

Do Management Disavowals of Mandated Disclosures Affect Investor Judgments?

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October 2004

Preliminary: Data collection still in progress.

We thank Brian Ballou, Shane Dikolli, Brooke Elliott, Anne Farrell, Jeffrey Hale, Leslie Hodder, Pat Hopkins, Lisa Koonce, Susan Krische, Clive Lennox, Lauren Maines, Mark Peecher, Geoff Sprinkle, Jim Wahlen, Alex Yen and workshop participants at Indiana University, the University of Illinois, the University of Texas at Austin, and Hong Kong University of Science and Technology for comments on a related working paper. Frank Hodge acknowledges support of the William R. Gregory Fellowship and Jamie Pratt acknowledges support of the KPMG Professorship. The authors thank the Accounting Departments at the University of Washington and the Hong Kong University of Science and Technology for financial support.

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Abstract

In this paper we report the results of an experiment designed to examine the consequences of a recent phenomenon where management disavows a mandated disclosure by providing a statement in the annual report that discredits the reliability or usefulness of the mandated information. Specifically, we examine whether management's disavowal of a firm's stock option compensation expense affects financial report user judgments of reliability and financial performance, as well as their investment decisions. We find that when relatively sophisticated financial report users are exposed to a statement disavowing stock option compensation expense, they perceive the income number that excludes stock option expense (non stock-option earnings) to be relatively more reliable than the number that includes stock option expense (stock-option earnings) and they invest more funds in the firm. These results suggest that management can use disavowals to influence financial report users and achieve strategic reporting objectives. Such influence may undermine the comparability of financial statements, suggesting that standard setters may wish to consider ways to monitor or regulate disavowing behavior. We also find, however, that these results do not hold for relatively less sophisticated users and in a setting where the firm is required to recognize stock option compensation expense on the income statement, a likely future scenario given the Financial Accounting Standards Board's recent push to require firms to expense stock options.

Key Words: Disavowal, Mandated disclosures, Stock options, Voluntary disclosures, Financial sophistication.

Data Availability: Contact the authors

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I. INTRODUCTION

Disclosure is critical for the efficient functioning of capital markets (Healy and Palepu 2003). It represents a mechanism for managers to provide information to stakeholders, potentially influencing their judgments and decisions. Management disclosures can be divided into two categories: mandated and voluntary. Mandated disclosures are disclosures required by regulators or standard setters, and they facilitate comparability and consistency of financial information (Schipper 2003). Voluntary disclosures are at management's discretion, and provide information "above the mandated minimum" (Core 2001, footnote 1).

A voluntary disclosure that conflicts with the intent of a mandated disclosure occurs when a company explicitly disavows the mandated disclosure. In an explicit disavowal, management voluntarily provides a disclosure stating that certain mandated information is not useful for decision-making. In its 2003 annual report, for example, Intel provides the pro forma earnings disclosure mandated by Statement of Financial Accounting Standard (SFAS) 123, "Accounting for Stock-Based Compensation," in its stock option footnote, but states in the footnote that the general approach for calculating the mandated earnings number generates an unreliable number.¹

An open issue is whether the presence of explicit disavowals in audited financial reports influences financial report users' (hereafter, "users") judgments and decisions. If management can influence the use of a mandated disclosure simply by disavowing it in the financial report,

¹ For example, Intel states in its "Employee Stock Benefit Plans" footnote that, "SFAS No. 123 requires the use of option pricing models that were not developed for use in valuing employee stock options. The Black-Scholes option pricing model was developed for use in estimating the fair value of short-lived exchange-traded options...Because the company's employee stock options have characteristics significantly different from those of traded options, and because changes in subjective input assumptions can materially affect the fair value estimate, in the opinion of management, the existing models do not necessarily provide a reliable single measure of the fair value of employee stock options."

disavowals arguably not only circumvent accounting standard setting, but also impair its ability to establish reporting standards that provide users with comparable and consistent financial information.²

This paper presents the results of an experiment designed to examine how a disavowal influences financial reports user judgments of reliability and financial performance, as well as their investment decisions. We examine disavowals in the context of the fair value footnote disclosure mandated by SFAS 123. SFAS 123 allows firms to choose between recognizing the estimated cost of employee stock options as an expense on the face of their income statement, or disclosing this amount and its effect on net income in a footnote. Most firms elect to disclose this information in a footnote (Aboody, Barth and Kasznik 2004a). We provided financial report users with a hypothetical firm's financial statements, the stock option footnote, and information about the firm's performance relative to several other firms in the same industry. Users assessed the reliability of the income number that excluded stock option compensation expense (non stock-option earnings) relative to the income number that included this amount (stock-option earnings), judged the firm's financial performance, and decided how much they would invest in the firm. Users also answered several credibility questions, questions about what they perceived as the firm's "true" compensation number, and a set of demographic questions.

We use a 2x2 experimental design to examine whether disavowing a mandated disclosure influences financial report user judgments and decisions. Our first independent variable is whether the stock option footnote contained a statement explicitly disavowing the use of option

² In Concept Statement 2, the FASB states that comparability is achieved if similar transactions are accounted for similarly and different transactions are accounted for differently (FASB 1980). In the same statement, the FASB notes that creating comparable information is a fundamental rationale for standards setting.

pricing models to estimate stock option compensation expense.³ Our second independent variable is whether the firm chose to recognize the expense associated with stock option compensation on the face of its income statement, or disclose this information in a footnote. In addition to these four cells, where the firm has a choice to either recognize or disclose stock option compensation expense, we created two additional conditions where the firm was required to recognize stock option compensation expense. These two cells allow us to examine whether the effect of a disavowal might change if the Financial Accounting Standards Board (FASB) moves ahead with its stated intent to require recognition in the near future.

Our results indicate that financial sophistication plays a key role in determining how a disavowal influences user judgments and decisions. We find that when the firm had a choice about whether to recognize or disclose stock option compensation, the disavowal influenced the more sophisticated users but not the less sophisticated users. For more sophisticated users, those exposed to the disavowal perceived non stock-option earnings as more reliable (implying that they perceived the stock option compensation expense amount as less reliable) and invested more funds in the disavowing firm. Interestingly, the results for more sophisticated users disappeared in a setting where the firm was required to recognize stock option compensation expense on the income statement, a likely future scenario given the FASB's intent to require the expensing of stock options.

Our results have implications for both practice and research. With respect to practice, they suggest that management can influence sophisticated financial report users to discount the reliability of a mandated disclosure and change their investment decisions by disavowing the

³ The location of information within financial statements (e.g., body of financial statements versus footnotes) may affect whether financial report users access the information (Hirst and Hopkins 1998; Maines and McDaniel 2000). Examining the effect on user judgments of a disavowal located in a footnote, therefore, is a joint test of whether investors access the disavowal and whether it affects their judgments.

disclosure. Simply, disavowals can be used by management to achieve strategic reporting objectives. If disavowals can undermine the comparability of financial statements, standard setters and regulators may wish to consider ways to monitor or regulate disavowing behavior.

With respect to research, we contribute to the extensive literature on voluntary management disclosures (see Healy and Palepu (2001) and Core (2001) for recent reviews of this research). Explicit disavowals are a unique form of voluntary disclosure in that they explicitly disavow a mandated disclosure. To the best of our knowledge, this is the first study to investigate the effects on financial statement users of an explicit disavowal.

Our findings concerning the importance of a user's level of financial sophistication also have implications for experiment-based studies that examine the effect of financial disclosures on financial report user judgments and decisions. Most studies in this area use as participants either analysts (e.g., Hopkins 1996; Hirst and Hopkins 1998; Sedor 2002) or nonprofessional financial statement users (e.g., Maines and McDaniel 2000; Hodge, Martin and Pratt 2004), and treat members within a user class as homogeneous. The participants in our study were knowledgeable (predominantly CPAs) users of financial statements with varying levels of sophistication. Our results suggest not only that a user's level of financial sophistication is important, but that financial sophistication can vary widely within the "nonprofessional user" classification. This observation coupled with Hunton and McEwen's (1997) finding of experience differences within the class of analysts, suggests that using investor class (i.e., analyst versus nonprofessional) as a proxy for experience/sophistication may be subject to considerable measurement error.

In the remainder of the paper we present background information in Section II and discuss theory in Section III. We describe the experiment in Section IV, and present and discuss the results in Sections V and VI, respectively.

II. BACKGROUND

Form of Disavowal

Webster's Dictionary (1984) defines disavow as "to deny or disclaim." Consistent with this definition, we define a disavowal as a company voluntarily making a disclosure that either explicitly or implicitly denies the usefulness of a mandated disclosure. At least three different forms of disavowals exist in practice. An example of each type follows:

1. A company reports two earnings measures: one based on generally accepted accounting principals (GAAP), and one based on the company's own set of rules for calculating income. The presence of the latter is an implicit disavowal of the mandated GAAP information. Pro forma income disclosures in earnings announcements, which have become increasingly common since 1987 (Alpert 2001), are an example of this form of disavowal.⁴
2. Rather than using the accounting approach mandated by GAAP, a company instead uses an alternative non-GAAP approach. For example, in its 2003 financial statements, Hong Kong-based Cathay Pacific Airways Limited did not apply Hong Kong Statement of Standard Accounting Practice (HKSSAP) 11, "Foreign Currency Translation," in

⁴ Numerous studies have recently examined the consequences of pro forma earnings disclosures (see, e.g., Bhattacharya, Black, Christensen, and Larson 2003; Elliott 2004; Johnson and Schwartz 2003; Frederickson and Miller 2004; Lougee and Marquardt 2004).

accounting for foreign currency hedges. Instead, it used an alternative approach and disclosed that it was using a non-standard approach.

3. A company makes a mandated disclosure in its financial statements, but includes a statement in its financial statements that explicitly disavows the mandated information. The earlier example of Intel's stock option footnote disavowal illustrates this form of disavowal.⁵

These three forms of disavowal differ in important ways. First, the financial information differs across the three forms of disavowals. In the first form, mandated information is provided in addition to other information; in the second, mandated information is replaced by other information; and in the third, mandated information is provided but then disavowed. In addition, the first form represents an implicit disavowal while the last two are explicit. Finally, the first and third forms could occur in any country while the second is most likely to occur in countries where accounting standards allow this practice.⁶

These differences suggest that evidence about the consequences of one form of disavowal may not generalize to the others. We focus on the third form because it provides the cleanest test of the consequences of disavowals. It is the only form where there is both an explicit disavowal and no confound from additional or alternative information. The only difference between a

⁵ Firms also disavow other mandated disclosures. For example, in its 2003 Form 10-K, Caterpillar Inc. disavows its segment footnote disclosure stating "...we feel that the financial information required by Statement of Accounting Standard No. 131 (SFAS 131) "Disclosures about Segments of Enterprise and Related Information" has limited value for our external readers."

⁶ Specifically, the second form of disavowal is most likely to occur in countries that emphasize principle-based accounting standards and that follow the "true and fair" view. Such countries allow companies to invoke a true and fair over-ride, which means that companies are allowed to use a non-GAAP alternative if that method provides a true and fair presentation of their financial position and operations, while the mandated GAAP method does not. In applying the true and fair over-ride, a company is required to disclose that it is using a non-GAAP method. Livne and McNichols (2003) examine the informativeness of financial statements that contain a true and fair over-ride.

company disavowing and not disavowing is the presence of the disavowal; the same financial information is presented in both situations.

Experimental Context

We examine the effect of a disavowal within the context of accounting for employee stock options. SFAS 123, “Accounting for Stock-Based Compensation,” requires companies to calculate the expense for employee stock options based on the fair value of the options on their grant date. SFAS 123, however, gives companies a choice between income statement recognition versus footnote disclosure. With the former, a company recognizes stock option compensation expense as a determinant of reported earnings on its income statement. With the latter, the company discloses stock option compensation expense as a component of stock option earnings in its footnotes. Although the exposure draft of SFAS 123 required income statement recognition, the published statement only encourages it, and the vast majority of US firms choose footnote disclosure (Aboody, Barth and Kasznik 2004a).

We chose the stock option fair value footnote disclosure as the context for our experiment for several reasons. First, stock option accounting has been, and continues to be, an important and controversial issue. The FASB initially proposed income statement recognition for stock option compensation, but in the face of significant lobbying and the threat of Congressional intervention, relaxed its position and ultimately allowed either income statement recognition or footnote disclosure.⁷ The International Accounting Standards Board, however, recently passed

⁷ For example, according to the FASB web site, the FASB has received over 6,500 comment letters regarding its exposure draft on Share Based Payment issued in March 2004. This is a substantial increase over the 1,700 comment letters that Botosan and Plumlee (2001) note the FASB received in 1993 related to the initial exposure draft of SFAS 123. Revsine et al. (2002) note that when the FASB was debating the expensing of stock options in the early 1990s, a Senate bill was introduced that would have eliminated the FASB’s independence by requiring the Securities and Exchange Commission to approve all new FASB standards.

International Accounting Standard 2, which requires firms to recognize the cost of providing stock options as an expense on their incomes statements beginning in January 2005. Due in part to high-profile accounting scandals, footnote disclosure of stock option compensation expense has come under increased scrutiny in the US, resulting in the FASB moving toward requiring firms to expense stock options (FASB 2004).

Second, many companies disavow the fair value footnote disclosure. Blacconiere et al. (2004) report that approximately 17% of the 710 firms in their preliminary sample disavow this disclosure. Third, this disavowal meets our criteria of (1) being explicit and (2) not being confounded with alternate or additional information. Fourth, the effect of stock option compensation expense on earnings appears to be significant. Botosan and Plumlee (2001) compared fully diluted stock option earnings per share disclosed in the stock option footnote to reported fully diluted earnings per share reported on the income statement for the 100 “fastest-growing” companies in America (identified by *Fortune* magazine), finding that pro forma income is at least 22% lower.⁸ Finally, Aboody et al. (2004b), Bell, Landsman, Miller, and Yeh (2002), and Li (2003) find that the stock market values stock option compensation expense reported in the footnotes, suggesting that market participants use the mandated information. A disavowal that influences investors to discount stock option earnings, therefore, may affect stock values.

We use an experiment, rather than relying on archival data, to examine the consequences of the stock option fair value disavowal for several reasons. First, it is impossible to use archival data to examine the effect of disavowals in a setting where firms are required to recognize stock

⁸ As an extreme example, Yahoo! Inc. reported earnings of \$70 million in fiscal 2000, but disclosed a stock option earnings *loss* of over \$1.2 billion.

option expense on their income statements because that setting does not yet exist in practice. An experiment, however, is well suited to test the effects of a condition that does not yet, but soon will, exist (Hopkins, Houston and Peters 2000; Libby, Bloomfield and Nelson 2002). Second, it would be difficult, if not impossible, using archival data to construct tests that would be sufficiently powerful to demonstrate that disavowals affect firm value. Although there are econometric solutions to overcome the endogeneity problem between the value of stock option expense and the value of the firm, there is not an acceptable solution to the self-selection bias inherent in the decision to disavow.⁹ Specifically, without a theory of why some firms disavow and others do not, it is impossible to identify all the necessary control variables to infer that an observed effect for disavowals is due to the disavowals per se and not due to an omitted, correlated variable. An experiment allows us to control all extraneous factors, and thus provide a clear causal link between the presence of the disavowal and judgments and decisions. Lastly, isolating the role of nonprofessional investor sophistication on disavowals would be very difficult if not impossible using archival data.

III. THEORY

We investigate whether a disavowal affects financial statement users' (1) perceptions of the disavowed information's reliability, (2) assessments of the disavowing firm's financial performance, and (3) investment amounts in the disavowing firm. We chose these three variables because they arguably represent important steps in the process of making an investment decision. Presumably, financial statement users seek out reliable financial

⁹ The endogeneity problem refers to the fair value of stock options depending on the stock price level while, in turn, the stock price level depends on the fair value of stock options.

information to assess a firm's financial performance, which in turn helps them make an informed investment choice. In the discussion below we assume that these three variables are related, and our arguments apply to all three.

Research suggests that financial report users may consciously (intentional cognitive effect) and/or subconsciously (unintentional cognitive effect) use a disavowal in forming judgments and making decisions (Libby and Tan 1999; Tan et al. 2002). With respect to intentional cognitive effects, financial report users may consciously rely on a disavowal to the extent that they view it as providing new company-specific information from an unbiased source. Since users are aware that management possesses private information about the individual nature of the firm's stock options, they may consider a disavowal as providing new company-specific information about the reliability of the stock option valuation. Thus, to the extent that users consider the disavowal as informative, it should put downward pressure on user assessments of the reliability of stock-option earnings, which in turn should encourage them to focus more on non stock-option earnings (which is higher than stock-option earnings), boosting their assessments of financial performance and the amount they invest in the firm.

With respect to unintentional cognitive effects, research shows that the mere presence of information, regardless of its relevance to a judgment or decision, can have unintentional effects on human information processing. For example, Frederickson and Miller (2004) present evidence that pro forma earnings disclosures in earnings announcements affect stock price judgments through unintentional cognitive effects. Numerous studies in a variety of settings have demonstrated that individuals make different judgments when their information set includes both diagnostic and nondiagnostic information compared to when it includes only diagnostic information (e.g., Nisbett et al. 1981; Hackenbrack 1992; Glover 1997; Hoffman and Patton

1997). Other studies have demonstrated that individual judgments often reflect an anchoring effect (e.g., Tversky and Kahneman 1974), even when individuals know the anchor was determined randomly, and have been told that the anchor has nothing to do with the requested judgment (Taffler 2002). These findings suggest that even if users do not perceive the disavowal to be informative or from an unbiased source, its mere presence could put downward pressure on their assessment of the reliability of stock option compensation, and thus increase both their assessment of financial performance and the amount they invest in the firm.

The above arguments suggest that a disavowal will affect user judgments if users intentionally discount the disavowed information, or if the disavowal initiates unintentional cognitive effects. We test these conjectures in the following hypotheses:

H1a: Nonprofessional financial report users exposed to a disavowal of stock option compensation expense will judge the reliability of non stock-options earnings to be higher than will users not exposed to the disavowal.

H1b: Nonprofessional financial report users exposed to a disavowal of stock option compensation expense will judge the disavowing firm's financial performance to be higher than will users not exposed to the disavowal.

H1c: Nonprofessional financial report users exposed to a disavowal of stock option compensation expense will invest more in the disavowing firm than will users not exposed to the disavowal.

We recognize that many financial report users view management as a biased source of information (Hodge 2003), and therefore may intentionally discount or ignore the disavowal when making their judgments and decisions. If users heavily discount or completely ignore the disavowal, we are likely to find little or no support for H1a – H1c, suggesting to standard setters and regulators that disavowing behavior is not a threat to the comparability of firms' financial statements.

Financial sophistication

We also examine whether the effect of a disavowal is a function of a user's level of financial sophistication. Financial sophistication consists of encounters within a particular setting that provide opportunities for an individual to acquire knowledge about that setting, leading to the creation of three kinds of knowledge: declarative knowledge, knowledge structures, and procedural knowledge (e.g., see Libby 1995; Vera-Munoz, Kinney, and Bonner 2001). Declarative knowledge consists of factual knowledge about the domain; knowledge structures organize the facts around underlying principles or categories; and procedural knowledge consists of if-then rules that provide solutions to domain-specific problems. Declarative knowledge is normally acquired first, while knowledge structures and procedural knowledge are built over time as the number of encounters within the domain accumulates. Experience in a domain leads to better-developed knowledge structures and more effective procedural knowledge (Bonner, Walther, and Young 2003).

Earlier we argued that key elements in determining the effect of a disavowal on user judgments and decisions include the extent to which: (1) users consider the disavowal to be informative; and (2) users are subject to unintentional cognitive effects. We argue that a user's level of financial sophistication may be related to these elements. More sophisticated users, who have more factual knowledge, better organized knowledge structures, and more developed procedural knowledge, should differ from less sophisticated users in terms of their beliefs that a disavowal represents new company-specific information from a believable source, as well as their inclination to be influenced unintentionally. More sophisticated users know more about, and have had more experience with, the financial reporting environment, financial statements, management disclosures, and management biases, which would likely shape their opinions about

these key elements. Although we believe that the differences between more and less sophisticated users could be large enough to influence the effect of a disavowal on user judgments and decisions, it is difficult to unambiguously predict the nature of these differences. Accordingly, we do not offer a specific hypothesis about the effect of financial sophistication. Instead, we offer the following research question.

RQ: Does the effect of a disavowal on user judgments and decisions depend on the user's financial sophistication?

To summarize, in this section we argue that the presence of a disavowal statement in a firm's stock option footnote will affect three important components of user investment decisions: (1) user assessments of the relative reliability of stock-option earnings (*vis-à-vis* non stock-option earnings), (2) user assessments of financial performance, and (3) the amount invested in the disavowing firm. In addition, a user's level of financial sophistication likely relates to these elements, and may play an important role in explaining how disavowals affect the three components of investment decisions.

We test these relationships in three different settings: (1) management chooses to disclose stock-option earnings in the footnotes only; (2) management chooses to include stock-option expense on the income statement; and (3) management is required, according to accounting standards, to include stock-option expense on the income statement. We examine these three settings to ascertain the extent to which our results are robust across different settings. The first two settings (choice settings) represent the options currently available to management under SFAS 123, and the third setting (mandated setting) represents the situation likely to exist within the next few years.

IV. EXPERIMENT

Task and Participants

Each participant received a packet in the mail consisting of three parts: a letter of introduction describing the general purpose of the case and instructions for completing the case, the main experimental materials and questionnaires, and a post-experiment questionnaire. The instructions for completing the case, asked participants to: “Please assume you work in the investment department of a firm. Your supervisor has instructed you to assess the financial performance of Firm Z, which is a member of Industry Q.”

The experimental materials consisted of a pre-case questionnaire asking participants to rate the reliability of 14 different financial statement items, general information about a hypothetical firm (Firm Z), Firm Z’s income statement and related footnotes, Questionnaire 1, additional information about Firm Z’s performance relative to its industry and several firms in its industry, and finally Questionnaire 2. Questionnaire 1 asked participants to assess earnings reliability, financial performance, and the level of Firm Z’s “true” compensation expense. Questionnaire 2 asked participants to evaluate Firm Z relative to two other firms described in the “additional information” part of the case, and then indicate how much they would invest in Firm Z relative to the other two firms. Questionnaire 2 also contained manipulation checks, a within-subjects disavowal manipulation, and demographic questions.

Maines and McDainel (2000) report that nonprofessional investors own approximately half of all stock in the insurance industry, and the New York Stock Exchange reports that 34 million nonprofessional investors invest directly in the stock market (NYSE 2001). Recognizing nonprofessional investors as an important user group of financial statements, the SEC has expressed concerns about the need to level the playing field by making financial statements more

transparent to all investors (Pitt 2001). Accordingly, we used nonprofessional financial report users as participants. Participants are alumni of a major US business school who graduated with a degree in accounting or finance and live within the continental US. We mailed materials to 1,000 individuals. We received 40 packets back as undeliverable, and 215 useable responses for an overall response rate of 22 percent (*NOTE: data collection not yet complete*).¹⁰

These 215 usable responses populate six cells. Four of the cells constitute our main dataset, and represent the scenario where a firm has a choice to recognize or disclose stock option compensation expense. The other two cells allow us to examine a likely future scenario where the FASB requires all firms to recognize the cost of stock options on the income statement. The table below shows the number of participants in each of our six cells.

FOUR CHOICE CELLS		n
Condition 1:	Disclose / no disavowal	43
Condition 2:	Disclose / disavowal	33
Condition 3:	Recognize / no disavowal	35
Condition 4:	Recognize / disavowal	37
TWO NO-CHOICE CELLS		n
Condition 5:	Recognize / no disavow	34
Condition 6:	Recognize / disavow	33
TOTAL		215

On average, our 215 participants have analyzed the financial performance of firms for 11 years and have accounting-related work experience of 16 years. Seventy-nine percent of the participants are Certified Public Accountants.

¹⁰ Our response rate compares favorably with other recent finance and accounting studies that used professionals as subjects. For example, Graham and Harvey (2001) had a response rate of nine percent using CFOs; Nelson, Elliott and Tarpley (2002) 16 percent using experienced auditors; Block (1999) 34 percent using Chartered Financial Analysts; and Trahan and Gitman (1995) 12 percent using CFOs.

Independent and Control Variables

We use three independent variables and one control variable in our tests. Two of the independent variables were manipulated between subjects: the presence or absence of a disavowal and recognition versus disclosure. The wording of the disavowal is identical to Intel's disavowal excerpted in footnote 1. In the recognition conditions Firm Z included stock option compensation as a part of general and administrative expense on the income statement and disclosed in the stock option footnote pro-forma earnings without stock option compensation expense included. In the disclosure condition, Firm Z disclosed the effect of including stock option compensation expense on earnings in its stock option footnote.

Our third independent variable is a continuous variable, a user's level of financial sophistication. Archival research commonly uses institutional ownership as a proxy for the level of investor sophistication (e.g., Hand 1990; Walther 1997; Bartov, Radhakrishnan and Krinsky 2000; Bonner, Walther and Young 2003). In doing so, this line of research assumes that institutional investors have more knowledge and experience analyzing the financial performance of firms, thus making them more financially sophisticated relative to non-institutional shareholders. Consistent with this logic, our measure of financial sophistication reflects a participant's knowledge and experience analyzing the financial performance of firms. Specifically, we compute a participant's level of financial sophistication as the average of the participant's experience analyzing the financial performance and condition of firms and his or her accounting-related work experience. Figure 1 graphically displays our financial sophistication variable. The range is from zero years to 35 years, with a mean (median) of 13 (12) years. Because financial sophistication is a continuous variable, we use regression to analyze our data.

Finally, we include one control variable: users' pre-case reliability assessment of the stock option compensation footnote. We collected users' pre-case reliability assessments by asking them: "When analyzing firms for the purpose of making investment-related decisions, how reliable do you find the following information?" Participants recorded their answers on an 11-point response scale with endpoints labeled "not at all reliable" to "very reliable."

Dependent variables

The FASB's conceptual framework states that reliability is essential to making accounting information useful for decision-making purposes (Concept Statement No. 2, paragraph 33). Consistent with the conceptual framework, our first dependent variable is reliability. We asked participants in Questionnaire 1 to assess the reliability of Firm Z's pro-forma net income relative to its reported net income on an 11-point scale with endpoints labeled "considerably less reliable than" and "considerably more reliable than." The midpoint of the scale was labeled "equally reliable to." Recall that pro-forma net income included (excluded) stock option compensation in the disclosure (recognition) conditions. We reverse coded responses in the disclosure conditions to put them on equal footing with those in the recognition conditions. Our reliability measure is a user's perception of non stock-option earnings relative to stock-option earnings. A higher reliability measure indicates that users perceived non-stock-option earnings as more reliable.

Our second dependent variable is financial performance. We measured user financial performance judgments by asking respondents the following question: "I believe that Firm Z's financial performance for the year ended June 30, 2004 was _____." Participants recorded their answers on an 11-point response scale with the endpoints labeled "very weak" and "very strong."

Our third dependent variable is the percentage of \$100,000 (from 0% to 100%) that participants chose to invest in Firm Z. In the “additional information” part of the case we told participants:

Your company has decided to invest \$100,000 in Industry Q. Preliminary analysis has limited the investment options to Firm A, Firm B, and Firm Z (the firm you just analyzed). All three firms are considered industry leaders in terms of market share and innovation. Your supervisor has asked you to decide how much of the \$100,000 to invest in each of the three firms.

Participants were then given ratio information for 2002 through 2004 on a reported and pro-forma basis for a ratio described as “critical for evaluating companies in Industry Q.” The ratio was labeled the “human capital productivity ratio (total sales / total compensation expense).” We computed this ratio so that when stock option compensation was included in the calculation, Firm Z underperformed the other two firms. When stock option compensation was excluded from the calculation, Firm Z outperformed the other two firms. We designed the materials in this way so that if the disavowal leads users to discount the total compensation number that includes stock option compensation expense, they should favor Firm Z relative to users who are not exposed to the disavowal.

V. RESULTS

Manipulation Checks

The post-experiment questionnaire contained two manipulation check questions. The first ascertained if participants could correctly recall whether Firm Z disclosed or recognized stock option compensation expense. The second ascertained if participants could correctly recall whether Firm Z disavowed the stock option compensation expense. Twenty-eight participants missed the placement manipulation check and seventeen participants missed the disavowal manipulation check, resulting in 170 participants correctly answering both manipulation check

questions. Of these 170 participants, 120 populate our four main “choice” cells. We use these 120 participants in computing the summary statistics below and in the analysis. We use the remaining 50 participants in our “no-choice” cells to examine the likely future scenario where firms are required to recognize stock option compensation expense on the income statement.

Descriptive statistics

In the pre-case questionnaire we asked participants to rate the reliability of 14 items commonly found in a firm’s financial statements. These items are listed along with their mean, median, minimum, and maximum reliability ratings in Table 1. We also report in Table 1 two composite scores: “annual report” and “all.” The annual report composite measure is the simple average of participants’ assessments of four items: the income statement, balance sheet, cash flow statement, and footnotes. The “all” composite measure is the simple average of all 14 items.

[Insert Table 1 here.]

Several interesting observations deserve mentioning. First, participants perceive net income as the least reliable item among the four income statement items ($p < 0.01$, 2T). Second, they perceive intangible assets as less reliable than any other item ($p < 0.01$, 2T). Third, participants perceive stock option compensation as less reliable than all other items except intangible assets and pensions ($p < 0.05$, 2T). No significant differences exist across the four choice conditions for either composite measure (all p -values > 0.30 , 2T) or for any of the 14 individual items (p -values range from 0.12 for intangibles to 0.99 for pensions, 2T). The p -value for stock option compensation is 0.80 (2T).

Main Analyses

Our main analysis uses the following regression.¹¹

$$DV_i = \beta_0 + \beta_1 \text{Placement}_i + \beta_2 \text{Disavow}_i + \beta_3 \text{Sophistication}_i + \beta_4 \text{Pre-ESO}_i + \beta_5 \text{Disavow}_i \times \text{Sophistication}_i \quad (1)$$

Our three dependent variables are reliability, financial performance, and investment amount. Placement is a dummy variable, coded 1 if Firm Z recognized stock option compensation expense on the income statement and 0 if Firm Z disclosed stock option compensation expense in the footnotes. Disavowal is a dummy variable, coded 1 if the disavowal statement was present and 0 if it was absent. Sophistication is a continuous variable ranging from zero to 35 years, as shown in Figure 1. We computed financial sophistication by averaging the years of experience each participant has analyzing the financial performance of firms and his or her accounting-related work experience. Including pre-ESO controls for differences in participants' ex ante beliefs about the reliability of stock option compensation. Table 2 reports our regression results.

[Insert Table 2 here.]

Panel A of Table 2 reports the results for reliability as the dependent variable. The coefficient on placement is negative and significant ($p = 0.07$, 2T), indicating that footnote disclosure of stock option compensation expense, as opposed to recognition, encouraged participants to view non stock-option earnings as relatively more reliable than stock-option

¹¹ Our results are qualitatively similar if we include a “disavow-by-placement” interaction and a “placement-by-sophistication” interaction in regression (1). These interactions are not significant in any of the regressions reported in Table 2 (p -values range from 0.18 to 0.97, 2T), and the disavow-by-placement interaction remains significant in our reliability and investment choice regressions (all p -values < 0.03 , 2T)

earnings. This result suggests that management's choice to disclose stock option expense in the footnotes caused participants to discount the reliability of stock option expense. This effect is consistent with results from other studies documenting that disclosed information has a smaller effect on users' judgments and decisions than does recognized information (Sami and Schwartz 1992; Harper et al. 1987, 1991; Hirst and Hopkins 1998; Wilkins and Zimmer 1983).

Sophistication, disavow, and the disavow-by-sophistication interaction all are significant. The coefficient on sophistication is negative and significant ($p = 0.06$, 2T). Thus, holding everything else constant, more sophisticated participants perceived non stock-option earnings to be relatively less reliable (and thus stock option earnings to be relatively more reliable) on average than did less sophisticated participants. The coefficient on disavow also is negative and significant ($p = 0.06$, 2T), indicating that, holding everything else constant, participants perceived non stock-option earnings to be relatively less reliable on average when the firm included a disavowal in its stock option footnote. This result is inconsistent with the apparent intent of the disavowal.

The disavow-by-sophistication is positive and significant ($p = 0.02$, 2T). This indicates that as financial sophistication increases, participants exposed to the disavowal perceived non stock-option earnings to be relatively more reliable (and thus stock option earnings to be relatively less reliable). This result is consistent with the disavowal causing more sophisticated users to discount the reliability of stock-option earnings, consistent with management's likely intent. To further examine this interaction, we split our sample at the median level of sophistication (12 years) to create "low" and "high" sophistication groups. Results (not tabled) indicate that "high" sophistication participants exposed to the disavowal perceived non stock option earnings to be relatively more reliable than did "high" sophistication participants not

exposed to the disavowal ($p = 0.10$, 1T). The disavowal did not affect participants in the “low” sophistication group ($p = 0.24$, 1T). Overall, these results support H1a, but only for more sophisticated users.

Panel B of Table 2 reports the regression results for financial performance as the dependent variable. Inconsistent with our expectations, neither disavow nor the disavow-by-sophistication interaction are significant. Thus, the data do not support H1b.

Panel C of Table 2 reports the regression results for investment amount as the dependent variable. The coefficients on disavow ($p = 0.05$, 2T) and sophistication ($p = 0.03$, 2T) are negative and significant, consistent with the results for reliability. The disavow main effect suggests that holding everything else constant, participants invested less in Firm Z when the firm included a disavowal in its stock option footnote. The sophistication main effect suggests that holding everything else constant, more sophisticated participants invested less in Firm Z when the firm included a disavowal in its stock option footnote.

Also consistent with our reliability results, the coefficient on the disavow-by-sophistication interaction is positive and significant ($p = 0.02$, 2T). As financial sophistication increases, participants exposed to the disavowal invested more in Firm Z than did those not exposed to the disavowal. Similar to our additional interaction analysis for reliability, we also examined this interaction further by splitting our sample at the median sophistication level. Results (not tabled) indicate that “high” sophistication participants exposed to the disavowal chose to invest a larger amount in Firm Z than did “high” sophistication participants not exposed to the disavowal ($p = 0.10$, 1T). The disavowal did not affect the investment amounts of participants in the “low”

sophistication group ($p = 0.22$, 1T). Overall, these results support H1c, but only for more sophisticated users.¹²

Taken as a whole, the results indicate that the disavowal affected more sophisticated participants, but not less sophisticated participants. Further, the results are consistent for more sophisticated participants. That is, the disavowal caused them to perceive non stock-option earnings to be relatively more reliable than stock option earnings. The greater relative reliability of non stock-option earnings presumably encouraged the more sophisticated participants to focus on these earnings (which are the higher earnings number), and invest more in the firm.

Additional Analyses

In this section we examine several additional dependent variables to further our understanding of how a disavowal influences user judgments and decisions. In Questionnaire 1, participants assessed Firm Z's "true" total 2004 compensation expense. Results (not tabled) reveal that regardless of the level of financial sophistication, participants exposed to the disavowal were more likely to state that "true" total compensation expense fell somewhere between stock-option earnings and non stock-option earnings ($p = .01$, 2T). This result suggests that the disavowal increased uncertainty about whether stock options should be included in compensation expense. Further, users not exposed to the disavowal were significantly more likely to state that "true" compensation expense should include the cost of stock options ($p = .08$, 2T). These results suggest that the disavowal had some effect on all participants, regardless of their level of financial sophistication.

¹² We also asked participants how confident they were in the amount they invested. Results reveal that confidence in the investment amount does not differ across participants who were versus were not exposed to the disavowal, regardless of sophistication level (all p -values > 0.83 , 2T).

After answering the manipulation check questions, we presented participants with two versions of Firm Z's stock option footnote side-by-side. The two footnotes were identical except that one included the disavowal and the other did not.¹³ We then asked participants whether the additional disavowing language would affect their reliability assessment of Firm Z's stock option compensation expense and the amount they chose to invest in Firm Z. This side-by-side comparison allows us to assess (1) the effect of a disavowal when it is transparent that the disavowal is a voluntary disclosure by management, as opposed to boilerplate language used by all companies, and (2) whether a disavowal effect observed in the between-subjects manipulation is due to unintentional cognitive processing (see, e.g., Libby and Tan 1999; Tan et al. 2002; Frederickson and Miller 2004).

For the reliability question, participants could select one of three options: (1) Yes, the information would cause them to assess the stock option expense amount as being less reliable; (2) Yes, the information would cause them to assess the stock option expense amount as being more reliable; and (3) No, the information would not affect their assessment. Overall, 84 percent of the participants indicated that the disavowal would cause them to change their reliability assessment, with 76 percent selecting option 1 and 6 percent selecting option 2, and only 16 percent indicating that it would not (i.e., option 3). The difference across the three options is significant ($p < 0.01$, 2T).¹⁴ These results are consistent with the side-by-side presentation of the footnotes making it transparent that the disavowal was a voluntary disclosure, which in turn, apparently caused most participants to perceive the disavowal as company-specific information

¹³ One footnote was identical to the footnote participants had seen earlier and the other differed only by the presence or absence of the disavowal.

¹⁴ Participants exposed to the disavowal in the between-subjects manipulation did not respond differently to this question than did participants not exposed to the disavowal ($p = 0.93$, 2T). Financial sophistication also did not significantly influence responses.

and discount the reliability of stock option compensation expense. These results also suggest that the reliability results reported earlier are due, at least in part, to more sophisticated users consciously discounting the reliability of stock-option earnings when exposed to a disavowal.¹⁵

For the investment amount, participants could also select one of three options: (1) Yes, the information would cause them to invest a smaller amount in Firm Z; (2) Yes, the information would cause them to invest a larger amount in Firm Z; and (3) No, the information would not affect the amount they invest. Overall, 42 percent of the participants indicated that the disavowal would cause them to change their investment amount, with 27 percent selecting option 1 and 15 percent selecting option 2, while the remaining 58 percent indicated that the disavowal would not affect their investment amount. The difference across the three options is significant ($p < 0.01$, 2T).¹⁶ Although the effect of the disavowal on the investment amount is not as pronounced as its effect on reliability, the disavowal still affected a considerable percentage of participants. Interestingly, there is a significant positive correlation ($p = 0.08$, 2T) between financial sophistication and responses to this question, indicating that relatively more sophisticated users were more likely to state that the disavowal would *not* affect their investment choice. Taken as a whole, these results suggest that the investment amount results reported earlier are likely due, at least in part, to an unconscious disavowal effect. That is, when

¹⁵ These reliability results provide a possible explanation for why the disavowal influenced more sophisticated participants in the earlier tests, but not the less sophisticated participants. By virtue of their higher financial sophistication, more sophisticated users probably possess knowledge that companies do not typically include disavowal language in their stock option footnote. In contrast, less sophisticated investors may not possess this knowledge. Consequently, when exposed to a stock option footnote that contained a disavowal in the between-subjects manipulation, less sophisticated participants may have believed that the disavowal was standard boilerplate language used by all companies, and thus not informative about the reliability of Firm Z's stock option expense. In contrast, more sophisticated participants may have perceived that the disavowal provided company-specific information.

¹⁶ Participants exposed to the disavowal in the between-subjects manipulation are significantly more likely to state that the disavowal would affect their investment choice than are participants not exposed to the disavowal ($p = 0.05$, 2T).

presented with a disavowal in a side-by-side comparison, more sophisticated users said that the disavowal would not affect their investment choice when in fact it did affect their choice in the between-subjects manipulation.

The effect of a disavowal in a “no choice” environment

We ran two additional “no choice” conditions to examine whether the effects previously documented would persist after the FASB requires firms to recognize stock option compensation on the income statement. To test the effect of a disavowal in a “no choice” environment we added the following language to the stock option footnote:

The FASB has issued an exposure draft entitled, ‘Share-Based Payment,’ that amends SFAS No. 123 by requiring companies to recognize the fair value of stock option compensation as an expense on the income statement. Our industry is part of a SEC pilot project that requires firms within the selected industries to comply with the exposure draft. We therefore are required to report the fair value of stock option compensation as an expense in our income statement.

We use the following regression to test for a disavowal effect within our two “no choice” conditions.

$$DV_i = \beta_0 + \beta_1 \text{Disavow}_i + \beta_2 \text{Sophistication}_i + \beta_4 \text{Pre-ESO}_i + \beta_5 \text{Disavow}_i \times \text{Sophistication}_i \quad (2)$$

Panel A of Table 3 reports the regression results for reliability; Panel B reports the results for financial performance; and Panel C reports the results for investment amount. No explanatory variable is significant in any of the regressions, suggesting that the disavowal effects we previously documented probably will not persist when the FASB requires firms to recognize stock option compensation expense on the income statements.

[Insert Table 3 here.]

VI. CONCLUSION

Many companies currently state explicitly in their audited financial reports that certain mandated information contained in their reports is unreliable or has limited value. In this paper we examine how such disavowals influence financial report users' assessments of the reliability of the disavowed information, assessments of the firm's financial performance, and the amount they would invest in the disavowing firm. We find that both financial sophistication and management discretion are important determinants of the effect of a disavowal on user judgments and decisions. We find that when the firm had discretion about whether to recognize or disclose stock option expense, the disavowal influenced the judgments and decisions of only more sophisticated users. Specifically, more sophisticated users exposed to the disavowal perceived non stock-option earnings to be relatively more reliable than stock option earnings and invested a larger amount in the disavowing firm. However, when the firm had no discretion and was required to recognize stock option expense on its income statement, which is the likely future scenario given the FASB's current position, the results for the more sophisticated users disappeared.

These results suggest that management can influence financial report users to discount the reliability of a mandated disclosure and change their investment decisions by disavowing the disclosure. In other words, it appears that management can use explicit disavowals to influence financial report users and achieve strategic reporting objectives. Our results suggest that investors may value two firms—equivalent in all other respects—differently based solely on whether they disavow stock option earnings, a disclosure mandated by Generally Accepted Accounting Principles. If disavowals can undermine the comparability of financial statements, standard setters and regulators may wish to consider ways to monitor or regulate disavowing

behavior. For example, regulators could explicitly prohibit firms from including disavowals of mandated disclosures in regulated documents. Alternatively, they could require all firms to include disavowal statements in mandated disclosures where the disclosure's inputs are highly subjective and subject to error.

Disavowals are a unique form of voluntary disclosure, and thus our findings contribute to the extensive literature on voluntary disclosures (see, e.g., Core 2001; Healy and Palepu 2001). Our findings also contribute to prior research by documenting the important role financial sophistication can play in determining how financial disclosures affect financial report user judgments and decisions. Our results suggest not only that a user's level of financial sophistication is important, but that financial sophistication can vary widely within the "nonprofessional user" classification. This observation coupled, with Hunton and McEwen's (1997) finding of experience differences within the class of analysts, suggests that using investor class (i.e., analyst versus nonprofessional) as a proxy for experience/sophistication may be subject to considerable measurement error.

Our study is subject to several potential limitations. First, we provided participants with only a subset of the information typically available to most investors so that the participants could complete the task in a reasonable amount of time. Second, we sent our materials to nonprofessional users to increase the generalizability of our findings. In doing so, however, we cannot be completely sure that participants complied with our instructions to complete the case in one setting and to refrain from looking back through the case materials when answering Questionnaire 2. Although we did not detect evidence that participants violated these instructions, our out-of-lab data-gathering technique cannot eliminate the possibility that uncontrolled, extraneous factors affected our results.

Notwithstanding these limitations, our results suggest that disavowing financial reporting mandates, such as stock option earnings, is a recent phenomenon that deserves scrutiny by standard setters and regulators. Our study offers evidence that such behavior may be undermining the comparability objective of Generally Accepted Accounting Principles.

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TABLE 1
Participants' Pre-Case Reliability Assessments^a

ITEM	MEAN	MEDIAN	MINIMUM	MAXIMUM
The income statement	8.16	8.00	4.00	11.00
Revenues	8.14	8.00	2.00	11.00
Interest	8.61	9.00	3.00	11.00
Net income	7.60	8.00	3.00	11.00
The balance sheet	8.10	8.00	1.00	11.00
Accounts receivable	7.91	8.00	3.00	11.00
Inventory	7.45	8.00	4.00	11.00
Property, plant & equipment	7.79	8.00	4.00	11.00
Intangible assets	5.70	6.00	1.00	11.00
The cash flow statement	8.16	9.00	1.00	11.00
The footnotes	7.83	8.00	3.00	11.00
Stock option compensation	6.35	7.00	1.00	11.00
Research & development	6.67	7.00	1.00	11.00
Pensions	6.64	7.00	2.00	11.00
Composite measures^b				
Annual report	8.01	8.13	4.00	10.50
All	7.47	7.52	4.00	10.08

NOTES:

^a We asked participants, “When analyzing firms for the purpose of making investment-related decisions, how reliable do you find the following information?” Participants recorded their responses on 11-point scales with endpoints labeled “not at all reliable” and “very reliable.”

^b Our “annual report” composite measure is the simply average of a participant’s assessment of the income statement, balance sheet, cash flow statement, and footnotes. Our “all” composite measure is the simple average of all of a participant’s assessments.

TABLE 2
Regression Results for Participant Reliability Assessments, Financial Performance Assessments, and Investment Amounts

Variable	Panel A DV = Reliability ^a			Panel B DV = Financial Performance ^b			Panel C DV = Investment Amount ^c		
	Coefficient	<i>t</i> statistic	<i>p</i> value ^d	Coefficient	<i>t</i> statistic	<i>p</i> value ^d	Coefficient	<i>t</i> statistic	<i>p</i> value ^d
Intercept	8.35	8.60	0.00	6.83	10.78	0.00	48.25	5.23	0.00
Placement ^e	-0.93	-1.85	0.07	0.33	1.01	0.32	6.41	1.34	0.18
Disavow ^f	-1.98	-1.89	0.06	-0.13	-0.19	0.85	-19.95	-2.00	0.05
Sophistication ^g	-0.09	-1.89	0.06	0.03	0.89	0.38	-0.96	-2.17	0.03
Pre-ESO ^h	-0.02	-0.17	0.86	0.03	0.43	0.67	0.12	0.12	0.90
Disavow x Sophistication	0.17	2.41	0.02	-0.04	-0.88	0.38	1.53	2.31	0.02
N	117			117			116		
Adjusted R-square	0.04			0.01			0.03		

NOTES:

- ^a Our reliability measure captures a user's perception of the reliability of the net income number that excludes stock option compensation expense (non stock-option earnings) relative to the reliability of the net income number that includes stock option compensation expense (stock option earnings).
- ^b Participants answered our financial performance question ("I believe that Firm Z's financial performance for the year ended June 30, 2004 was _____.") on an 11-point scale with endpoints labeled "very weak" and "very strong."
- ^c We captured participants' investment amount by asking them "What percentage of \$100,000 (from 0% to 100%) would you invest in Firm Z?"
- ^d p-values are two-tailed.
- ^e Placement is a dummy variable, coded 1 if Firm Z recognized stock option compensation expense and 0 if Firm Z disclosed stock option compensation expense.
- ^f Disavow is a dummy variable, coded 1 if Firm Z's stock option footnote contained a disavowal statement and 0 if it did not.
- ^g Sophistication is a continuous variable computed by taking the average of the number of years a participant has analyzing the financial performance of firms and his or her accounting-related work experience.
- ^h Pre-ESO captures a participant's ex ante beliefs about the reliability of stock option compensation.

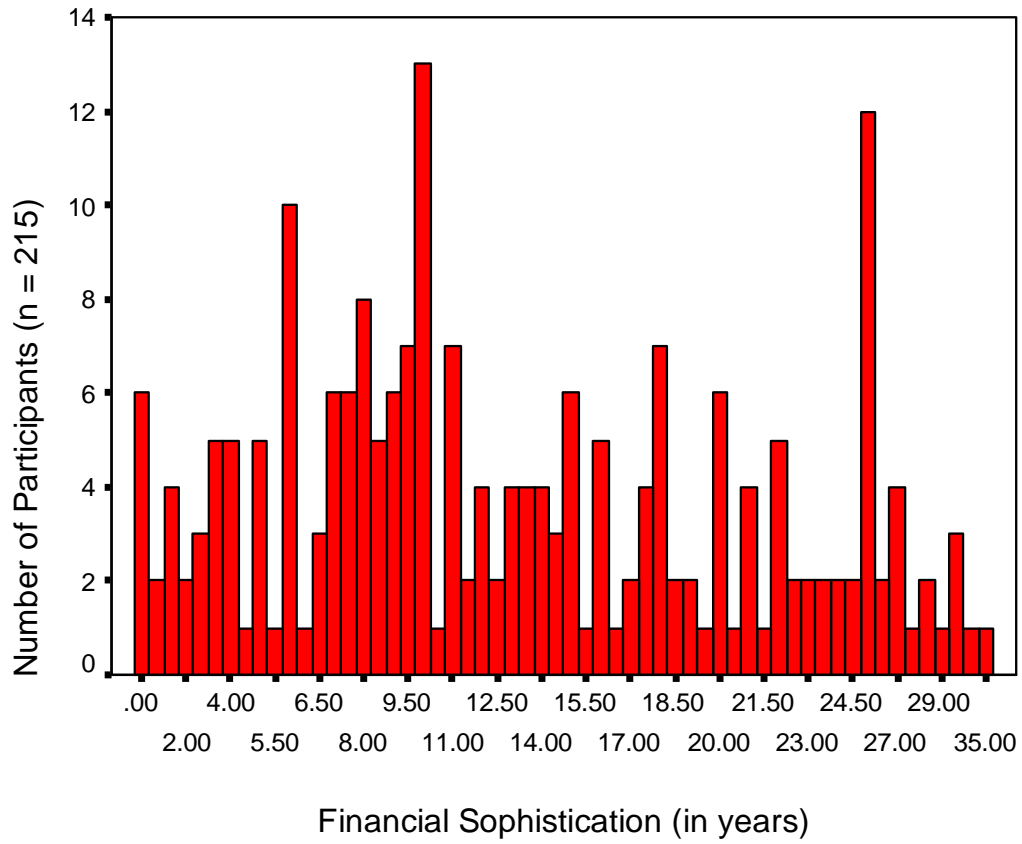
TABLE 3
Regression Results for Participant Reliability Assessments, Financial Performance Assessments, and Investment Amounts

Variable	Panel A DV = Reliability ^a			Panel B DV = Financial Performance ^b			Panel C DV = Investment Amount ^c		
	Coefficient	<i>t</i> statistic	<i>p</i> value ^d	Coefficient	<i>t</i> statistic	<i>p</i> value ^d	Coefficient	<i>t</i> statistic	<i>p</i> value ^d
Intercept	3.91	2.75	0.00	8.00	8.45	0.00	23.33	1.84	0.07
Disavow ^e	-0.46	-0.33	0.75	0.12	0.02	0.99	6.34	0.51	0.62
Sophistication ^f	0.02	0.28	0.78	0.03	0.76	0.45	0.29	0.57	0.57
Pre-ESO ^g	0.15	0.96	0.34	-0.08	-0.81	0.42	0.97	0.72	0.48
Disavow x Sophistication	0.02	0.22	0.83	-0.02	-0.39	0.70	-0.03	-0.04	0.97
N	63			63			63		
Adjusted R-square	-0.05			-0.03			-0.04		

NOTES:

- ^a Our reliability measure captures a user's perception of the reliability of the net income number that excludes stock option compensation expense (non stock-option earnings) relative to the reliability of the net income number that includes stock option compensation expense (stock option earnings).
- ^b Participants answered our financial performance question ("I believe that Firm Z's financial performance for the year ended June 30, 2004 was _____.") on an 11-point scale with endpoints labeled "very weak" and "very strong."
- ^c We captured participants' investment amount by asking them "What percentage of \$100,000 (from 0% to 100%) would you invest in Firm Z?"
- ^d p-values are two-tailed.
- ^e Disavow is a dummy variable, coded 1 if Firm Z's stock option footnote contained a disavowal statement and 0 if it did not.
- ^f Sophistication is a continuous variable computed by taking the average of the number of years a participant has analyzing the financial performance of firms and his or her accounting-related work experience.
- ^g Pre-ESO captures a participant's ex ante beliefs about the reliability of stock option compensation.

FIGURE 1
Bar Graph of User Financial Sophistication^a



Notes:

^a We computed user financial sophistication by taking the simple average of a participant's years analyzing the financial performance and condition of firms and his or her years of accounting-related work experience.