Audit committee accounting expertise, expectations management, and nonnegative earnings surprises

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ABSTRACT

We investigate whether accounting expertise on audit committees curtails expectations management to avoid negative earnings surprises. Controlling for the endogenous choice of an accounting expert, we find that firms with an accounting expert serving on the audit committee exhibit: (1) less expectations management to avoid negative earnings surprises; (2) less nonnegative earnings surprises through expectations management; and (3) more nonnegative earnings surprises that are less susceptible to manipulations of both realized earnings and earnings expectations. We find, however, that the inclusion of an accounting expert on the audit committee curtails expectations management only in the interim quarters. While Brown and Pinello (2007) find a greater magnitude of downward revisions in analysts' forecasts in the fourth quarter, they also document a lower incidence of nonnegative earnings surprises. Together, this suggests that with an accounting expert, audit committees likely view the fourth quarter downward revisions as driven more by guidance than by manipulation, thus focusing on curbing only expectations management in interim quarters.

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1. Introduction

Managers have incentives to avoid negative earnings surprises because missing this earnings target adversely impacts the firm's stock price (Bartov et al., 2002; Skinner and Sloan, 2002). To avoid negative earnings surprises, the extant literature documents that managers are likely to manipulate

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earnings upward and/or guide analysts' earnings expectations downward (Matsumoto, 2002; Bartov et al., 2002; Brown and Pinello, 2007, among others), tactics that are often referred to as the 'earnings surprise games' by the regulatory body and financial press (e.g., Levitt, 1998; Barsky, 2002). While recent studies show that the market becomes more skeptical of firms' earnings that just beat analysts' expectations in the post-Sarbanes Oxley Act (SOX) era (Koh et al., 2008; Keung et al., 2010),[1] financial executives surveyed by Graham et al. (2005) indicate that meeting or beating earnings expectations remains an important signal to the market about future performance of the firm.[2]

The evidence from the prior literature implies that the quality of meeting or beating earnings expectations as a signal about the firm is likely to be compromised with the noise from the tactics to avoid negative earnings surprises. Bedard et al. (2004) and Lin and Hwang (2010) find a negative association between audit committee accounting expertise and upward earnings management, suggesting that the monitoring of an accounting expert can reduce the noise in meeting or beating earnings expectations attributable to earnings management. The objective of our paper is to examine whether firms with an accounting expert serving on the audit committee reduce the noise by constraining downward expectations management.[3]

Since the primary responsibility of audit committees is to monitor the financial reporting process, an accounting expert on the committee to constrain earnings management is anticipated. Expectations management, however, is merely a reporting strategy and does not directly impact the quality of financial reporting. It remains an open question, therefore, whether an accounting expert on audit committee can constrain expectations management as well, or whether it provides an open hand for managers to employ expectations management when earnings management is constrained.

Expectations management typically starts with optimistic forecasts that analysts issue early in the forecasting period, followed by a downward revision to a meetable or beatable level as the earnings announcement approaches. To induce a downward revision in analysts' forecasts, managers need to 'walk down' analysts' earnings expectations by issuing earnings guidance or press releases. Expectations management, therefore, can be constructed as an example of managers abusing their discretion over disclosures to attain their short-term goal while clouding the information conveyed with meeting or beating earnings expectations.

Over the last decade, the responsibility of audit committees has evolved to include the monitoring of voluntary disclosures, suggesting that the audit committee would likely be able to constrain expectations management by curtailing managers' abuse of disclosures. For instance, the New York Stock Exchange (NYSE) explicitly requires audit committees to discuss disclosures in the company's Management Discussion and Analysis (MD&A), earnings press releases, and the earnings guidance provided to financial analysts and rating agencies [NYSE Listed Company Manual, Section 303A.07(B) and (C)]. Further, when providing guidance for implementing Section 302 of SOX, which requires public companies to maintain effective disclosure controls and procedures, the SEC recommended (but did not require) that companies establish a disclosure committee that would be responsible for the company's public disclosure. Many corporate boards delegate the oversight responsibility for the disclosure committee to the audit committee (National Association of Corporate Directors, 2007). These developments reflect a belief of the regulators that the responsibility of audit committees is not limited to monitoring the financial reporting process; rather, audit committees serve as the "ultimate" gatekeeper of financial disclosure (SEC, 1999).

The extant literature provides evidence on the association between audit committees and firms' voluntary disclosures. Karamanou and Vafeas (2005) find that firms with an accounting expert on the audit committee are more likely to issue management earnings guidance that is more accurate. Liu and Zhuang (2011) further show that management earnings guidance issued by firms with an

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[1] Investors' skepticism of the earnings game is exemplified by lower earnings response coefficient for zero or small positive earnings surprises (Keung et al., 2010) and by diminishing market rewards for marginally beating analysts' expectations (Koh et al., 2008) in the post-SOX era.

[2] We use meeting or beating earnings expectations and nonnegative earnings surprises interchangeably throughout the paper.

[3] Cohen et al. (2008) and Bartov and Cohen (2009) find that in the post-SOX era, managers substitute real earnings management for accrual-based earnings management and expectations management to avoid missing analysts' earnings expectations. We do not intend to examine real earnings management, as real earnings management involves economic actions that external auditors or audit committees cannot readily challenge.

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accounting expert on the audit committee is positively associated with analysts' forecast accuracy and negatively associated with forecast dispersion. As such, we expect that accounting expertise on audit committees is likely to constrain expectations management through monitoring firm disclosure in the following respects.

First, the literature suggests that the preference for optimistic forecasts early in the forecasting period is attributable to analysts' incentives to access firm information and to pursue underwriting and investment banking businesses (Baik and Jiang, 2006; Richardson et al., 2004; Ke and Yu, 2006; Libby et al., 2008). If the accounting expert induces more relevant and transparent disclosures in the prior financial reports, analysts are less likely to produce overly optimistic forecasts early in the forecasting period to gain access to firm information, which in turn would likely leave less room for analysts to subsequently walk down their forecasts.[4] Second, by monitoring the press releases and earnings guidance issued by managers during the forecasting period, the audit committee with accounting expertise would likely reduce managers' incentive to walk down analysts' expectations to a meetable or beatable level.

To test our predictions, we use a sample of firms from *RiskMetrics* that hold annual shareholders' meetings for fiscal years 1997 through 2008. We measure expectations management and nonnegative earnings surprises in accordance with Bartov et al. (2002) and Bartov and Cohen (2009). Following Brown and Pinello (2007), we test the incidence and magnitude of expectations management. It is noted, however, that firms selecting an accounting expert to serve on the audit committee are also likely to be those firms that are less likely to engage in expectations management. To mitigate the influence of the endogeneity issue on our inferences, we control for the selection of an accounting expert to serve on the audit committee. Also, because the fourth quarter is subject to more rigorous scrutiny than interim quarters (e.g., Manry et al., 2003; Brown and Pinello, 2007), we perform our tests for interim quarters and the fourth quarter separately.

We find that managers are less likely to engage in expectations management to avoid negative earnings surprises when there is an accounting expert serving on the audit committee. We also find that the incidence of meeting or beating earnings expectations susceptible to expectations management is lower with audit committee accounting expertise. The inclusion of an accounting expert on the audit committee, however, curtails expectations management only in the interim quarters. While Brown and Pinello (2007) find a greater magnitude (but not incidence) of downward revisions in analysts' forecasts in the fourth quarter, they also document a lower incidence of nonnegative earnings surprises. This suggests that with an accounting expert, audit committees likely view the fourth quarter downward revisions as driven more by guidance than by manipulation, thus focusing on curtailing expectations management to avoid negative earnings surprises in the interim quarters.[5]

Two questions arise from our findings: (1) Is audit committee accounting expertise related to nonnegative earnings surprises that are less susceptible to manipulations of realized earnings and earnings expectations (i.e., genuine nonnegative earnings surprises)? (2) Is audit committee accounting expertise related to the decision to stop providing earnings guidance found in firms with poorer prior performance and more uncertain operating environments (Chen et al., 2011), such that these firms are less likely to engage in expectations management? For the first question, we find a significantly positive association between accounting expertise and nonnegative earnings surprises that are less

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[4] Libby et al. (2008) document that analysts know that management guidance is generally downward biased, which leads to the optimistic–pessimistic path in their forecasts. They also find that analysts understand the investment banking incentives for an optimistic–pessimistic path in analysts' forecasts. These incentives persist even after the enactment of Regulation Fair Disclosure (Reg FD). We do not intend to discern managers' abuse of their discretion over disclosures from the investment banking incentives on the part of analysts, in that the latter would bias our tests against finding significant associations between accounting expertise on audit committees and expectations management.

[5] While the extant literature is silent about distinguishing guidance from downward expectations management, we perform two additional tests (untabulated) to support our conjecture. First, we test small nonnegative earnings surprises (meeting or beating analysts' forecasts by one cent or less), because small nonnegative earnings surprises are likely most suspected of manipulation. We find that the incidence of small nonnegative earnings surprises is lower in the fourth quarter than in interim quarters. Second, we find significantly smaller market rewards to meeting or beating earnings expectations in the fourth quarter than in interim quarters. Together, this suggests that nonnegative earnings surprises in the fourth quarter are less susceptible to manipulation and that the 'earnings games' are likely less prevalent in the fourth quarter than in interim quarters.

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susceptible to manipulation, suggesting that audit committees with accounting expertise do not forgo the benefits of meeting the earnings benchmark, but likely strengthen the signal to the market about future performance of the firm. For the second question, we provide initial evidence that firms with an accounting expert on the audit committee are less likely to stop earnings guidance, consistent with the implications of Karamanou and Vafeas (2005) and Liu and Zhuang (2011). We suggest that future research look into the interaction among corporate governance, firms' pressure to meet earnings expectations, and firms' decision to stop providing guidance. Additional tests focusing on small nonnegative earnings surprises produce similar results.

Our study contributes to the accounting literature and has practical implications for capital market participants and public accounting profession. First, we contribute to the corporate governance literature by documenting that accounting expertise on the audit committee not only mitigates earnings management, but also constrains expectations management. Second, we provide evidence of a positive association between audit committee accounting expertise and nonnegative earnings surprises that are less susceptible to manipulation. This suggests that while the inclusion of an accounting expert on the audit committee curbs managers' downward expectations management to attain their short-term goal, it does not forgo the benefit of meeting earnings expectations when it is accomplished without manipulation. Finally, our findings imply that by constraining managers' self-serving disclosures, accounting expertise on the audit committee reduces managers' influence on analysts' forecasts, thus contributing to maintaining the independence of analysts' forecasting process.

The rest of the paper proceeds as follows. Section 2 reviews related literature and develops our hypotheses. Section 3 discusses our sample and research design. Section 4 presents our results, and Section 5 concludes the paper.

2. Related literature and hypothesis development

Graham et al.'s (2005, 2006) survey of senior financial executives reveals the pressures these executives face to meet earnings benchmarks. In the survey, the executives identify that building credibility with the capital markets and maintaining or increasing the firm's stock price are the dominating motivations to meet the earnings benchmarks. Consistent with the survey results, Kasznik and McNichols (2002) and Bartov et al. (2002) find that meeting or beating analysts' earnings expectations serves as a leading indicator of future firm performance. In contrast, missing analysts' forecasts results in an adverse impact on the firm's stock price (Bartov et al., 2002; Skinner and Sloan, 2002).

In light of managers' incentives to deliver earnings, Dechow et al. (2003) find that firms that slightly beat analysts' forecasts have higher discretionary accruals relative to other firms, suggesting that these small profit firms engage in earnings management. Cotter et al. (2006) find that firms issuing management guidance are more likely to meet or beat analysts' earnings forecasts, suggesting that managers often walk down analysts' earnings expectations to avoid negative earnings surprises. Matsumoto (2002) documents that managers use both upward earnings management and downward expectations management to avoid missing analysts' expectations.

Further, Brown and Pinello (2007) identify that upward earnings management and downward expectations management are tactics that managers use as substitutes to avoid missing analysts' expectations. Specifically, they find that managers engage in greater downward expectations management for annual reporting than for quarterly reporting, as managers' ability to manage earnings upward is constrained with the greater scrutiny associated with annual reporting. Similarly, attributable to more scrutiny on financial reporting, Koh et al. (2008) and Bartov and Cohen (2009) find that in the post-SOX period, the tendency of using earnings management to meet analysts' forecasts has decreased. Both studies, however, produce contrasting evidence on the tendency of using expectations management. Koh et al. (2008) find that the use of expectations management increases due to constrained earnings management, whereas Bartov and Cohen (2009) find decreases in expectations management and attribute their finding to stronger corporate governance in the post-SOX period.

We provide direct evidence by examining whether audit committees with accounting expertise are related to expectations management. Even though expectations management is merely a firm's reporting strategy and does not directly follow from the quality of financial reporting, prior research

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suggests that opportunistic expectations management yields negative consequences to the markets. Tian (2007) finds that the intrinsic value metrics estimated using manipulated forecasts are less accurate in tracking stock prices and predicting future stock returns than the value metrics using non-manipulated forecasts, suggesting that manipulated analyst forecasts would likely lead to inefficient stock pricing.

Expectations management is characterized as analysts' forecasts exhibiting an optimistic–pessimistic path, a path preferred by managers (Baik and Jiang, 2006; Bartov et al., 2002; Cotter et al., 2006; Richardson et al., 2004). The survey by Graham et al. (2005, 2006) reveals that this preference is likely attributable to manager's incentives to maintain or increase the company's stock price, because pessimistic forecasts in the beginning-of-period analyst's forecasts may have lingering negative impact on market valuations. Ke and Yu (2006) and Libby et al. (2008) provide further evidence that analysts also prefer an optimistic–pessimistic path in their forecasts due to their needs to access firm information and to maintain good professional relationships with management to generate their forecasts. Thus, from the standpoint of the information environment, expectations management can be viewed as managers' influence on the analysts' forecasting process by manipulating firms' financial disclosures.

We focus on accounting expertise of the audit committee as a mechanism to curtail expectations management, in that the attention corporate audit committees have received since the accounting scandals and the enactment of SOX in early 2000s has resulted in more homogeneous composition with respect to the committee's independence. Yet, accounting expertise remains an attribute that the firm can choose to have for its audit committee, since SOX only mandates a more relaxed requirement with respect to the financial expertise of the committee. Krishnan and Visvanathan (2008) and Dhaliwal et al. (2010), respectively, find that firms with an accounting expert serving on the audit committee promote more conservative accounting and exhibit higher accruals quality than those firms without an accounting expert on the audit committee. With regard to the monitoring of other financial disclosures, Karamanou and Vafeas (2005) find that audit committee financial expertise is positively related to managers' decisions to issue earnings forecasts and the accuracy of management forecasts. Liu and Zhuang (2011) extend Karamanou and Vafeas (2005) and find that the influence of audit committees on managers' decision to issue earnings forecasts is significantly related to analysts' forecast accuracy and dispersion.

We, therefore, expect that firms with an accounting expert serving on the audit committee are less likely to walk down analysts' earnings expectations by monitoring firms' press releases and earnings guidance. Also, by inducing more transparent disclosure in the prior financial reports, analysts following firms with an accounting expert on the audit committee would likely obtain high quality firm information for their earnings forecasts, and hence have less incentive to issue overly optimistic earnings forecasts early in the forecasting period. This, in turn, leads to less room to walk down their forecasts later in the forecasting period. We, therefore, state our first set of hypotheses below:

H1a. The incidence of expectations management decreases with an accounting expert serving on the audit committee.

H1b. The magnitude of expectations management decreases with an accounting expert serving on the audit committee.

Following Brown and Pinello (2007), we test the incidence and magnitude of expectations management. An immediate consequence of constraining expectations management is that the incidence of meeting or beating analysts' forecasts through managers' manipulation is likely reduced with an accounting expert on the audit committee. Thus, our second hypothesis focuses on the association of accounting expertise on the audit committee with the incidence of meeting or beating analysts' forecasts that are more susceptible to expectations management. We state our second hypothesis below:

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H2. The incidence of meeting or beating analysts' earnings forecasts through expectations management decreases with an accounting expert serving on the audit committee.

A question arising from our first two hypotheses is whether firms with accounting expertise on the audit committee are more or less likely to meet analysts' earnings expectations without resorting to manipulations of realized earnings and earnings expectations. On the one hand, meeting earnings targets depends primarily on managers' ability to deliver earnings. There is no *a priori* belief that the presence of an accounting expert on the audit committee should or should not influence a manager's ability to meet the earnings targets. On the other hand, the market rewards meeting or beating earnings expectations to the extent that it serves as a leading indicator of future firm performance. There is no compelling counter-argument that audit committees with accounting expertise would be willing to forgo the benefit of meeting or beating earnings expectations, when meeting targets is accomplished without manipulation. We, therefore, expect that an audit committee with accounting expertise is related to the incidence of meeting or beating earnings expectations that is less susceptible to manipulation, but we make no directional prediction. We state our third hypothesis below:

H3. The incidence of meeting or beating analysts' earnings forecasts less susceptible to manipulation is different between firms with an accounting expert serving on the audit committee and firms without.

3. Sample and research design

3.1. Sample selection

The CFOs surveyed by Graham et al. (2005) indicate that CFOs are most concerned about meeting the level of earnings reported in the same quarter of the previous year, and the analysts' forecasts for that quarter. These responses strongly suggest that managers' obsession with meeting or beating earnings expectations are more pronounced in quarterly reports. As such, we focus our tests on the quarterly data.

Our initial sample consists of 18,564 firm-year observations covered by *RiskMetrics* that hold annual shareholders' meetings for fiscal years 1997 through 2008. We gather sizes of board of directors and audit committees, the fraction of independent directors, other directorships held by directors, and the stock ownership of CEOs and directors from *RiskMetrics*. We gather work experience and educational background of directors from firms' annual proxy statements for identification of accounting expertise of the directors serving on the audit committee. We delete 383 observations for firms that we are unable to locate their proxy statements.

We obtain quarterly analysts' forecasts and actual earnings from *I/B/E/S* detail files, and quarterly financial information from *Compustat*. This results in 30,415 firm-quarter observations.

Following Bartov et al. (2002), Brown and Pinello (2007), and Bartov and Cohen (2009), we require a firm-quarter observation to satisfy the following three criteria: (1) at least two individual earnings forecasts (not necessarily by the same analyst) are made for the quarter at least 20 trading days apart[6]; (2) the release date of the first forecast is at least one day after the previous quarter's earnings announcement; and (3) the release date of the last forecast precedes the current quarter's earnings announcement date by at least three days. These criteria result in a loss of 6357 firm-quarter observations.

We collect quarterly institutional ownership data from *CDA/Spectrum*. We require firms to have *Compustat* and *CRSP* data available to estimate the likelihood of a firm selecting an accounting expert to serve on the audit committee. Missing values on the determinants of an accounting expert results in a loss of 2664 observations. Finally, we trim the top 1% of the values on stock ownership of CEOs, directors, and institutional investors, and top and bottom 1% of the values on other determinants of accounting experts to mitigate the undue influence of extreme observations. Our final sample consists of 19,752 firm-quarter observations. Table 1 reports our sample screening process.

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[6] If two analysts issue earnings forecasts on the same day, we use the average of the earnings forecasts.

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Table 1
Sample selection and screening procedures.

	Observations
Initial sample from RiskMetrics from fiscal years 1997–2008	18,564
Less missing proxst statements	383
Total firm-years available	18,181
Total firm-quarters listed on I/B/E/S and COMPUSTAT from the firm-years above	30,415
Less: Analysts' forecasts that do not meet the three selection criteria	6357
Less firm-quarters:	
Missing CRSP data and determinants of accounting experts	2664
Truncating top 1% of the stock ownership of CEOs, Directors, and Institutional Investors	439
Truncating top and bottom 1% of other determinants of accounting experts	1203
Total firm-quarters in the final sample	19,752

3.2. Measures of expectations management and nonnegative earnings urprises

Following Bartov et al. (2002), we measure expectations management as the optimistic–pessimistic path of analysts' forecasts during the quarter. For the incidence of expectations management, we set a dichotomous variable (*EXM*) to one if the first earnings forecast exceeds the actual earnings per share and the last forecast is equal to or less than the actual earnings per share for the quarter, and zero otherwise. Following Brown and Pinello (2007), we measure the magnitude of expectations management (*WLKDN*) by subtracting the last forecast from the first forecast, scaled by total assets at the beginning of the quarter and multiplied by 1000.

We measure nonnegative earnings surprises as a dichotomous variable (*MBE*) coded as one if actual earnings per share is equal to or greater than the last forecast for the quarter.[7] Nonnegative earnings surprises susceptible to expectations management indicate that the firm would have missed the earnings expectations had the firm not engaged in expectations management. We, therefore, undo the expectations management by setting a dichotomous variable (*EXMMBE*) to one if actual earnings per share is less than analysts' first forecast but equal to or greater than analysts' last forecast for the quarter, and zero otherwise.

Finally, to measure nonnegative earnings surprises that are less susceptible to manipulation, we need to undo earnings management and expectations management since managers are likely to use both tactics to meet the earnings expectations. Following Matsumoto (2002) and Koh et al. (2008), we first measure earnings management as discretionary accruals using the modified Jones model described in Dechow et al. (1995), controlling for performance as in Kothari et al. (2005) and potential differences in fourth quarter accruals:

$$TACC_{i,q}/TA_{i,q-1} = \alpha_0[1/TA_{i,q-1}] + \alpha_1[\Delta REV_{i,q}/TA_{i,q-1}] + \alpha_2[PRE_{i,q}/TA_{i,q-1}] + \alpha_3[IB_{i,q}/TA_{i,q-1}] + \alpha_4 QTR4_{i,q} + \varepsilon_{i,q} \tag{1}$$

where $TACC_{i,q}$ is the total accruals for quarter q, defined as earnings before extraordinary items and discontinued operations less cash flows from operations adjusted for extraordinary items and discontinued items (Compustat item XIDOQ)[8]; $TA_{i,q-1}$ is the total assets at the beginning of quarter q (Compustat item ATQ); $\Delta REV_{i,q}$ is the sales revenues for quarter q less sales revenues for quarter $q-1$ (Compustat item SALEQ); $PRE_{i,q}$ is the gross property, plant, and equipment for quarter q (Compustat item PPEGTQ)[9]; $IB_{i,q}$ is

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[7] To avoid misclassification of *EXM* and *MBE*, we use split-unadjusted data.

[8] Firms only report year-to-date cash flows from operations (Compustat item OANCFY) in their quarterly filings. We compute quarterly difference in this item to estimate quarterly cash flows from operations before adjusting for extraordinary items and discontinued items.

[9] Following Matsumoto (2002), for firms that report a balance for *PPE* in the fourth fiscal quarter but report missing data in the interim quarters, we compute the year-to-year change in *PPE* and add to each of the interim quarters a proportional amount of this change based on the proportion of annual depreciation incurred in that quarter.

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the income before extraordinary items for quarter q (Compustat item IBQ); and $QTR4_{i,q}$ is the one if the quarter is a firm's fourth fiscal quarter, otherwise zero.

We estimate the model for each firm-year using all firm-quarters in that year from the same two-digit SIC code. The sample includes only firm-years with eight or more firm-quarters of data in the two-digit SIC group. To mitigate the undue influence of extreme values, we delete the top and bottom half-percent of each variable (i.e., $1/TA_{i,q-1}$, $\Delta REV_{i,q}/TA_{i,q-1}$, $PPE_{i,q}/TA_{i,q-1}$, and $IB_{i,q}/TA_{i,q-1}$) except for $QTR4$.

Industry- and year-specific parameter estimates obtained from Eq. (1) are used to estimate firm-specific non-discretionary accruals:

$$NA_{i,q} = \hat{\alpha}_0[1/TA_{i,q-1}] + \hat{\alpha}_1[(\Delta REV_{i,q} - \Delta REC_{i,q-1})/TA_{i,q-1}] + \hat{\alpha}_2[PRE_{i,q}/TA_{i,q-1} + \hat{\alpha}_3[IB_{i,q}/TA_{i,q-1}] + \hat{\alpha}_4 QTR4_{i,q} \tag{2}$$

where $\Delta REC_{i,q}$ is accounts receivables (Compustat item RECTQ) for quarter q less accounts receivables for quarter $q - 1$. The difference between actual total accruals and non-discretionary accruals is our proxy for discretionary accruals. We then follow Koh et al. (2008) and rescale the asset-scaled discretionary accruals to a per share basis as below:

$$DAPS_{i,q} = (TACC_{i,q} - NA_{i,q} \times TA_{i,q-1})/SHARES_{i,q} \tag{3}$$

where $DAPS_{i,q}$ is the discretionary accruals per share for quarter q; and $SHARES_{i,q}$ is the common shares used to calculate earnings per share for quarter q (Compustat item CSHPRQ).

We undo earnings management by subtracting $DAPS$ from the actual earnings per share. If actual earnings per share is equal to or greater than analysts' last forecast but actual earnings per share minus $DAPS$ is less than the last forecast for the quarter, it is indicative of meeting or beating earnings expectations through earnings management.

Following our procedures to undo expectations management and earnings management, for firms reporting nonnegative earnings surprises, we set a dichotomous variable (*GENMBE*) to one if actual earnings per share is equal to or greater than analysts' first forecast (i.e., no need for expectations management) and actual earnings per share minus $DAPS$ is equal to or greater than analysts' last forecast (i.e., no need for earnings management), and zero otherwise.

3.3. Choice of audit committee accounting expertise

It is possible that firms that select an accounting expert to serve on the audit committee are the firms that are less likely to meet or beat earnings expectations through manipulation. The omission of this self-selection issue can result in a spurious association between accounting expertise and expectations. We, therefore, employ a conventional Heckman two-stage model to correct for the endogeneity issue of audit committee accounting expertise. Our first stage is to estimate the likelihood of a firm selecting an accounting expert to serve on its audit committee. We draw upon the extant literature and identify the underlying board and firm characteristics that determine the choice of audit committee expertise, as below.

3.3.1. Board characteristics

The availability of outside directors with accounting expertise is bound by the sizes of the board of directors and its audit committee, and the fraction of independent directors on the board (Yermack, 1996; Klein, 2002). Thus we consider the sizes of board and its audit committee and the fraction of independent directors as determinants of accounting expertise.

The demand for accounting expertise on the audit committee is likely to increase as more directors serve on multiple boards, in that multiple directorships can prevent directors from being effective monitors of management (Core et al., 1999; Fich and Shivdasani, 2006). On the other hand, Perry and Peyer (2005) find that multiple appointments signal director quality, consistent with Fama and Jensen's (1983) argument that firms who look for highly qualified directors might prefer directors who serve on other boards. The demand for accounting expertise, therefore, is likely reduced if the outside directors gain expertise from serving on other corporate boards. These two equally compelling

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arguments prevent us from offering a directional prediction for the multiple directorships on determining the level of audit committee expertise.

We also consider stock ownership of institutional shareholders and directors as determinants of accounting expertise. Shleifer and Vishny (1986) argue that institutional shareholders, by virtue of their large stockholdings, would have incentives to monitor management. Klein (2002) finds that large outside shareholders substitute for audit committee oversight, whereas Karamanou and Vafeas (2005) find that institutional ownership complements boards and audit committees in monitoring management. Due to the mixed evidence, we make no directional prediction for the association between institutional ownership and accounting expertise.

With respect to director stock ownership, Warfield et al. (1995) and Yermack (2004) document that outside directors holding the company's stocks serve as active monitors due to a better alignment of the interests of directors and other shareholders. In the presence of active directors, the benefit of including an accounting expert on the audit committee is likely diminished. We, therefore, expect a negative association between director ownership and accounting expertise.

Finally, we consider the CEO/chairman duality and CEO stock ownership as the determinants of accounting expertise. Beasley and Salterio (2001) find that a firm whose CEO serves as the board chairman is less likely to select an audit committee with financial expertise. Agency theory predicts that the demand for monitoring mechanisms decreases when managerial ownership in the firm increases (Weisbach, 1988). As such, we expect that the CEO/chairman duality and CEO stock ownership exhibit a negative association with accounting expertise.

3.3.2. Firm characteristics

The extant literature also examines other firm characteristics that would likely explain the selection of an accounting expert to serve on the audit committee. Firm size and growth opportunities are widely examined in explaining the demand for monitoring, but the evidence is mixed (e.g. Beasley and Salterio, 2001; Klein, 2002; Krishnan and Lee, 2009). We consider these two characteristics, but make no directional predictions.

Additionally, the prior literature shows that the demand for accounting expertise is reduced with losses (Klein, 2002), and increases with leverage (Beasley and Salterio, 2001; Klein, 2002), litigation risk (Krishnan and Lee, 2009), organizational complexity (Krishnan and Lee, 2009), and information asymmetry (Bushman et al., 2004). We measure a firm's organizational complexity as the number of business segments and the existence of foreign operations, and measure information asymmetry as the standard deviation of stock returns (return volatility). Finally, we include a dichotomous variable representing SOX as a determinant of accounting expertise.

Together, our first stage model is specified below[10]:

$$\begin{aligned}
\Pr(AEXP = 1) = F(&\beta_0 + \beta_1 BDSZ + \beta_2 ACSZ + \beta_3 BDIND + \beta_4 OTHBD + \beta_5 INSTOWN + \beta_6 DIROWN \\
&+ \beta_7 DUAL + \beta_8 CEOOWN + \beta_9 AT + \beta_{10} MTB + \beta_{11} LEV + \beta_{12} LOSS + \beta_{13} LITI \\
&+ \beta_{14} SEG + \beta_{15} FRGN + \beta_{16} VOL + \beta_{17} SOX + \varepsilon)
\end{aligned} \qquad (4)$$

where *AEXP* is the one if the firm selects an accounting expert to serve on the audit committee, otherwise zero; *BDSZ* is the natural logarithm of the number of members on the board of directors; *ACSZ* is the natural logarithm of the number of directors on the audit committee; *BDIND* is the percentage of directors on the board that are independent from the firm; *OTHBD* is the average other directorships held by outside directors; *INSTOWN* the percentage of the firm's aggregate common stock owned by institutional investors; *DIROWN* is the percentage of the firm's aggregate common stock owned by outside directors; *DUAL* is set to one if the CEO serves as the chairman of the board, otherwise zero; *CEOOWN* is the percentage of the firm's common stock held by the CEO; *AT* is the natural logarithm of the firm's total assets at the beginning of the quarter; *MTB* is the firm's market-to-book ratio at the beginning of the quarter; *LEV* is the firm's short-term and long-term debt divided by book value of common shareholders' equity, measured at the beginning of the quarter; *LOSS* is set to one if the firm reported a loss in the prior quarter, otherwise zero; *LITI* is set to one if the firm operates in

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[10] For ease of exposition, we suppress firm and time subscripts.

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biotechnology (SIC 2833-2836 and 8731-8734), computers (SIC 3570-3577 and 7370-7374), electronics (SIC 3600-3674), or retail (SIC 5200-5961) industries, otherwise zero; *SEG* is the natural logarithm of the firm's number of business segments; *FRGN* is an indicator variable set to one if the firm has foreign operations, otherwise zero; *VOL* is the standard deviation of daily stock returns over the past quarter; and *SOX* is set to one if firm's fiscal quarter ends after July 30, 2002 (the date the SOX was signed into law), otherwise zero.

In the second stage, we include the inverse Mills ratio from the first stage estimation as an additional control to correct for the endogeneity. To test our first set of hypotheses, we estimate a logistic regression model for testing the incidence, and an OLS regression model for testing the magnitude of expectations management, as below:

$$
\Pr(EXM = 1|MBE = 1) = F(\gamma_0 + \gamma_1 AEXP + \gamma_2 MVE + \gamma_3 MTB + \gamma_4 FE + \gamma_5 LOSS + \gamma_6 DECERN \\
+ \gamma_7 NOV + \gamma_8 BIG4 + \gamma_9 FD + \gamma_{10} SOX + \gamma_{11} IMR + \varepsilon) \tag{5}
$$

$$
(WLKDN = 1|MBE = 1) = \lambda_0 + \lambda_1 AEXP + \lambda_2 MVE + \lambda_3 MTB + \lambda_4 FE + \lambda_5 LOSS + \lambda_6 DECERN \\
+ \lambda_7 NOV + \lambda_8 BIG4 + \lambda_9 FD + \lambda_{10} SOX + \lambda_{11} IMR + \xi \tag{6}
$$

where *EXM* is set to one if the analysts' first forecast for the current quarter after previous quarter's earnings announcement is greater than actual earnings per share, and the last forecast before current quarter's earnings announcement is less than actual earnings per share for the current quarter, otherwise zero; *WLKDN* is the analysts' first forecast minus last forecast for the quarter, scaled by total assets at the beginning of the quarter and multiplied by 1000; *MBE* is set to one if actual earnings per share is equal to or greater than analysts' last forecast for the quarter, otherwise zero; *MVE* is the natural logarithm of market value of equity at the beginning of the quarter; *FE* is the absolute value of forecast error, measured by analysts' first forecast minus actual earnings per share for the quarter, scaled by the stock price at the beginning of the quarter; *DECERN* is set to one if the firm reports a decrease in income before extraordinary items from the same quarter last year, otherwise zero; *NOA* is the net operating assets, measured as shareholders' equity less cash and marketable securities and plus total debt, scaled by sales for the quarter; *BIG4* is set to one if the firm is audited by a Big 4 auditor, otherwise zero; *FD* is set to one if firm's fiscal quarter ends after October 23, 2000 (the date Reg FD took effect), otherwise zero; and *IMR* is the inverse Mills ratio, measured as $\varphi(\beta'Z)/\Phi(\beta'Z))$ for firms choosing an accounting expert serving on the audit committee and $-\varphi(\beta'Z)/(1 - \Phi(\beta'Z))$ for firms not choosing an accounting expert serving on the audit committee, where: $\varphi(\cdot)$ represents the probability density function (pdf) of a standard normal distribution; $\Phi(\cdot)$ represents the cumulative density function (cdf) of a standard normal distribution; $\beta'Z$ is the prediction from the probit model in Eq. (4).

Other variables are defined before. As in Brown and Pinello (2007), we condition our tests of the incidence and magnitude of expectations management on the firm-quarters with nonnegative earnings surprises. Because the fourth quarter is subject to more rigorous scrutiny than the interim quarters (e.g. Manry et al., 2003; Brown and Pinello, 2007), we test our hypotheses for the interim quarters and the fourth quarter separately.

We control for the market value of equity (*MVE*), market-to-book ratio (*MTB*), the absolute value of forecast error (*FE*), and loss firms (*LOSS*) that may be related to managers' incentives to meet or beat analysts' forecasts. We also control for negative changes in earnings from the same quarter last year (*DECERN*), since Graham et al. (2005) document that this too is an important performance benchmark. We include net operating assets (*NOA*) and audit quality (proxied by *BIG4*) to control for the constraints of earnings management (Barton and Simko, 2002), since the constraints of earnings management would likely influence the employment of expectations management. Finally, we include two dichotomous variables to control for the effects of Reg FD and SOX, as the major regulatory changes during our sample period would likely influence a firm's disclosure practices and corporate governance structure.

To test our second and third hypotheses, we estimate the following logistic regression model:

$$
\Pr(EXMMBE = 1 \text{ or } GENMBE = 1) = F(\delta_0 + \delta_1 AEXP + \delta_2 MVE + \delta_3 MTB + \delta_4 FE + \delta_5 LOSS + \delta_6 DECERN \\
+ \delta_7 NOV + \delta_8 BIG4 + \delta_9 FD + \delta_{10} SOX + \delta_{11} IMR + \varepsilon) \tag{7}
$$

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where *EXMMBE* is set to one if actual earnings per share is less than analysts' first forecast but equal to or greater than analysts' last forecast for the quarter, otherwise zero; and *GENMBE* is set to one if actual earnings per share is equal to or greater than analysts' first forecast and actual earnings per share minus discretionary accruals per share (*DAPS*) from Eq. (3) is equal to or greater than analysts' last forecast, otherwise zero.

Other variables are defined before. We also test our second and third hypotheses for the interim quarters and the fourth quarter separately.

4. Descriptive statistics and regression results

4.1. Descriptive statistics and correlation matrix

Panel A of Table 2 presents the descriptive statistics for the determinants of accounting expertise. Of the 19,752 observations, there are 9084 observations (46%) with an accounting expert serving on the audit committee. Across the board and firm characteristics, we find the determinants that we identify exhibit significant differences across firms with an accounting expert and firms without, except for *LOSS* and *LITI*. This suggests that these characteristics are likely to explain the firm's choice of including an accounting expert on the audit committee.

Panel B of Table 2 presents the frequency of expectations management and meeting or beating earnings expectations, and other controls across firms with and without an accounting expert serving on the audit committee. The univariate tests show that firms with an accounting expert on the audit committee exhibit a lower incidence and a smaller magnitude of expectations management than firms without an accounting expert. Also, the incidence of meeting or beating earnings expectations irrespective of the manipulation (*MBE*) is lower for firms with an accounting expert. Between meeting or beating earnings expectations through expectations management (*EXMMBE*) and meeting or beating earnings expectations that is less suspected of manipulation (*GENMBE*), we find firms with an accounting expert on the audit committee exhibit a lower incidence of *EXMMBE*, but a higher incidence of *GENMBE* than firms without an accounting expert. These results together provide evidence supporting our hypotheses. Additionally, we find significant differences in market value of equity, forecast errors, net operating assets, and hiring of a Big 4 auditor across firms with and without an accounting expert on the audit committee, thus warranting the inclusion of these controls in our tests.

Table 3 reports the correlation matrix for our sample. Panel A presents the correlations among the determinants of accounting expertise. In general, we find the board and firm characteristics that explain the selection of an accounting expert to serve on the audit committee are significantly correlated, but not in the same direction. This suggests that a firm likely trades off the supply and demand factors when considering the desired level of audit committee expertise. Panel B of Table 3 presents the correlations between the dependent variables (*EXM*, *WLKDN*, and *MBE*) and other controls. In general, we find that *EXM*, *WLKDN*, and *MBE* are significantly correlated with the control variables. The significant correlations, combined with the results of the univariate tests in Table 2, justify the inclusion of these controls.

4.2. Results for the choice of an accounting expert

Table 4 presents the results of our first stage estimation that regresses the choice variable (*AEXP*) on the determinants in Eq. (4). With regard to the board structure, we find that the audit committee size and the fraction of independent directors on the board are positively related to the appointment of an accounting expert, suggesting the availability of independent directors to serve on the audit committee is a binding constraint.

With respect to other board characteristics, we find that outside directors serving on multiple corporate boards reduce the need for an accounting expert. Institutional ownership and directors' stock ownership also significantly explain the choice of an accounting expert. Finally, firms whose CEO also serves as the board chairman and owns a higher fraction of company's shares are less likely to have an accounting expert on the audit committee.

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Table 2
Descriptive statistics of firms characteristics partitioned by accounting expertise on audit committees.

Variable	Accounting expert on committee				No accounting expert on committee				t-Test for difference in mean	Wilcoxon test for difference in median
	N	Mean	Median	Std. dev.	N	Mean	Median	Std. dev.		
Panel A: Determinants of accounting expert										
BDSZ	9084	2.189	2.197	0.272	10,668	2.208	2.197	0.309	−0.019***	0.000
ACSZ	9084	1.322	1.386	0.274	10,668	1.291	1.386	0.310	0.030***	0.000
BDIND	9084	0.704	0.727	0.157	10,668	0.646	0.667	0.180	0.058***	0.061***
OTHBD	9084	0.804	0.714	0.607	10,668	0.977	0.833	0.738	−0.173***	−0.119***
INSTOWN	9084	0.556	0.648	0.343	10,668	0.466	0.550	0.314	0.090***	0.098***
DIROWN	9084	2.714	0.717	5.514	10,668	3.108	0.694	6.394	−0.394***	0.023*
DUAL	9084	0.607	1.000	0.488	10,668	0.686	1.000	0.464	−0.078***	n.a.
CEOOWN	9084	2.736	1.153	4.777	10,668	3.343	1.162	5.841	−0.608***	−0.009
AT	9084	7.375	7.252	1.455	10,668	7.499	7.275	1.619	−0.124***	−0.023***
MTB	9084	2.695	2.253	33.277	10,668	4.118	2.504	84.290	−1.423***	−0.251***
LEV	9084	0.221	0.216	0.172	10,668	0.242	0.238	0.180	−0.022***	−0.022***
LOSS	9084	0.132	0.000	0.339	10,668	0.127	0.000	0.333	0.005	n.a.
LITI	9084	0.263	0.000	0.440	10,668	0.265	0.000	0.441	−0.002	n.a.
SEG	9084	−3.533	0.000	5.930	10,668	−6.338	−11.513	6.075	2.805***	11.513***
FRGN	9084	0.390	0.000	0.488	10,668	0.265	0.000	0.442	0.124***	n.a.
VOL	9084	0.027	0.024	0.013	10,668	0.027	0.024	0.014	−0.001***	0.000*
Panel B: Frequency of expectations management, meeting or beating earnings expectations, and other controls										
EXM	9084	0.528	1.000	0.499	10,668	0.556	1.000	0.497	−0.028***	n.a.
WLKDN	9084	0.026	0.001	0.116	10,668	0.032	0.001	0.123	−0.006***	0.000
MBE	9084	0.753	1.000	0.432	10,668	0.769	1.000	0.421	−0.017***	n.a.
EXMMBE	9084	0.190	0.000	0.392	10,668	0.223	0.000	0.416	−0.033***	n.a.
GENMBE	9084	0.339	0.000	0.473	10,668	0.308	0.000	0.462	0.032***	n.a.
MVE	9084	7.301	7.186	1.167	10,668	7.506	7.307	1.399	−0.205***	−0.121***
FE	9084	0.003	0.001	0.005	10,668	0.003	0.001	0.005	0.000***	0.000***
DECERN	9084	0.377	0.000	0.485	10,668	0.371	0.000	0.483	0.006	n.a.
NOA	9084	3.963	2.612	4.195	10,668	3.850	2.564	3.734	0.112**	0.048
BIG4	9084	0.968	1.000	0.176	10,668	0.981	1.000	0.135	−0.014***	n.a.

Notes: The variables are defined as below:

BDSZ = Natural logarithm of the number of members on the board of directors;

ACSZ = natural logarithm of the number of directors on the audit committee;

BDIND = percentage of directors on the board that are independent from the firm;

OTHBD = average other directorships held by outside directors;

INSTOWN = percentage of the firm's aggregate common stock owned by institutional investors;

DIROWN = percentage of the firm's aggregate common stock owned by outside directors;

DUAL = one if the CEO serves as the chairman of the board, otherwise zero;

CEOOWN = percentage of the firm's common stock held by the CEO;

AT = natural logarithm of the firm's total assets at the beginning of the quarter;

MTB = the firm's market-to-book ratio at the beginning of the quarter;

LEV = the firm's short-term and long-term debt divided by book value of common shareholders' equity, measured at the beginning of the quarter;

LOSS = one if the firm reported a loss in the prior quarter, otherwise zero;

LITI = one if the firm operates in biotechnology (SIC 2833-2836 and 8731-8734), computers (SIC 3570-3577 and 7370-7374), electronics (SIC 3600-3674), or retail (SIC 5200-5961) industries, otherwise zero;

SEG = natural logarithm of the firm's number of business segments;

FRGN = one if the firm has foreign operations, otherwise zero;

VOL = standard deviation of daily stock returns over the past quarter;

EXM = one if the analysts' first forecast for the current quarter after previous quarter's earnings announcement is greater than actual earnings per share, and the last forecast before current quarter's earnings announcement is less than actual earnings per share for the current quarter, otherwise zero;

WLKDN = analysts' first forecast minus last forecast for the quarter, scaled by total assets at the beginning of the quarter and multiplied by 1000;

MBE = one if actual earnings per share is equal to or greater than analysts' last forecast for the quarter, otherwise zero;

EXMMBE = one if actual earnings per share is less than analysts' first forecast but equal to or greater than analysts' last forecast for the quarter, otherwise zero;

GENMBE = one if actual earnings per share is equal to or greater than analysts' first forecast and actual earnings per share minus discretionary accruals per share (*DAPS*) from Eq. (3) is equal to or greater than analysts' last forecast, otherwise zero;

MVE = natural logarithm of market value of equity at the beginning of the quarter;

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FE = absolute value of forecast error, measured by analysts' first forecast minus actual earnings per share for the quarter, scaled by the stock price at the beginning of the quarter;

DECERN = one if the firm reports a decrease in income before extraordinary items from the same quarter last year, otherwise zero;

NOA = net operating assets, measured as shareholders' equity less cash and marketable securities and plus total debt, scaled by sales for the quarter; and

BIG4 = one if the firm is audited by a Big 4 accounting firm, otherwise zero.

Other firm characteristics we identify also significantly explain the choice of an accounting expert. Large firms and firms reporting losses are less likely to select an accounting expert due to the mitigating needs. In contrast to our prediction, firms with higher leverage are negatively related to the selection of an accounting expert. A possible explanation for this can be creditors acting as a monitor in lieu of an accounting expert.

Additionally, firms with more business segments and higher stock return volatility are positively related to the selection of an accounting expert, suggesting that operation complexity and information asymmetry increase the demand for an accounting expert. Finally, the passage of SOX increases the need for an accounting expert due to increasing monitoring responsibility imposed on the audit committee in the post-SOX era.

4.3. Results for testing expectations management

Table 5 presents the results for testing the associations between accounting expertise on the audit committee and the incidence and magnitude of expectations management. We find that in the interim quarters, the coefficient on *AEXP* is significantly negative for testing *EXM* (coefficient of −1.026, *p*-value <0.01) and for testing *WLKDN* (coefficient of −0.035, *p*-value <0.01), supporting our H1a and H1b. In the fourth quarter, however, the coefficient on *AEXP* is insignificant. This suggests that the influence of the accounting expert in constraining expectations management is more pronounced in the interim quarters. While Brown and Pinello (2007) find a greater magnitude of downward revisions in analysts' forecasts, they also document a lower incidence of nonnegative earnings surprises in the fourth quarter. An explanation to articulate our evidence and Brown and Pinello's (2007) findings is that the audit committee with an accounting expert is likely to view the fourth quarter downward revisions driven more by guidance than by manipulation. As a result, the audit committee focuses on curbing expectations management in the interim quarters.

We also calculate the marginal effect of *AEXP* in our test of *EXM* to provide some insight into the economic significance of *AEXP* in constraining expectations management. For the interim quarters, the marginal effect of *AEXP* is −0.248, indicating that moving from no accounting expert to having an accounting expert on the audit committee decreases the probability of expectations management given a nonnegative earnings surprise by 0.248.

For other controls, our results are consistent with Brown and Pinello (2007). Specifically, *MVE* and *MTB* are negatively, whereas *LOSS* and *DECERN* are positively, related to expectations management. The effect of *FE* is, however, inconclusive. Finally, we find that coefficient on *IMR* is significant in the tests of the interim quarters, suggesting the validity of correcting for the endogenous choice of accounting expertise.

4.4. Results for testing nonnegative earnings surprises

Table 6 presents the logistic regression results for testing the association between accounting expertise on the audit committee and the incidence of meeting or beating analysts' earnings forecasts. Our benchmarking firms for testing meeting or beating analysts' earnings forecasts that are susceptible to expectations management are the mix of firms that rely solely on earnings management to meet earnings expectations and firms that miss earnings expectations.[11] The sample for this test consists of 13,390 firm-quarter observations.

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[11] Using different benchmarking firms, such as the mix of firms that miss the earnings expectations and firms that meet or beat earnings expectations irrespective of manipulation, does not alter our inferences.

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Table 3
Correlation matrix of firm characteristics.

	BDSZ	ACSZ	BDIND	OTHBD	INST OWN	DIR OWN	DUAL	CEO OWN	AT	MTB	LEV	LOSS	LITI	SEG	FRGN	VOL
Panel A: Determinants of accounting expert																
BDSZ		**0.515**	**0.122**	**0.191**	−0.084	0.032	0.037	−0.224	**0.591**	−0.008	**0.177**	−0.093	−0.278	−0.164	−0.132	−0.418
ACSZ	**0.515**		**0.324**	**0.204**	0.015	−0.080	0.086	−0.236	**0.447**	−0.005	**0.134**	−0.072	−0.248	−0.058	−0.055	−0.336
BDIND	**0.122**	**0.324**		**0.193**	**0.179**	−0.200	0.077	−0.284	**0.184**	−0.016	0.024	0.000	−0.110	**0.130**	**0.124**	−0.155
OTHBD	**0.191**	**0.204**	**0.193**		0.030	−0.097	0.087	−0.174	**0.325**	0.002	**0.089**	0.026	−0.004	−0.051	0.041	−0.110
INSTOWN	−0.084	0.015	**0.179**	0.030		−0.061	−0.023	−0.070	0.004	−0.007	−0.019	−0.030	−0.087	**0.187**	**0.159**	−0.037
DIROWN	0.032	−0.080	−0.200	−0.097	−0.061		−0.132	0.085	−0.141	0.040	−0.033	−0.025	−0.013	−0.035	−0.009	**0.046**
DUAL	0.037	0.086	0.077	0.087	−0.023	−0.132		0.166	**0.132**	0.002	**0.084**	−0.026	−0.066	−0.077	−0.064	−0.076
CEOOWN	−0.224	−0.236	−0.284	−0.174	−0.070	0.085	0.166		−0.240	0.011	−0.092	−0.021	0.065	−0.031	−0.050	**0.154**
AT	**0.591**	**0.447**	**0.184**	**0.325**	0.004	−0.141	0.132	−0.240		−0.011	**0.267**	−0.053	−0.271	−0.176	−0.146	−0.405
MTB	−0.008	−0.005	−0.016	0.002	−0.007	**0.040**	0.002	0.011	−0.011		−0.010	−0.012	0.006	−0.002	0.004	0.004
LEV	**0.177**	**0.134**	0.024	**0.089**	−0.019	−0.033	0.084	−0.092	**0.267**	−0.010		0.079	−0.260	−0.031	−0.083	−0.201
LOSS	−0.093	−0.072	0.000	0.026	−0.030	−0.025	−0.026	−0.021	−0.053	−0.012	0.079		0.089	0.068	0.077	**0.261**
LITI	−0.278	−0.248	−0.110	−0.004	−0.087	−0.013	−0.066	0.065	−0.271	0.006	−0.260	0.089		0.041	0.083	**0.400**
SEG	−0.164	−0.058	**0.130**	−0.051	**0.187**	−0.035	−0.077	−0.031	−0.176	−0.002	−0.031	0.068	0.041		**0.657**	0.043
FRGN	−0.132	−0.055	**0.124**	0.041	**0.159**	−0.009	−0.064	−0.050	−0.146	0.004	−0.083	0.077	0.083	**0.657**		**0.105**
VOL	−0.418	−0.336	−0.155	−0.110	−0.037	0.046	−0.076	**0.154**	−0.405	0.004	−0.201	**0.261**	**0.400**	0.043	**0.105**	

	EXM	WLKDN	MBE	MVE	MTB	FE	LOSS	DECERN	NOA	BIG4
Panel B: Expectations management, meeting or beating earnings expectations, and other controls										
EXM		**0.435**	0.058	−0.015	−0.012	**0.080**	0.089	**0.195**	−0.007	−0.014
WLKDN	**0.435**		0.032	−0.168	−0.007	**0.200**	0.132	0.168	−0.077	**−0.020**
MBE	0.058	0.032		0.045	0.004	−0.166	−0.112	−0.206	−0.071	0.005
MVE	−0.015	−0.168	0.045		0.012	−0.235	−0.132	−0.080	0.114	0.098
MTB	−0.012	−0.007	0.004	0.012		−0.007	−0.011	−0.011	−0.013	0.001
FE	0.080	0.200	−0.166	−0.235	**−0.007**		0.295	0.202	**0.013**	**−0.002**
LOSS	0.089	0.132	−0.112	−0.132	−0.011	**0.295**		0.357	0.036	0.004
DECERN	**0.195**	**0.168**	−0.206	−0.080	−0.011	**0.202**	**0.357**		0.039	0.012
NOA	−0.007	**−0.077**	−0.071	0.114	−0.013	0.013	0.036	**0.039**		0.002
BIG4	−0.014	**−0.020**	0.005	**0.098**	0.001	−0.002	0.004	0.012	0.002	

Notes: Pearson (Spearman) correlations appear below (above) the diagonal. Correlations in bold signify significance at the convention level. See Table 2 for variable definitions.

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Table 4
Probit regression of audit committee accounting expertise on the board and firm characteristics.

Variable	Sign	AEXP
Intercept	?	−0.839
		(7.83)***
BDSZ	+	0.017
		(0.37)
ACSZ	+	0.253
		(6.22)***
BDIND	+	0.587
		(9.02)***
OTHBD	?	−0.213
		(13.59)***
INSTOWN	?	0.127
		(4.30)***
DIROWN	−	−0.003
		(−1.94)**
DUAL	−	−0.077
		(−3.66)***
CEOOWN	−	−0.008
		(−4.04)***
AT	?	−0.021
		(−2.49)***
MTB	?	0.000
		(−0.77)
LEV	+	−0.130
		(−2.22)**
LOSS	−	0.084
		(2.84)***
LITI	+	0.029
		(1.17)
SEG	+	0.010
		(4.49)***
FRGN	+	−0.037
		(−1.35)
VOL	+	3.083
		(3.53)**
		0.08
SOX	?	0.953
		(38.70)***
N		19,752
Pseudo-R^2		0.2335

Notes: The regression model is:

$Pr(AEXP = 1) = F(\beta_0 + \beta_1 BDSZ + \beta_2 ACSZ + \beta_3 BDIND + \beta_4 OTHBD + \beta_5 INSTOWN + \beta_6 DIROWN + \beta_7 DUAL + \beta_8 CEOOWN + \beta_9 AT + \beta_{10} MTB + \beta_{11} LEV + \beta_{12} LOSS + \beta_{13} LITI + \beta_{14} SEG + \beta_{15} FRGN + \beta_{16} VOL + \beta_{17} SOX + \varepsilon).$

where:

AEXP = one if the firm selects an accounting expert to serve on the audit committee, otherwise zero;
BDSZ = natural logarithm of the number of members on the board of directors;
ACSZ = natural logarithm of the number of directors on the audit committee;
BDIND = percentage of directors on the board that are independent from the firm;
OTHBD = average other directorships held by outside directors;
INSTOWN = percentage of the firm's aggregate common stock owned by institutional investors;
DIROWN = percentage of the firm's aggregate common stock owned by outside directors;
DUAL = one if the CEO serves as the chairman of the board, otherwise zero;
CEOOWN = percentage of the firm's common stock held by the CEO;
AT = natural logarithm of the firm's total assets at the beginning of the quarter;
MTB = the firm's market-to-book ratio at the beginning of the quarter;
LEV = the firm's short-term and long-term debt divided by book value of common shareholders' equity, measured at the beginning of the quarter;
LOSS = one if the firm reported a loss in the prior quarter, otherwise zero;
LITI = one if the firm operates in biotechnology (SIC 2833-2836 and 8731-8734), computers (SIC 3570-3577 and 7370-7374), electronics (SIC 3600-3674), or retail (SIC 5200-5961) industries, otherwise zero;
SEG = natural logarithm of the firm's number of business segments;
FRGN = one if the firm has foreign operations, otherwise zero;

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VOL = standard deviation of daily stock returns over the past quarter; and
SOX = one if firm's fiscal quarter ends after July 30, 2002 (the date the SOX was signed into law), otherwise zero.
For ease of interpretation, we report the square root of the Wald χ^2 statistics in the parentheses, which is equivalent a *t*-statistic (see Maddala, 1992).
[*] Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.10 level.
[**] Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.05 level.
[***] Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.01 level.

We find that the coefficient on *AEXP* (−0.655) is significantly negative for testing *EXMMBE* in the interim quarters, supporting our H2. This suggests that the likelihood of meeting or beating analysts' forecasts through expectations management is significantly lower with accounting expertise of the audit committee, especially in the interim quarters. Also, the marginal effect of *AEXP* (−0.137) for the interim quarters indicates that moving from no accounting expert to having an accounting expert on the audit committee decreases the probability of *EXMMBE* by 0.137.

Table 6 also tests the incidence of meeting or beating earnings expectations that is less suspected of manipulation in association with accounting expertise. Our benchmarking firms are those that fall short of earnings expectations, resulting in a sample for this test of 11,071 firm-quarter observations.[12] The result shows that the coefficient on *AEXP* (0.701) is significantly positive for testing *GENMBE* in the interim quarters, supporting our H3. This suggests that firms with an accounting expert on the audit committee report a higher incidence of meeting or beating earnings expectations, while being less susceptible to manipulation. The marginal effect of 0.166 indicates that the probability of meeting or beating earnings expectations, while being less susceptible to manipulation, increases by 0.166 when firms include an accounting expert from having no accounting expert on the audit committee. Our result for *GENMBE* suggests that to the extent that the market rewards firms for meeting or beating earnings targets as a leading indicator for firm future performance, accounting expertise on the audit committee does not forgo the benefit. Rather, accounting expertise on the audit committee strengthens the signal of meeting or beating expectations.

4.5. Additional tests

4.5.1. Small nonnegative earnings surprises

The extant literature suggests that firms reporting earnings that beat analysts' earnings expectations by large amounts are less likely to engage in expectations management than firms reporting earnings that just barely beat the earnings benchmark. To examine if our results are robust to firm-quarters with small nonnegative earnings surprises, we repeat our tests by limiting our sample to firm-quarters in which actual earnings per share exceed analysts' forecasts by one cent or less.[13] The resulting sub-sample consists of 8711 firm-quarter observations, including 3992 observations that report small nonnegative earnings surprises and 4719 observations that fall short of earnings expectations.

From untabulated results, our main findings on expectations management and the incidence of nonnegative earnings surprises substantially hold for the sub-sample, suggesting that our results are robust to small earnings surprises.

4.5.2. Accounting expertise and the decision to stop providing earnings guidance

In light of the adverse impact of managers' pursuing a short-term goal at the expense of long-term interest of shareholders, the financial press and academics urge managers to give up quarterly earnings guidance and focus on long-term strategic goals (Jensen and Fuller, 2002; Graham et al., 2006). While earnings guidance is not the only means that managers can employ to walk down analysts'

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[12] As with the test of *EXMMBE*, using different benchmarking firms does not alter our inferences.
[13] We also examine firm-quarters in which actual earnings per share exceed analysts' consensus forecasts by two cents or less, and the results are similar.

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Table 5
Regressions of the incidence and magnitude of expectations management on accounting expertise on the audit committee and other controls.

Variable	Sign	EXM					WLKDN	
		Interim quarters		Fourth quarter				
		Coeff.	Marginal effect	Coeff.	Marginal effect		Interim quarters	Fourth quarter
Intercept	?	0.816		0.438			0.139	0.149
		(3.97)***		(1.14)			(11.66)***	(5.26)***
AEXP	−	−1.026	−0.248	−0.135	−0.034		−0.035	−0.020
		(−3.52)***		(−0.25)			(−2.43)**	(−0.73)
MVE	?	−0.036	−0.009	0.017	0.004		−0.013	−0.011
		(−2.22)**		(0.55)			(−16.00)***	(−7.53)***
MTB	?	−0.001	0.000	−0.005	−0.001		−0.000	−0.000
		(−2.42)**		(−1.41)			(−0.59)	(−0.11)
FE	−	−53.337	−13.113	−22.690	−5.563		1.212	2.684
		(−9.68)***		(−2.52)***			(2.59)***	(2.91)***
LOSS	?	0.235	0.057	0.286	0.069		0.020	0.009
		(3.12)***		(2.44)**			(4.09)***	(1.33)
DECERN	?	0.932	0.219	0.772	0.183		0.037	0.030
		(19.95)***		(9.25)***			(15.14)***	(6.39)***
NOA	?	−0.006	−0.002	0.008	0.002		−0.002	−0.001
		(−1.25)		(0.88)			(−9.40)***	(−4.27)***
BIG4	?	−0.168	−0.041	−0.499	−0.116		−0.011	−0.040
		(−1.32)		(−2.09)**			(−1.30)	(−1.93)*
FD	?	0.202	0.050	−0.086	−0.021		−0.001	−0.009
		(3.56)***		(−0.86)			(−0.30)	(−1.72)*
SOX	?	0.216	0.053	0.150	0.037		0.005	0.009
		(1.72)*		(0.63)			(0.92)	(0.77)
IMR	?	0.561		0.107			0.017	0.010
		(3.18)***		(0.32)			(1.98)**	(0.56)
No. of obs.								
EXM = 1		6475		1935			6475	1935
EXM = 0		5145		1488			5145	1488
Total		11,620		3423			11,620	3423
R^2		0.040		0.030			0.068	0.068

Notes: The regression models are:

$Pr(EXM = 1|MBE = 1) = F(\gamma_0 + \gamma_1 AEXP + \gamma_2 MVE + \gamma_3 MTB + \gamma_4 FE + \gamma_5 LOSS + \gamma_6 DECERN + \gamma_7 NOV + \gamma_8 BIG4 + \gamma_9 FD + \gamma_{10} SOX + \gamma_{11} IMR + \varepsilon).$

$(WLKDN = 1|MBE = 1) = \lambda_0 + \lambda_1 AEXP + \lambda_2 MVE + \lambda_3 MTB + \lambda_4 FE + \lambda_5 LOSS + \lambda_6 DECERN + \lambda_7 NOA + \lambda_8 BIG4 + \lambda_9 FD + \lambda_{10} SOX + \lambda_{11} IMR + \xi.$

where:

EXM = one if the analysts' first forecast for the current quarter after previous quarter's earnings announcement is greater than actual earnings per share, and the last forecast before current quarter's earnings announcement is less than actual earnings per share for the current quarter, otherwise zero;

WLKDN = analysts' first forecast minus last forecast for the quarter, scaled by total assets at the beginning of the quarter and multiplied by 1000;

MBE = one if actual earnings per share is equal to or greater than analysts' last forecast for the quarter, otherwise zero;

AEXP = one if the firm selects an accounting expert to serve on the audit committee, otherwise zero;

MVE = natural logarithm of market value of equity at the beginning of the quarter;

MTB = the firm's market-to-book ratio at the beginning of the quarter;

FE = absolute value of forecast error, measured by analysts' first forecast minus actual earnings per share for the quarter, scaled by the stock price at the beginning of the quarter;

LOSS = one if the firm reported a loss in the prior quarter, otherwise zero;

DECERN = one if the firm reports a decrease in income before extraordinary items from the same quarter last year, otherwise zero;

NOA = net operating assets, measured as shareholders' equity less cash and marketable securities and plus total debt, scaled by sales for the quarter;

BIG4 = one if the firm is audited by a Big 4 auditor, otherwise zero;

FD = one if firm's fiscal quarter ends after October 23, 2000 (the date Reg FD took effect), otherwise zero;

SOX = one if firm's fiscal quarter ends after July 30, 2002 (the date the SOX was signed into law), otherwise zero; and

IMR = inverse Mills ratio, measured as $\varphi(\beta'Z)/\Phi(\beta'Z)$ for firms choosing an accounting expert serving on the audit committee and $-\varphi(\beta'Z)/(1 - \Phi(\beta'Z))$ for firms not choosing an accounting expert serving on the audit committee, where: $\varphi(\cdot)$ represents the probability density function (pdf) of a standard normal distribution; $\Phi(\cdot)$ represents the cumulative density function (cdf) of a standard normal distribution; $(\beta'Z$ is the prediction from the probit model in Eq. (4).

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Reported in the parenthesis is the square root of the Wald χ^2, which is equivalent to a *t*-statistic (see Maddala, 1992). R^2 for testing *EXM* denotes pseudo-R^2, and R^2 for testing *WLKDN* denotes adjusted R^2.

* Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.10 level.

** Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.05 level.

*** Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.01 level.

earnings forecasts, the flexibility of engaging in expectations management is notwithstanding limited by stopping earnings guidance.

Chen et al. (2011) investigate the characteristics of firms that stop providing earnings guidance, market reactions to the announcement of stopping guidance, and the subsequent changes in the information environment reflected in analysts' forecasts. They show that firms who stop providing quarterly earnings guidance are those with poorer prior performance, more uncertain operating environments, and fewer informed investors. The market reacts to the announcement negatively and experiences a deterioration in the information environment with respect to the stoppers.

We, therefore, examine whether accounting expertise of the audit committee is related to firms' decision to stop quarterly earnings guidance. Following Chen et al. (2011), we use the *CIG* database to identify a firm as stopping quarterly earnings guidance if the firm provides at least three quarters of guidance in the past eight quarters but no guidance in the next eight quarters. The issuance date of the last available guidance during this time frame is designated as the stoppage date. This process results in 211 firms identified as stopping earnings guidance in our sample period.

We then construct a control group comprised of firms who continue to provide quarterly earnings guidance. We identify all firms available on the *CIG* database who provide an earnings forecast within ±90 days of each stopper firm's last issuance date of earnings guidance and who also issue at least a quarterly forecast in the previous and subsequent quarters (quarter $Q - 1$ and $Q + 1$). This process results in 3555 control firms.

Adapted from Chen et al. (2011), our model specification of testing the association between accounting expertise and stopping earnings guidance is below:

$$\Pr(STOP = 1) = F(\eta_0 + \eta_1 AEXP + \eta_2 RET + \eta_3 PMBE + \eta_4 STDRET + \eta_5 FOLLOW + \eta_6 INSTOWN$$
$$+ \eta_7 MVE + \eta_8 MTB + \eta_9 FD + \eta_{10} SOX + \eta_{11} IMR + \varepsilon) \qquad (8)$$

We control for firm performance, information uncertainty, and informed investors, factors that Chen et al. (2011) find significantly explain the firm's decision to stop guidance. We proxy for firm performance by stock price performance (*RET*) and the percentage of quarters in the past eight quarters in which a firm's earnings meet or beat analysts' forecasts (*PMBE*). Information uncertainty is measured as the standard deviation of daily stock returns in the past quarter (*STDRET*). We proxy for informed investors by analyst following (*FOLLOW*) and institutional ownership (*INSTOWN*). Similar to Chen et al. (2011), we also control for market value of equity (*MVE*), market-to-book ratio (*MTB*), and Reg FD (*FD*). Finally, we control for SOX and include the inverse Mills ratio (*IMR*) to control for the endogenous choice of an accounting expert.

Table 7 presents the initial results of the test. The coefficient on *AEXP* is −1.717, significant at the 5% level, suggesting that firms with an accounting expert on the audit committee are less likely to stop quarterly earnings guidance. The marginal effect of −0.086 indicates that the probability of stopping guidance decreases by 0.086 from *AEXP* = 0 to *AEXP* = 1. Consistent with Chen et al. (2011), we find firm performance, information uncertainty, and informed investors affect firms' decision to stop earnings guidance.

Chen et al.'s (2011) findings imply that firms who stop quarterly earnings guidance are those who perform poorly and thus withhold unfavorable information about future performance. While it is consistent with the disclosure theories (e.g. Dye, 1985; Verrecchia, 1983), it does not align with the intended goal of having managers focus on the long-term interest of shareholders by stopping the

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Table 6
Regressions of the incidence of meeting or beating earnings expectations on accounting expertise on the audit committee and other controls.

Variable	Sign	EXMMBE				Sign	GENMBE			
		Interim quarters		Fourth quarter			Interim quarters		Fourth quarter	
		Coeff.	Marginal effect	Coeff.	Marginal effect		Coeff.	Marginal effect	Coeff.	Marginal effect
Intercept	?	−0.480		−0.203		?	0.892		1.264	
		(−2.08)**		(−0.55)			(3.58)***		(2.69)***	
AEXP	−	−0.655	−0.137	−0.719	−0.138	?	0.701	0.166	−0.743	−0.183
		(−1.97)**		(−1.20)			(1.98)**		(−1.09)	
MVE	?	0.002	0.000	−0.024	−0.005	?	0.030	0.007	0.012	0.003
		(0.12)		(−0.72)			(1.47)		(0.32)	
MTB	?	0.002	0.000	−0.003	−0.001	?	0.000	0.000	−0.000	0.000
		(0.92)		(−1.08)			(0.03)		(−0.46)	
FE	−	−30.172	−6.439	−20.780	−4.055	?	−57.888	−13.879	−101.391	−25.335
		(−5.57)***		(−2.58)***			(−9.71)***		(−8.36)***	
LOSS	?	0.089	0.019	0.150	0.030	?	−0.061	−0.015	0.000	0.000
		(1.31)		(1.42)			(−0.76)		(0.00)	
DECERN	?	0.634	0.137	0.474	0.094	?	−1.252	−0.299	−1.016	−0.248
		(13.50)***		(5.58)***			(−24.10)***		(−10.10)***	
NOA	?	−0.055	−0.012	−0.018	−0.003	?	−0.125	−0.030	−0.203	−0.051
		(−9.12)***		(−1.84)*			(−15.00)***		(−10.90)***	
BIG4	?	−0.089	−0.019	−0.496	−0.107	?	0.078	0.019	0.078	0.020
		(−0.62)		(−2.07)**			(0.51)		(0.27)	
FD	?	0.379	0.081	0.113	0.022	?	0.435	0.104	0.636	0.157
		(6.16)***		(1.00)			(5.82)***		(4.61)***	
SOX	?	−0.347	−0.072	0.103	0.020	?	−0.734	−0.177	0.013	0.003
		(−2.41)**		(0.39)			(−4.75)***		(0.04)	
IMR	?	0.338		0.413		?	−0.361		0.377	
		(1.67)*		(1.14)			(−1.68)*		(0.91)	
No. of obs.										
EXMMBE = 1		3180		926						
EXMMBE = 0		6824		2460						
GENMBE = 1							5119		1243	
GENMBE = 0							3503		1206	
Total		10,004		3386			8622		2449	
Pseudo-R^2		0.036		0.015			0.118		0.149	

Notes: The regression model is:

$Pr(EXMMBE = 1 \text{ or } GENMBE = 1) = F(\delta_0 + \delta_1 AEXP + \delta_2 MVE + \delta_3 MTB + \delta_4 FE + \delta_5 LOSS + \delta_6 DECERN + \delta_7 NOV + \delta_8 BIG4 + \delta_9 FD + \delta_{10} SOX + \delta_{11} IMR + \varepsilon).$

where:

EXMMBE = one if actual earnings per share is less than analysts' first forecast but equal to or greater than analysts' last forecast for the quarter, otherwise zero; and

GENMBE = one if actual earnings per share is equal to or greater than analysts' first forecast and actual earnings per share minus discretionary accruals per share (*DAPS*) from Eq. (3) is equal to or greater than analysts' last forecast, otherwise zero.

See Table 5 for other variable definitions. Reported in the parenthesis is the square root of the Wald χ^2, which is equivalent to a *t*-statistic (see Maddala, 1992).

* Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.10 level.

** Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.05 level.

*** Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.01 level.

short-term earnings guidance. Our initial evidence suggests that the audit committee with accounting expertise is less likely to encourage poor-performing firms to stop guidance. Rather, it is consistent with the implications of Karamanou and Vafeas (2005) and Liu and Zhuang (2011) that the audit committee with accounting expertise is positively related to the issuance of management forecasts with higher quality, such that the transparency of firm disclosure is enhanced. Future research can further

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Table 7

Regression of firms stopping garnings guidance on audit committee accounting expertise and other controls.

Variable	Sign	AEXP	
		Coeff.	Marginal effect
Intercept	?	−0.035	
		(−0.05)	
AEXP	?	−1.717	−0.086
		(−2.52)**	
RET	+	−1.312	−0.056
		(−3.01)***	
PMBE	−	−2.156	−0.092
		(−5.65)***	
STDRET	+	7.681*	0.326
		(1.53)*	
FOLLOW	+	−0.003	0.000
		(−0.29)	
INSTOWN	+	0.269	0.011
		(1.26)	
MVE	?	−0.129	−0.005
		(−1.93)*	
MTB	?	0.000	0.000
		(0.39)	
FD	?	−0.246	−0.011
		(−1.04)	
SOX	?	0.936	0.040
		(2.93)***	
IMR	?	0.867	
		(2.06)**	
N		3766	
Pseudo-R^2		0.050	

Notes: The regression model is:

$Pr(STOP = 1) = F(\eta_0 + \eta_1 AEXP + \eta_2 RET + \eta_3 PMBE + \eta_4 STDRET + \eta_5 FOLLOW + \eta_6 INSTOWN + \eta_7 MVE + \eta_8 MTB + \eta_9 FD + \eta_{10} SOX + \eta_{11} IMR + \varepsilon)$.
where:

STOP = one if the firm stops providing quarterly earnings guidance, otherwise zero;

AEXP = one if the firm selects an accounting expert to serve on the audit committee, otherwise zero;

RET = market-adjusted buy-and-hold returns compounded over the quarter in which the firm stops providing quarterly earnings guidance, from the day after previous quarter's earnings announcement to the current quarter earnings announcement date;

PMBE = percentage of quarters in the past eight quarters that a firm's earnings meet or beat analysts' forecasts;

STDRET = standard deviation of daily stock returns over the quarter in which the firm stops providing quarterly earnings guidance;

FOLLOW = number of analysts following the firm;

INSTOWN = percentage of the firm's aggregate common stock owned by institutional investors;

MVE = natural logarithm of market value of equity at the beginning of the quarter in which the firm stops providing quarterly earnings guidance;

MTB = the firm's market-to-book ratio at the beginning of the quarter in which the firm stops providing quarterly earnings guidance;

FD = one if firm's fiscal quarter ends after October 23, 2000 (the date Reg FD took effect), otherwise zero;

SOX = one if firm's fiscal quarter ends after July 30, 2002 (the date the SOX was signed into law), otherwise zero; and

IMR = inverse Mills ratio, measured as $\varphi(\beta'Z)/(\Phi(\beta'Z))$ for firms choosing an accounting expert serving on the audit committee and $-\varphi(\beta'Z)/(1 - \Phi(\beta'Z))$ for firms not choosing an accounting expert serving on the audit committee, where: $\varphi(\cdot)$ represents the probability density function (pdf) of a standard normal distribution; $\Phi(\cdot)$ represents the cumulative density function (cdf) of a standard normal distribution; $\beta'Z$ is the prediction from the probit model in Eq. (4).

Reported in the parenthesis is the square root of the Wald χ^2, which is equivalent to a *t*-statistic (see Maddala, 1992).

* Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.10 level.

** Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.05 level.

*** Signify one-tailed significance for directional predictions, and two-tailed significance for non-directional predictions at the 0.01 level.

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investigate the interaction among corporate governance, firms' pressure to meet earnings targets, and the decision to stop earnings guidance. Future research can also shed more light on whether firms with an accounting expert on the audit committee disclose more forward-looking information in place of quarterly earnings guidance.

5. Conclusion

In this study, we examine whether the presence of an accounting expert on the audit committee is related to expectations management and the incidence of nonnegative earnings surprises. Upon correcting for the inherent endogeneity of the choice of audit committee expertise, we find that managers are less likely to engage in expectations management when firms include an accounting expert on the audit committee. We also find that the incidence of nonnegative earnings surprises that are susceptible to expectations management is lower for firms with an accounting expert on the audit committee. On the other hand, the likelihood of nonnegative earnings surprises that are less susceptible to manipulations of realized earnings and earnings expectations is higher with an accounting expert on the audit committee, suggesting that firms with accounting expertise on the audit committee do not forgo the benefit of meeting the earnings benchmark. The association between accounting expertise and expectations management and the frequency of nonnegative earnings surprises is, however, more evident in interim quarters. Combined with Brown and Pinello's (2007) findings, we attribute this result to audit committees with an accounting expert viewing the fourth quarter downward revisions in analysts' forecasts as driven more by guidance than by manipulation. As such, audit committees would then focus on curtailing expectations management in the interim quarters, where the downward revisions in analysts' forecasts are more suspected of being driven by manipulation.

An additional test uncovers a negative association between accounting expertise and a firm's decision to stop quarterly earnings guidance. Future research can investigate the interaction among corporate governance, firms' pressure to meet earnings targets, and the decision to stop earnings guidance. Future research can also investigate whether firms who stop earnings guidance disclose more forward-looking information to enhance the transparency of disclosure when the firms include an accounting expert on the audit committee.

Finally, our findings suggest that an accounting expert on the audit committee would likely curb managers' perverse incentives to influence firms' disclosure practices and analysts' forecasting process. We, therefore, respond to Brown and Pinello (2007) by shedding light on how corporate governance influences the interaction between earnings management and expectations management.

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