Audit Committee Characteristics and Repeatedly Meeting-Beating Analyst Forecasts

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ABSTRACT

This paper examines the association between audit committee directors' tenure and number of other board memberships at firms that repeatedly meet or just beat analyst forecasts as compared to firms that repeatedly just miss such forecasts. I use data from the period 2005 to 2007 and find that the proportions of audit committee directors with (a) long tenure and (b) more than three other board memberships are positively associated with the likelihood of a firm repeatedly meeting or just beating analyst forecasts. These results suggest that audit committee director tenure and the degree of director "busyness" can affect an audit committee member's effectiveness in providing financial reporting oversight and provide empirical support for calls by governance advocates and others about limiting audit committee member tenure and busy-boarding.

JEL Classifications: G30, M41, M42

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I.   INTRODCUTION

In recent years, the Securities and Exchange Commission (SEC 1999a, 2003), legislators (U.S. Senate 2002a, 2002b; SOX, 2002), and others have stressed the importance of the audit committee in providing effective oversight of the financial reporting process. Spurred by such interest from legislators and regulators, many prior studies have examined the association between audit committee characteristics and a variety of financial reporting outcomes. As noted by Beasley et al. (2009) and Carcello et al. (2011), prior research related to audit committee characteristics has focused on audit committee composition and diligence. Further, studies examining audit committee composition have concentrated on two characteristics of audit committee directors: independence and financial expertise. While earlier research tended to focus on independence, in the aftermath of actions by the SEC (1999a, 2000) and the enactment of SOX (requiring all audit committee directors to be independent), later research has focused on issues related to the presence of financial experts on the audit committee (e.g., Yang and Krishnan, 2005; Krishnan and Visvanathan, 2008; Krishnan and Lee, 2009; Dhaliwal et al., 2010).

In an effort to identify what constitutes a "good" audit committee, DeFond and Francis (2005) and Carcello et al. (2011) call for additional research addressing specific characteristics of the audit committee beyond independence and expertise. Audit committee member tenure and the number of other directorships are two issues that have received increasing attention from good governance advocates and others in recent years.

DeZoort et al. (2002) call for an enhancement of the richness of audit committee composition measures, specifically suggesting that the "research could address whether …current audit committee tenure affects overall ACE [audit committee effectiveness]." A survey by Heidrick and Struggles (2007) finds that 21 percent of companies had a term-limit policy for directors and that this proportion had doubled since 2000. Shareholder activists have recently put forth proposals at many companies that there should be a limit on the number of years a director can serve.[1] Reflecting this trend, publications issued by the Big 4 accounting firms now discuss audit committee director tenure issues (PricewaterhouseCoopers, 2000; Deloitte, 2010). For example, Deloitte (2010) notes in its Audit Committee Brief that "[t]o be most effective, audit committees should periodically reassess the optimal mix of committee members, taking into account…the skills, experiences, diversity, time commitments, tenure, and rotation of its members." Such views echo those espoused by some academics earlier (Lapides et al., 2007).

During the Senate hearings related to the Enron failure, senators and others raised the possibility of limiting the number of boards an individual could serve on at any time (U.S. Senate, 2002b). Increasingly, companies are having formal policies that restrict the number of other directorships that can be held by their outside directors. For example, General Motors noted in its 2007 proxy statement that under its Corporate Governance Guideline No. 13, "non-management directors are encouraged to limit the number of other boards of U.S. public companies on which they serve, to no more than four.... Moreover, the Directors and Corporate Governance Committee and the Board annually review whether members of GM's Audit Committee serve on audit

committees of other companies, and whether that service compromises their ability to fulfill their duties on GM's Audit Committee."

Thus, there is now an increased focus on audit committee member characteristics beyond independence and financial expertise. Along these lines, Carcello et al. (2011) note that "for good audit committees, most of the focus is on audit committee financial expertise and independence" and suggest that there is a "need to develop better measures of board and audit committee characteristics." Yet, there is limited prior research on audit committee member tenure and "busyness."

Yang and Krishnan (2005) find that earnings management is lower when audit committee members have longer tenure and have multiple other board memberships; in contrast, Dhaliwal et al. (2010) show that accruals quality is positively related to lower tenure and fewer board memberships of the audit committee financial expert. In addition, Barua et al. (2010) find that the extent of investment in internal auditing is higher when audit committee members have shorter tenure. With respect to busy-boarding, Sharma and Iselin (2006) find that restatements are less likely when audit committee members have multiple board memberships, but Sharma et al. (2009) find that multiple directorships are negatively associated with audit committee meeting frequency. Thus, the results from prior studies are not consistent; in addition, data from four of the above five studies are from the pre-SOX period when there was also greater variation in audit committee member characteristics, such as independence and the presence of financial experts. Given the focus on audit committee director tenure and busyness, in this paper I examine the association between these two audit committee characteristics and the likelihood that a company will repeatedly meet or just beat earnings forecasts versus repeatedly missing earnings forecasts.

As noted by Carcello et al. (2011), many prior studies have examined the notion of earnings management or earnings quality by focusing on a variety of dependent variables, such as fraudulent financial reporting, restatements, and accruals quality. Fraud and restatement are relatively infrequent occurrences, while the accruals quality metrics are prone to problems with model specification (e.g., Krishnan and Yang, 2007; Ball, 2009). In this paper, I use another metric that has been used by prior researchers as a measure of earnings management, namely meeting or just beating analysts' forecasts. Importantly, the SEC's (1999d, 2009) statements and actions indicate that meeting-just beating analysts' forecasts is considered by the SEC to be a factor in evaluating the quality of financial reporting.[2]

While some studies suggest that the likelihood of meeting or just beating analyst earnings expectations has declined in the post-SOX period (Koh et al., 2008; Bartov and Cohen, 2008), firms still appear to engage in such activity and regulators are interested in such behavior. For instance, in August 2009, General Electric agreed to pay a $50 million penalty to settle charges stemming from an investigation by the SEC alleging that GE accounting executives approved improper application of accounting standards, with one specific occasion allowing GE to directly avoid missing analysts' expectations. The SEC (2009) specifically noted in its complaint that GE consistently met or exceeded financial analysts' consensus EPS expectations each quarter from 1995 through 2004.

In my analyses, I compare firms that repeatedly meet or just beat analyst's forecasts against firms that just failed to meet analyst's forecasts on multiple occasions during the period from 2005 to 2007. I find that audit committee director tenure and

busyness are positively associated with the likelihood of a firm repeatedly meeting or just beating analyst forecasts. These results are consistent with suggestions from governance advocates about the benefits related to restricting audit committee member tenure (e.g., Lapides et al., 2007; Deloitte, 2010) and service on multiple boards (NACD, 1996; CII, 1998; U.S. Senate, 2002b).

The next section discusses the background. This is followed by a development of hypotheses and then a description of method and data. After a discussion of results, the paper ends with a summary and conclusions.

II.   BACKGROUND

A.   Meet/Just Beat Strategy of Earnings Management

Analysts' forecasts serve as a proxy for the market's expectations and are one of three performance measures that managers seek to meet (Degeorge et al., 1999). There are at least two reasons as to why managers wish to meet this benchmark: an expected valuation premium and a reduced cost of capital.

The importance of the meet/just beat (MB) strategy of earnings management could be attributed, at least in part, to empirical evidence showing that investors reward firms with earnings that meet or beat analysts' estimates by assigning a valuation premium and penalize those that fall short of such estimates (Barth et al., 1999; Bartov et al., 2002; Kasznik and McNichols, 2002). Graham et al. (2005) provide additional survey-based evidence that is consistent with this notion of a MB premium. They report that more than eighty percent of survey respondents (CFOs) agree that meeting earnings benchmarks helps "maintain or increase the stock price" and "build credibility with capital markets." Furthermore, even in situations where investors are capable of discerning the effect of earnings management in order to achieve this expectation threshold, investors discount the MB premium assigned but the discount is economically minor and statistically insignificant (Bartov et al., 2002).

In addition, managers may want to consistently engage in the MB strategy due to a lower cost of capital associated with a decrease in information asymmetry. Brown et al. (2009) find that the decrease (increase) in information asymmetry is larger for MB (Miss) firms who have regularly met or beaten (missed) expectations over the prior eight quarters and that this average reduction in asymmetry is significant only when it is part of a repeated pattern. Chevis et al. (2007) find that the valuation premium awarded by the market to MB firms increases as the length of the period of continuous meet/beat activity increases. They also present evidence suggesting that repeat MB firms enjoy higher valuations of income and book value of equity than firms that only periodically meet/just beat or do not meet/just beat at all. Graham et al. (2005) report that seventy-eight percent of surveyed CFOs believe that missing a benchmark "creates uncertainty about the firm's future prospects."

III.   DEVELOPMENT OF HYPOTHESES

A.   Audit Committees Characteristics and Financial Reporting

The SEC (1999a) noted that "audit committees play a critical role in the financial

reporting system by overseeing and monitoring management's and the independent auditors' participation in the financial reporting process." Thus, the audit committee serves as an important monitoring mechanism in ensuring high quality financial reporting and can influence whether a firm will have the ability to engage in the MB strategy of earnings management.

In their detailed summaries of research related to audit committees, DeZoort et al. (2002), DeFond and Francis (2005), and Carcello et al. (2011) note that almost all research related to audit committee composition has focused on independence and financial expertise. While earlier research on audit committees focused on director independence, after the listing related changes mandated by the NYSE and NASDAQ in 1999 (SEC 1999b, 1999c) and the requirement in SOX that all audit committee members be independent, recent research has tended to focus on audit committee financial expertise. Generally, prior research finds audit committees that have financial experts, and are diligent, are associated with higher quality financial reporting and auditing using a variety of measures, such as fraudulent financial reporting (Beasley et al., 2010), accruals (Yang and Krishnan, 2005; Carcello et al., 2008), internal controls (Krishnan, 2005; Naiker and Sharma, 2009), and going-concern reporting (Carcello and Neal, 2000).

Audit committees can also influence management's ability to engage in earnings management through the extent of their support for the positions of the external auditor. Carcello and Neal (2003) and DeZoort et al. (2003) find that audit committees with financial experts are more likely to support the external auditor.

In this study, I focus on two issues related to audit committee composition that have started receiving attention from corporate governance advocates and others yet have received sparse attention in prior research: tenure on the audit committee and the number of other corporate boards simultaneously served on by audit committee directors.

B.   Audit Committee Member Tenure

During the Enron hearings, Charles Elson, Director of the Center for Corporate Governance noted that:

> "[T]here is concern about the length of directors' terms. Directors who are on a board for too long, are viewed as becoming effectively tired, not as sharp as they once were in reviewing the company and much more willing to accept management representations than not. That is why a number of folks have called for term limits for directors."
>
> (U.S. Senate, 2002b)

Directors with longer tenure are likely to be more closely affiliated with management and less likely to challenge management decisions (Boeker and Goodstein, 1993). Vafeas (2003) asserts that term limits for board members should be considered by regulators in light of evidence that long-tenured board members, as opposed to short-tenured members, are more closely affiliated with management as exhibited by long-tenured members' proclivity to approve higher compensation to the CEO.

While the above arguments relate to directors in general, it is likely that they are particularly applicable in the case of audit committee directors. The 21st Century Governance and Financial Reporting Principles (Lapides et al., 2007), endorsed by the Institute of Internal Auditors, recommends that "the board should consider limiting the number of years an individual can serve on the audit committee to ensure adequate rotation of its members." DeZoort et al. (2002) note the paucity of research related to director tenure and suggest that future research address whether audit committee member tenure affects overall audit committee effectiveness. While Yang and Krishnan (2005) find that earnings management is less likely when audit committee members had longer tenure, Dhaliwal et al. (2010) show that shorter tenure of the financial expert on the audit committee is associated with better quality of accruals in the post-SOX era.

The above discussion suggests the first hypothesis (stated in the null form):

H1: The likelihood of a company repeatedly engaging in the MB strategy of earnings management is not related to audit committee director tenure.

C.   Number of Other Directorships Held by Audit Committee Members

Fama (1980) and Fama and Jensen (1983) suggest that the number of other board memberships can be viewed as a signal of the market's assessment about a particular director. Under this reputation argument, directors establish reputations for being effective monitors and are rewarded with additional directorships. Thus, the higher the number of other board memberships, the greater the expertise of a director and the better the quality of monitoring provided by a director.

The counterpoint is that too many board memberships spread a director thin, and thus reduces the quantity and/or quality of the oversight provided by the director. For example, during the Enron hearings held by the Permanent Subcommittee on Investigations of the U.S. Senate's Committee on Governmental Affairs, the Senators posed the following written question to some witnesses:

> "Some directors of the Enron Board have been criticized for their membership on numerous boards, calling into question their ability to dedicate time and focus to issues at Enron. Would you be in favor of limiting the number of corporate boards an individual may serve simultaneously?"
>
> (U.S. Senate, 2002b)

This view is espoused, among others, by the National Association of Corporate Directors (NACD, 1996), the Council of Institutional Investors (CII, 1998), and the New York Stock Exchange (SEC, 2003).

In the context of audit committees, Yang and Krishnan (2005) find that earnings management is lower at firms where the audit committee directors serve on multiple boards, but Dhaliwal et al. (2010) show that accruals quality is positively related to accounting experts who hold low levels of multiple directorships. Sharma and Iselin (2006) find that restatements are less likely at firms where audit committee members have multiple board memberships, while Fich and Shivdasani (2007) show that "busy boards" significantly increase a firm's probability of facing financial litigation.

Given such inconsistent evidence, I do not make a directional prediction for the next hypothesis. Thus, hypothesis two, in the null form, is:

H$_2$: The likelihood of a company repeatedly engaging in the MB strategy of earnings management is not related to the number of additional board memberships held by audit committee directors.[3]

IV.   METHOD AND DATA

A.   Model

I base the empirical model on prior research seeking to explain the likelihood of firms engaging in the MB strategy of earnings management. The model is as follows:

$$\text{MBMiss} = \beta_0 + \beta_1*\text{Horizon} + \beta_2*\text{ForStd} + \beta_3*\text{NumAnaly} + \beta_4*\text{Lev} + \beta_5*\text{LitRisk}$$
$$+ \beta_6*\text{MtoB} + \beta_7*\text{LogMktVal} + \beta_8*\text{Loss} + \beta_9*\text{Big4} + \beta_{10}*\text{ACSize}$$
$$+ \beta_{11}*\text{ACXprt} + \beta_{12}*\text{ACMeet} + \beta_{13}*\text{ACTenure} + \beta_{14}*\text{ACBusy} + \varepsilon$$

where MBMiss = 1 if actual earnings reported repeatedly exceeds the analyst's forecast by one cent per share or less (i.e., $\$0.00 \leq$ Forecast Error $\leq \$0.01$), 0 otherwise (see below, following description of the sample, for a more detailed explanation of "repeatedly"); Horizon = Forecast horizon, measured as number of days between earnings announcement and the day the most recent earnings forecast was made; ForStd = Forecast dispersion, calculated as the standard deviation of earnings forecasts during the 4th quarter of 2007; NumAnaly = Number of analysts making an earnings forecast during the 4th quarter of 2007; Lev = Leverage, equal to total liabilities divided by total assets; LitRisk = 1 if firm's primary SIC code is 2833 – 2836, 3570 – 3577, 3600 – 3674, 5200 – 5961, or 7370 – 7370, 0 otherwise; MtoB = Market to book ratio, calculated as stock price at fiscal year-end divided by book value per share; LogMktVal = Natural log of market value of equity; Loss = 1 if the firm had a net loss for fiscal year 2007, 0 otherwise; Big4 = 1 if auditor is a Big 4 auditor, 0 otherwise; ACSize = Square root of the number of audit committee members during 2007; ACXprt = Square root of the number of audit committee financial experts during 2007; ACMeet = Square root of the number of audit committee meetings during 2007; ACTenure = Ratio of the number of members serving on the audit committee for more than 7 consecutive years as of 2007; and ACBusy = Ratio of the number of members on the audit committee who hold more than three other outside directorships during 2007.

Before I discuss the rationale for including these specific control variables in the model, I note that as part of my sensitivity tests I use a variety of different measures for the audit committee related variables.

Prior research has shown that the closer the earnings forecast is made to the earnings announcement, the smaller the forecast error (Crichfield et al., 1978; O'Brien, 1988; Brown, 1991; Sinha et al., 1997). Since earnings forecasts and forecast revisions occur at different times for different firms, I include the variable Horizon to capture the number of days between the earnings announcement day and the most recent earnings forecast available. Given that more recent forecasts, or forecasts with a smaller horizon, tend to be more accurate, I expect the coefficient on Horizon to be negative in the

above regression.

I attempt to control for cross-sectional differences in the information environment that may affect forecast accuracy by including the following variables: forecast dispersion (ForStd) as measured by the standard deviation of all forecasts issued for the firm during the fourth quarter, the number of analysts following the firm (NumAnaly), as well as the logged market value of the firm (LogMktVal) as a measure of firm size. Forecast dispersion captures the degree of uncertainty that analysts have about the performance of the target firm, so I anticipate the coefficient of ForStd to be negative. Conversely, since the number of analysts following a firm represents the degree to which a firm is followed, I anticipate the coefficient of NumAnaly will be positive. It can be argued that larger firms have more resources to engage in the MB strategy of earnings management. Therefore, I expect the coefficient on LogMktVal to be positive. These directional predictions are based on results from prior research, which show that forecast horizon and dispersion are negatively related to forecast accuracy but positively related to firm size and the number of analysts following the firm (Atiase, 1985; Lys and Soo, 1995; Brown, 1997; Cheng and Warfield, 2005; Chevis et al., 2007; Davis et al., 2009).

Chevis et al. (2007) find that the likelihood of meeting or just beating forecasts is positively associated with highly leveraged firms. I therefore include leverage (Lev) as a control variable and expect the coefficient to be positive. Following Cheng and Warfield (2005) and Frankel et al. (2002), I include variables to capture the growth of the firm as represented by the firm's market-to-book ratio (MtoB), whether the firm operates within a litigious industry (LitRisk), and whether the firm experienced a loss for the fiscal year (Loss). In their analysis of equity incentives and the probability of meeting or just beating analysts' forecasts by $0.01, Cheng and Warfield (2005) find that growth is significantly and negatively associated with the likelihood to meet or just beat earnings forecasts, while firms in litigious industries are more likely to meet or just beat forecasts. Frankel et al. (2002) find that firms reporting small earnings surprises are less likely to meet or just beat earnings forecasts. I predict the coefficients of MtoB and Loss to be negative, and the coefficient of LitRisk to be positive.

I include three other audit committee related variables in the model. I include ACSize because as the number of audit committee members increases it is likely that the extent of audit committee oversight will increase (Raghunandan and Rama, 2007). Based on prior research indicating audit committees that have members with financial expertise are associated with generally better quality financial reporting (Beasley et al., 2009), I include ACXprt in the model and expect this variable to have a negative coefficient. Audit committees that hold more frequent meetings are said to be more diligent and more effective in their monitoring (DeZoort et al., 2002; Carcello et al., 2011). Based on the above, I expect that more frequent audit committee meetings lead to better monitoring and less earnings management; hence, I expect the coefficient of ACMeet to be negative.

B.   Data

Table 1 describes the sample selection process. I begin by obtaining the universe of December 31 year-end firms having earnings and forecast data in the Institutional Brokers Estimate System (I/B/E/S) during the twelve quarters beginning in January

2005 and ending in December 2007[4], yielding 3,521 firm-quarter observations.

Table 1
Sample selection

	Number of Firms
Total number of firm-quarter observations in I/B/E/S	3,521
Less: Foreign firms	(316)
Less: Firms missing financial, proxy, or analyst data	(45)
Less: Firms that switched fiscal year ends	(2)
Less: Outlier firm	(1)
Sample Size	3,157

Analysts make their earnings forecasts throughout the year, making revisions as they receive new earnings-relevant information concerning their target firms. Consequently, forecasts issued closer to the earnings announcement date are based on a more rich information set and thus tend to be more accurate than the preceding forecasts (Sinha et al., 1997). Prior studies have documented this positive association between forecast recency and forecast accuracy (Crichfield et al., 1978; O'Brien, 1988; Brown, 1991; Sinha et al., 1997). Hence, I use the most recent forecast issued prior to the earnings announcement date as the analyst forecast measure.

I then calculate the forecast error, as actual earnings per share less forecasted earnings per share. Meeting or just beating (just missing) analyst earnings expectations are firm-quarter observations for which actual earnings reported either meets or exceeds (misses) the analyst's forecast by a cent per share or less, i.e., $\$0.00 \leq$ forecast error $\leq \$0.01$ ($-\$0.01 \leq$ forecast error $< \$0.00$). After removing irregular observations or observations with missing data and foreign firms, the initial sample is reduced to 3,205 firm-quarter observations.

I deleted 45 firms with either missing proxy data or missing control variable data in Compustat. In addition, I deleted two firms that switched to a non-December 31 fiscal year end month during the analysis period, and one outlying firm.[5] This process yielded a final overall sample of 3,157 firm-quarter observations.

Table 2 provides empirical evidence about the number of quarters in which firms either meet or just beat analyst forecasts, or just missed analyst forecasts. The table shows that 727 of the 3,157 firms (23 percent) did not meet, just beat, or just miss even once during the 12 quarters examined in this study.

The data in Table 2 show a very interesting pattern. While 2,204 of the 3,157 firms (70 percent) either meet or just beat analyst forecasts at least once during the 12 quarters, only 1,277 firms (40 percent) just missed analyst forecasts at least once during the same time period. Similarly, 563 of the 3,157 firms (18 percent) meet or just beat analyst forecasts at least four times during the study period; in contrast, only 34 of the 3,157 firms (1 percent) just missed analyst forecasts at least four times during the 12 quarters. Overall, fewer firms are likely to just miss than to meet or just beat analyst forecasts.

Table 2
Number of quarters of meet/just beat or just miss analyst forecasts

This table presents the frequency of meeting or just beating analyst forecasts, or just missing analyst forecasts, during the 12 quarters ending December 31, 2007. The shaded areas represent the "repeated Meet/Just Beat" and "repeated Just Miss" groups of firm observations. These two groups combined represent the sample of firm observations used for the regression analysis.

		Meet or Just Beat												
	# of Quarters	0	1	2	3	4	5	6	7	8	9	10	11	Total
Just Miss	0	727	492	282	162	95	54	23	15	20	4	4	2	1,880
	1	176	208	159	122	73	52	18	16	9	9	5	3	850
	2	34	64	54	36	37	25	22	11	2	6	-	-	291
	3	12	18	10	17	14	16	5	8	1	1	-	-	102
	4	3	1	3	7	4	1	3	-	1	-	-	-	23
	5	1	2	1	2	2	1	-	-	-	-	-	-	9
	6	-	-	1	-	1	-	-	-	-	-	-	-	2
	Total	953	785	510	346	226	149	71	50	33	20	9	5	3,157

I then partition the overall sample of firms into repeated meet/just beat and repeated just miss groups. A firm is classified as a repeated "Meet/Just Beat" firm if it had a net MB for at least 7 out of the 12 quarters. Thus, a firm that met or just beat the earnings forecasts by $0.01 for 9 of the 12 quarters but also just missed forecasts by $0.01 for 2 of the 12 quarters is still considered a repeated "Meet/Just Beat" firm. A firm is classified as a repeated "Just Miss" firm as long as the firm misses the earnings forecast by $0.01 or less, at minimum, a net of 2 out of the 12 quarters. Thus, a firm that just missed the earnings expectation for 5 out of 12 quarters, but also met or just beat expectations for 3 of the 12 quarters is considered a repeated "Just Miss" firm. The above process yields 77 repeated Meet/Just Beat firms and 79 repeated Just Miss firms.[6]

All audit committee data were hand-collected from the firms' proxy statements obtained from the SEC's website. After deleting observations with missing data for variables in the regression model, the final sample for the regression analysis includes 75 firms that repeatedly meet or just beat analyst forecasts and 64 firms that repeatedly just missed analyst forecasts.

Table 3

Univariate tests of differences

This table presents univariate tests of differences between 75 firms that repeatedly meet or just beat analyst forecasts and 64 firms that repeatedly just missed meeting analyst forecasts. The sample sizes differ from those depicted in the top-right and bottom-left corners of Table 2 due to missing data for variables in the regression model. The variables are defined as follows: Horizon = Forecast horizon, equal to the number of days between earnings announcement and the day the most recent earnings forecast was made; ForStd = Forecast dispersion, calculated as the standard deviation of earnings forecasts during the 4th quarter of 2007; NumAnaly = Number of analysts making an earnings forecast; Lev = Leverage, equal to total liabilities divided by total assets; LitRisk = Indicator variable if firm's SIC code is 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7370, 0 otherwise; MtoB = Market to book ratio, calculated as stock price at fiscal year-end divided by book value per share; LogMktVal = Logged market value of equity; Loss = Indicator variable equal to 1 if the firm had a net loss for fiscal year 2007, 0 otherwise; Big4 = 1 if auditor is a Big 4 firm, 0 otherwise; ACSize = Square root of the number of audit committee members during 2007; ACXprt = Square root of the number of audit committee financial experts during 2007; ACMeet = Square root of the number of audit committee meetings during 2007; ACTenure = Ratio of audit committee members having consecutive tenure on the committee greater than 7 years; ACBusy = Ratio of members on the committee who hold more than three other outside directorships.

Variable	Repeated Meet/Just Beat Firms (n = 75)			Repeated Just Miss Firms (n = 64)			p-value from tests of differences
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	
Horizon	31.730	20.000	30.458	45.730	26.000	41.066	0.051
ForStd	0.020	0.011	0.028	0.083	0.030	0.250	0.000
NumAnaly	7.910	6.000	4.902	6.940	5.000	5.188	0.146
Lev	0.520	0.480	0.277	0.608	0.627	0.282	0.044
LitRisk	0.390	0.000	0.490	0.190	0.000	0.393	0.015
MtoB	3.249	2.797	2.645	4.340	2.041	6.716	0.174
LogMktVal	3.181	2.968	0.745	2.889	2.723	0.767	0.015
Loss	0.070	0.000	0.251	0.220	0.000	0.417	0.013
Big4	0.850	1.000	0.356	0.830	1.000	0.380	0.816
ACSize	1.901	1.732	0.200	1.923	1.732	0.234	0.756
ACXprt	1.268	1.000	0.375	1.284	1.000	0.408	0.784
ACMeet	2.775	2.828	0.492	2.801	2.828	0.601	0.774
ACTenure	0.298	0.250	0.287	0.174	0.000	0.240	0.006

| ACBusy | 0.078 | 0.000 | 0.145 | 0.056 | 0.000 | 0.137 | 0.243 |

V.   RESULTS

A.   Descriptive Statistics

Table 3 presents univariate results of differences between the two groups. The repeated Meet/Just Beat firms have a shorter forecast horizon ($p < .10$), less forecast dispersion ($p < .01$), lower leverage ($p < .05$), and higher market value ($p < 0.01$); the repeated Meet/Just Beat firms are also more likely to be in risky industries ($p < .05$), and less likely to have losses ($p < 0.05$).

Turning to audit committee related variables, there are no significant differences between the two groups in terms of the number of audit committee directors, the number of experts or the number of meetings. Further, the proportion of audit committee directors with more than three other board memberships is not significantly different between the two groups. However, the repeated Meet/Just Beat group of firms has a higher proportion of long-tenured audit committee members ($p < .01$).

Table 4
Regression results

This table presents the results from a logistic regression with MBMiss as the dependent variable. MBMiss = 1 if a firm observation repeatedly met or just beat the analyst's forecast by one cent per share or less (i.e., $\$0.00 \leq$ Forecast Error $\leq \$0.01$), 0 otherwise (i.e. $-\$0.01 \leq$ Forecast Error $< \$0.00$). The sample includes 75 firms that repeatedly met or just beat analyst forecasts and 64 firms that repeatedly just missed meeting analyst forecasts. Other variables are defined as in Table 3.

Model: MBMiss = β_0 + β_1*Horizon + β_2*ForStd + β_3*NumAnaly + β_4*Lev + β_5*LitRisk+ β_6*MtoB + β_7*LogMktVal + β_8*Loss + β_9*Big4 + β_{10}*ACSize + β_{11}*ACXprt + β_{12}*ACMeet + β_{13}*ACTenure + β_{14}*ACBusy + ε

Model Chi-square = 65.511, $p < .001$; Nagelkerke R^2 = .502.

Variable	Predicted sign	Coefficient	p-value
Intercept		5.618	0.030
Horizon	-	-0.016	0.027
ForStd	-	-25.108	0.002
NumAnaly	+	0.000	0.498
Lev	+	0.522	0.288
LitRisk	+	2.539	0.001
MtoB	-	-0.212	0.002
LogMktVal	+	1.451	0.005
Loss	-	-1.198	0.070
Big4	-	-0.947	0.085
ACSize	-	-2.083	0.047
ACXprt	-	-0.973	0.093
ACMeet	-	-1.210	0.009
ACTenure	?	2.476	0.009
ACBusy	?	4.108	0.018

B.   Regression Results

Table 4 reports the results obtained from the regression model. The explanatory power of the model, as measured by the Pseudo R^2, is 0.50; this is in line with those reported in prior research relating to meeting-beating analysts' forecasts (Cheng and Warfield, 2005; Chevis et al., 2007; Davis et al., 2009).

Consistent with expectations, the likelihood of a firm repeatedly meeting or just beating analyst's forecasts is negatively associated with number of days between the earnings forecast and the earnings announcement (Horizon), forecast dispersion (ForStd), market-to-book ratio (MtoB), loss (Loss) and a Big 4 auditor (Big4). Also consistent with expectations and prior research, the likelihood of engaging in repeated meet-just beat behavior is positively associated with firm size (LogMktVal) and industry type (LitRisk).

With respect to the audit committee variables, consistent with expectations, the coefficients of ACSize, ACXprt and ACMeet are negative and significant indicating that meeting or just beating analyst's forecasts is less likely in firms that have audit committees that have more (a) members, (b) experts, and (c) meetings. The coefficient of ACTenure is negative and significant indicating that when the audit committee has a higher proportion of long-tenured members there is a higher likelihood of a firm repeatedly meeting or just beating analyst's forecasts. This result is consistent with the management-friendliness hypothesis; that is, long tenured outside directors become friendly with organizational management thereby creating a less stringent oversight environment. The coefficient of ACBusy is also negative and significant, indicating that as the proportion of directors who serve on more than three boards increases, the likelihood of the firm repeatedly meeting or just beating analyst forecasts increases. This evidence supports the argument espoused by good governance advocates that companies should consider limiting the number of boards on which audit committee members serve concurrently.

C.   Sensitivity Analyses

I perform the following additional analyses as part of sensitivity tests. First, I recognize that my use of seven years (for audit committee director tenure) and more than three boards (for concurrent directorships) is necessarily arbitrary. Hence, I use a number of other cutoff measures. For the tenure variable, I use the following alternative cutoffs: five years and ten years. With each of these alternative measures, the ACTenure variable remains negative and significant (as in Table 4). However, for the ACBusy variable, when I use more than two as the cutoff (instead of more than three), ACBusy is not significant at conventional levels. Thus, it appears that the difference arises once a director sits on more than three boards. In such alternative regressions, the sign and significance of the other variables in the model are generally similar to those presented in Table 4.

Next, instead of using the proportion of audit committee members with tenure or board memberships above a specific threshold, I use the average tenure and board membership measures for the audit committee. With this alternative specification, the

ACTenure variable is once again negative and significant but the ACBusy variable is not significant.

Some prior studies use dummy variables for audit committee related variables (e.g., if the committee met more than a specified number of times a year). Further, some other studies have sought to distinguish between accounting experts and other types of experts (e.g., Dhaliwal et al., 2010). Hence, I use dummy variables for meetings and experts, in lieu of ACMeet and ACXprt, as follows: ACMeetD = 1 if the committee met more than the median number of meetings (8) of the sample, 0 otherwise; ACAccXprt = 1 if an accounting expert is present on the audit committee, 0 otherwise.[7] With such alternative specification of the regression model, I find that ACMeetD is negative and significant but ACAccXprt is not significant.   More importantly, the significance of the variables of interest, namely ACTenure and ACBusy remains substantively similar to those presented in Table 4.

I include an additional control variable measuring internal control quality in the regression model. I define this dummy variable as follows: ICW =1 if there is a material weakness in internal controls for fiscal year 2007, 0 otherwise. ICW is not significant in the model, and the sign and significance of the other variables remains substantively similar to those presented in Table 4.

VI.   SUMMARY AND CONCLUSIONS

The audit committee's role in ensuring high quality financial reporting has long been recognized by the SEC and others. In this paper, I examine the association between audit committee characteristics and the likelihood of firms repeatedly meeting or just beating or just missing analyst's earnings forecasts. Almost all prior research on audit committee composition has focused on independence and financial expertise of the audit committee directors. I extend the literature on audit committee composition by focusing on two factors that have received little attention in prior research, yet have become the focus of legislators, good governance advocates, and others: audit committee members' tenure and the number of other directorships.

I examine the propensity of 3,157 firms to meet/just beat or just miss analyst forecasts by $0.01 or less during 2005 to 2007. I find that firms are much more likely to repeatedly meet or just beat analyst forecasts than to repeatedly just miss analyst forecasts. While this finding may not be surprising, the frequency of such repeated behavior may be informative: 70 percent of the sample firms either meet or just beat analyst forecasts at least once during the 12 quarters, but only 40 percent of the sample firms just missed analyst forecasts at least once during the same time period. Further, 18 percent of the sample firms meet or just beat analyst forecasts at least four times during the study period but only 1 percent of the sample firms just missed analyst forecasts at least four times during the 12 quarters.

In my analyses, I focus on 75 firms that had a net meet or just beat count of 7 out of the 12 quarters and 64 firms that had a net just miss count of 2 out of the 12 quarters. I find that audit committee director tenure is positively associated with the likelihood of a firm repeatedly meeting or just beating analyst forecasts. This finding holds whether I use the average number of years of audit committee member tenure, or the proportion of directors with more than five, seven, or ten years of audit committee tenure. These results provide strong support for the argument that too long a service may lead to audit

committee members becoming less vigilant or more permissive of earnings management, and support calls (e.g., Lapides et al., 2007) to restrict the tenure of directors on the audit committee.

My results for the number of other directorships held by audit committee members is mixed: when I use the proportion of directors holding more than three other board memberships, the ACBusy variable is positive and significant in the regression, indicating that audit committees that have a higher proportion of members with four or more other board memberships are less likely to prevent earnings management. However, when I use average number of board memberships, or when I use the proportion of audit committee directors holding more than two other directorships, the ACBusy variable is not significant in the regression. Since the NYSE and others have typically sought to limit the number of board memberships to four, my results may be viewed as providing partial support for efforts seeking to limit busy-boarding by audit committee directors.

My results suggest many interesting avenues for future research. One avenue is to examine the association between audit committee member tenure and busy-boarding with other measures of audit quality and financial reporting quality, particularly in the post-SOX period. Another interesting area is to examine the reaction of external and internal auditors when audit committee members have long tenure and/or multiple board memberships. Finally, it is also interesting to examine how audit committee member interactions and processes vary with the tenure and busy-boarding of audit committee members.

ENDNOTES

1. AT&T, American Express, Home Depot, Pfizer and United Technologies are some examples of companies that have had shareholder proposals related to director term-limits in recent years.
2. The SEC (1999d) noted that "among the considerations that may well render material a quantitatively small misstatement of a financial statement item" is "whether the misstatement hides a failure to meet analysts' consensus expectations."
3. I note that for the first hypothesis I focus on the number of years of service on the audit committee but for the second hypothesis I focus on the number of additional board memberships. I do this for two reasons. The first reason is to be consistent with the approach taken in prior research (e.g, Yang and Krishnan, 2005; Barua et al., 2010; Dhaliwal et al., 2010). The second reason is the fact that, among others, the suggestions of Lapides et al. (2007) and Deloitte (2010) focus on audit committee tenure presumably because a new member on the committee may be more likely to view things from a different perspective and/or may be more skeptical. However, for the second hypothesis I focus on the total number of additional board memberships because, in the case of busy-boarding related discussions, the focus is on the time it takes to serve on boards; further, very few directors serve on more than three audit committees.
4. I stop with 2007 because I also wanted to examine if the propensity to repeatedly meet / just beat or miss analyst forecasts is associated with subsequent negative restatements. Since, on average, it takes more than two years before most

subsequent restatements are disclosed, I stopped with fiscal year 2007. However, the subsequent analysis indicates that only 8 of the 156 sample firms (selected as described below) had a negative restatement until June 30, 2010, reinforcing the earlier suggestion that restatements are relatively infrequent.

5. This firm was deemed an outlier at the sub-group regression analysis stage. It had a market-to-book ratio value that was approximately 40 times the size of the average ratio for the Just Miss group.

6. I recognize that the above process is somewhat arbitrary. However, because I had to hand-collect audit committee related data, I wanted the sample to be of manageable size. Further, the very definition of "repeated" implies more than two, so I used the "net of 2" for the repeated Just Miss firms; using a net of 3 or more for the Just Miss firms drastically reduces the sample size of this group. With respect to the repeated Meet/Just Beat firms, I used alternative cutoffs (net of 8 or 9 quarters); the results with such alternative cutoffs are similar to those reported in the paper.

7. I define an accounting expert as someone who has experience as an auditor or as a senior corporate executive in accounting or finance (e.g., CFO, CAO, VP-Finance, etc.).

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