Earnings management behavior does not change significantly for preparers using more precise standards when the incentive horizon changes from short-term to long-term.

To test the second hypothesis, we conduct a planned contrast that compares the signed change in the lease decision when the incentive horizon changes from short-term to long-term for the less precise standards (mean change = -1.835), relative to the same change for more precise standards (mean change = 0.794). The contrast is statistically significant (p = 0.013), providing evidence that the decrease in capitalization of the lease is more pronounced when standards are less precise, relative to more precise, consistent with hypothesis two.

[INSERT TABLE 1 ABOUT HERE]

[INSERT FIGURE 2 ABOUT HERE]

Finally, we created a dichotomous variable to represent whether or not participants chose to capitalize the lease (scale response 1 through 5 = 0, and scale response 6 through 10 = 1). Using the dichotomous measure as a dependent variable in a binary logistic regression model and STANDARD_PRECISION, INCENTIVE_HORIZON and the interaction term as independent variables (see Table 2). The interaction term is again significant (p = 0.020), providing support for H2. In addition, the main effect of INCENTIVE_HORIZON is statistically significant (p = 0.023) in the logistic regression model, providing some additional support for H1.

[INSERT TABLE 2 ABOUT HERE]

Mediation Analyses

The debriefing questions examine potential sources of influence on participants’ lease classification decisions (see Table 3). Agoglia et al. (2011) find evidence that concerns about second-guessing by regulators and concerns about the economic substance of events mediate the
relationship between standard precision and decisions to engage in aggressive financial reporting. We measure perceptions of concern for regulator second-guessing and economic substance in the debriefing questions and examine whether these act as mediating variables in our study.

[INSERT TABLE 3 ABOUT HERE]

Using the full sample and examining all treatment conditions, we do not find evidence that concerns about economic substance or regulator second-guessing are mediating variables. However, Agoglia et al. (2011) only examined a condition of short-term incentives. In addition, our main finding is that the management of earnings to enhance short-term profit is reduced for preparers using less precise standards when the incentive horizon is changed from short-term to long-term. Thus, to examine whether economic substance or regulator second-guessing are mediators when standards are less precise, we split the sample on $STANDARD\_PRECISION$ and then test for mediating effects of the relationship between $INCENTIVE\_HORIZON$ and $LEASE\_CLASSIFICATION$.

We perform the mediation analyses following the procedures described by Hayes and Preacher (2014) and Hayes (2018). The method involves Model 4 from Hayes (2018) and employs 95 percent bias-corrected confidence intervals and 5,000 bootstrap samples. Results of the mediation tests indicate that concerns about the economic substance of the lease transaction mediates the relationship between $INCENTIVE\_HORIZON$ and $LEASE\_CLASSIFICATION$ (Effect = -0.987, LLCI = -1.955, ULCI = -0.210).\(^\text{13}\) Thus, similar to Agoglia et al. (2011), we find that concerns about economic substance influence lease classification decisions, and this explains, at least partially, preparers’ reluctance to take advantage of the flexibility inherent in less precise standards when the incentive horizon is short-term.

\(^{13}\) There is no evidence of a mediating effect of concerns about second-guessing by regulators in any experimental condition.
Employing the same mediation analysis technique for the sample of controllers in the long-term incentive horizon condition reveals that economic substance is not a mediating variable when the incentive horizon is long-term, while it is a mediator when the incentive horizon is short-term. This is consistent with our expectations that preparers become less concerned about oversight and economic substance when their incentives do not involve maximizing short-term profitability. Thus, preparers’ concerns about economic substance do not significantly influence their lease classification decisions when executives’ incentives are tied to long-term performance, and they appear to feel free to take advantage of the flexible standards in order to pursue long-term goals that align with executive pay structures.

**Additional Tests**

It is also important to explore whether these findings are a function of the standard precision manipulation creating different perceptions of the lease criteria. Specifically, for participants in the less precise standard precision condition, the term “for the major part of” is open to their own interpretation, which might influence their lease classification. Following Agoglia et al. (2011), we examine whether the more and less precise lease classification standards created different perceptions of the meaning of “for the major part,” by asking participants the following question:

*If a criterion for classifying a lease as a capital lease is if the lease term is for the major part of the economic life of the asset, what is the minimum percentage you would assign to the expression “for the major part of”?
(Please answer on a scale of 0% to 100%). ________ %*

Participants in the less precise condition perceived that “for the major part of” represented a lower percentage (mean = 62.62, p = 0.038) relative to participants in the precise treatment condition (mean = 68.49). Therefore, we include this perception as a covariate and repeat the analyses above to test our hypothesis. The results are unchanged by including this covariate.
As an additional test, we follow Agoglia et al. (2011) and repeat our analyses using only the participants who indicated that their perception of “for the major part of” fell within the range of 70 percent to 80 percent. Thus, this test directly compares participants who had similar perceptions of the lease criterion during the experiment. Of the 67 participants in the less precise standard treatment, 26 responded within the 70-80 percent range. We retest our hypothesis using only these participants. We find results similar to our initial results, and there is also a marginally significant interaction between \textit{STANDARD\_PRECISION} and \textit{INCENTIVE\_HORIZON} (p < 0.11) with the reduced sample.

Given that our sample is comprised of financial statement preparers from both the United States (61) and Bangladesh (86), we also examine whether there is a country effect on the ANOVA results. Participants from the United States have frequent exposure to precise, rules-based standards, which are prevalent in US GAAP. In contrast, Bangladesh follows the Bangladesh Financial Reporting Standards, which are closely modeled after International Accounting Standards and IFRS. The Bangladesh standards are more principles-based in nature and tend to be less precise than US GAAP. It is possible that our results may be influenced by preparers’ familiarity with different standard types. To explore the potential for familiarity with different standards to influence our findings, we create an indicator variable for the country of origin of our participants (0 = US participant, 1 = Bangladesh participant) and include this covariate in the model used to test our hypothesis. The country indicator variable is not statistically significant (F = 0.543, p = 0.462), and results of hypothesis testing are unchanged.\textsuperscript{14} Our results are robust for financial

\textsuperscript{14} We also analyzed a model where we examined whether country of origin interacts with either standard precision or the incentive horizon. There are no interactive effects, which again supports the argument that results are robust for preparers from different standard regimes. Further, we included the country dummy in moderated mediation models to determine whether country influenced the mediating effects of economic substance on the lease classification decision. The country dummy was also not statistically significant in any of these models.
preparers who are familiar with either more or less precise standards, which indicates that familiarity with certain types of standards is not a driver of the results. However, we do find that differences between controllers in Bangladesh and the US influence the importance of economic substance when making lease capitalization decisions.

Additionally, we examined whether there is an effect of job title (Chief Financial Officer vs. other managerial accounting and finance position). To explore whether there were classification differences between CFO and other managerial accounting and finance professionals, we create an indicator variable based on the participant’s self-reported job title (0= non-CFO, 1= CFO). There is no significant difference in lease classification between CFOs and non-CFOs (F = 0.119, p = 0.731), and including the indicator variable as a covariate does not influence the results of our hypotheses testing.

V. SUMMARY AND CONCLUSIONS

The FASB has recently issued two new accounting standards, which were developed by joint task forces of the FASB and IASB and are principles-based standards. Increasingly, empirical evidence supporting how the precision of accounting standards influences decisions made by financial statement preparers is of importance to practitioners and regulators. Prior literature tends to support a movement towards a more principles-based approach to standard setting, as it finds that less precise standards are more effective at reducing income-increasing earnings management behavior relative to more precise, rules-based standards. Our study examines whether these findings hold in decision contexts that have not previously been considered. Specifically, we examine how standard precision and the incentive horizon of financial statement preparers jointly influence the reporting decisions of financial statement preparers.
Consistent with expectations, we find that the incentive horizon of executives in a firm changes the nature of earnings management decisions made by preparers. When standards are less precise, preparers in firms that connect executive pay to long-term performance are less likely to make decisions that promote shorter-term profitability than are participants in firms where executive pay is more closely associated with short-term profitability. In addition, when the incentive horizon changes from short-term to long-term, income-increasing earnings management behavior decreases more when standards are less precise, relative to more precise. Mediation analyses reveal that these results are partially explained by differences in concerns about the economic substance of transactions when the incentive horizon is short-term versus long-term. When incentives are tied to short-term profitability, concerns about the economic substance of transactions mediates the effects of standard precision on earnings management decisions. However, when incentive structures create long-term incentive horizons, economic substance concerns no longer influence decisions to manage earnings through lease capitalization decisions.

Future research could extend our line of inquiry by examining standard precision in alternate settings to identify other factors that may moderate the relationship between standard precision and aggressive financial reporting. It is important to note that our case focuses on a specific context (lease classification), which has been revised by the joint task force of the FASB and IASB. To broaden the generalizability of our findings, future research could examine standard precision using alternative standards. Such research would enhance our understanding of the role that standard precision plays in influencing financial statement preparers’ decisions to engage in earnings management behavior.

Overall, we provide evidence that incentive structures and the precision of accounting standards work together to influence the choice to engage in income-increasing financial reporting.
The results reveal that our understanding of the market implications of standard precision is incomplete without simultaneously considering the influence of incentive structures, and the findings have important implications for both research and practice. The results suggest that migration to principles-based standards may not result in the expected reductions in earnings management behavior. In fact, in the current environment where incentive systems often include stock-based compensation with long holding requirements, the possible movement towards principles-based standards could result in an increase in earnings management activities that are intended to boost longer-term performance measures.
REFERENCES


TABLE 1
Lease Classification Decision ANOVA

Panel A: Mean (Standard Deviation) [Number of participants]

<table>
<thead>
<tr>
<th></th>
<th>INCENTIVE_HORIZON: Short-Term</th>
<th>INCENTIVE_HORIZON: Long-Term</th>
<th>Row Means</th>
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</thead>
<tbody>
<tr>
<td>STANDARD_PRECISION:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Precise</td>
<td>6.93 (2.95)</td>
<td>5.09 (3.66)</td>
<td>6.05</td>
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<tr>
<td></td>
<td>[35]</td>
<td>[32]</td>
<td></td>
</tr>
<tr>
<td>More Precise</td>
<td>5.60 (3.42)</td>
<td>6.39 (3.49)</td>
<td>6.02</td>
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<tr>
<td></td>
<td>[35]</td>
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<tr>
<td>Column Means</td>
<td>6.26 (3.24)</td>
<td>5.75 (3.61)</td>
<td>6.05</td>
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<td></td>
<td>[70]</td>
<td>[65]</td>
<td>[135]</td>
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</table>

Panel B: ANOVA Results

<table>
<thead>
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<th>Factor</th>
<th>df</th>
<th>Mean Square</th>
<th>F-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IH</td>
<td>1</td>
<td>9.13</td>
<td>0.80</td>
<td>0.374</td>
</tr>
<tr>
<td>SP</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.981</td>
</tr>
<tr>
<td>IH X SP</td>
<td>1</td>
<td>58.22</td>
<td>5.08</td>
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<tr>
<td>Error</td>
<td>134</td>
<td>11.46</td>
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</table>

Panel C: Simple Effects Test

<table>
<thead>
<tr>
<th></th>
<th>t-statistic</th>
<th>p-value (one-tailed)</th>
</tr>
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<tbody>
<tr>
<td>H1: When the incentive horizon is long-term, financial statement preparers will be less likely to engage in income-increasing earnings management behavior than when the incentive horizon is short-term.</td>
<td>2.22</td>
<td>0.014</td>
</tr>
</tbody>
</table>

Panel D: Planned Contrast

<table>
<thead>
<tr>
<th></th>
<th>t-statistic</th>
<th>p-value (one-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2: When the incentive horizon changes from short-term to long-term, decreases in income-increasing earnings management behavior will be more pronounced when standards are less precise, relative to more precise.</td>
<td>2.25</td>
<td>0.013</td>
</tr>
</tbody>
</table>

INCENTIVE_HORIZON is an indicator variable where zero represents the short-term incentive condition, and one represents the long-term incentive condition.

STANDARD_PRECISION is an indicator variable where zero represents the more precise standard, and one represents the less precise standard.

The dependent variable is LEASE_CLASSIFICATION. Participants assess the likelihood that they would classify the lease as an operating lease or a capital lease on a ten-point scale where 1 represents “Definitely classify as an operating lease” and 10 represents “Definitely classify as a capital lease.”
### TABLE 2
Lease Classification Decision Logistic Regression

<table>
<thead>
<tr>
<th>Factor</th>
<th>df</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
<td>INCENTIVE_HORIZON (IH)</td>
<td>1</td>
<td>-1.16</td>
<td>0.510</td>
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<tr>
<td>STANDARD_PRECISION (SP)</td>
<td>1</td>
<td>-0.82</td>
<td>0.492</td>
<td>2.796</td>
<td>0.095</td>
</tr>
<tr>
<td>IH X SP</td>
<td>1</td>
<td>1.64</td>
<td>0.707</td>
<td>5.377</td>
<td>0.020</td>
</tr>
<tr>
<td>Constant</td>
<td>1</td>
<td>0.65</td>
<td>0.356</td>
<td>3.338</td>
<td>0.068</td>
</tr>
</tbody>
</table>

*INCENTIVE_HORIZON* is an indicator variable where zero represents the short-term incentive condition, and one represents the long-term incentive condition.

*STANDARD_PRECISION* is an indicator variable where zero represents the more precise standard, and one represents the less precise standard.

The dependent variable is a dichotomous version of *LEASE_CLASSIFICATION*. Participants assess the likelihood that they would classify the lease as an operating lease or a capital lease on a ten-point scale where one represents “Definitely classify as an operating lease” and ten represents “Definitely classify as a capital lease.” Scaled responses are converted to a dichotomous variable where 1 through 5 are coded as 0, and responses of 6 through 10 are coded as 1.
FIGURE 1

Hypothesized Results

Income-Increasing Reporting Choices

Incentive Horizon

Standard Precision

- - - - - - Less Precise

- - - - - - More Precise

Increasing Reporting Choices

Short-Term

Long-Term
The Y-Axis represent *LEASE_CLASSIFICATION*. Participants assess the likelihood that they would classify the lease as an operating lease or a capital lease on a ten-point scale where 1 represents “Definitely classify as an operating lease” and 10 represents “Definitely classify as a capital lease.”