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**EARNINGS MANAGEMENT AND CORPORATE GOVERNANCE:
THE ROLES OF THE BOARD AND THE AUDIT COMMITTEE**

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**Earnings Management and Corporate Governance:
The Role of the Board and the Audit Committee
(Abstract)**

We examine the role of the board of directors, the audit committee, and the executive committee in preventing earnings management. Supporting an SEC Panel Report's conclusion that audit committee members need financial sophistication, we show that the composition of a board in general and of an audit committee more specifically, is related to the likelihood that a firm will engage in earnings management. Board and audit committee members with corporate or financial backgrounds are associated with firms that have smaller discretionary current accruals. Board and audit committee meeting frequency is also associated with reduced levels of discretionary current accruals. We conclude that board and audit committee activity and their members' financial sophistication may be important factors in constraining the propensity of managers to engage in earnings management.

1. Introduction

Earnings management has recently received considerable attention by regulators and the popular press. In a September 1998 speech to lawyers and CPAs, Arthur Levitt, chairman of the Security Exchange Commission committed “the SEC in no uncertain terms to a serious, high-priority attack on earnings management” (Loomis, 1999, p. 76). There followed the formation of a Blue Ribbon Panel by the Public Oversight Board, an independent private sector group that oversees the self-regulatory programs of the SEC Practice Section of the American Institute of Certified Public Accountants.

How widespread is the earnings management problem? In an article in Fortune magazine, Loomis (1999) argues that earnings management is rampant and that CEOs view earnings management as a tool to ensure that their firms meet earnings expectations. Loomis (1999) reports that to SEC chairman Levitt, falsified reports and doctored records are a common problem and there are “great expanses of accounting rot, just waiting to be revealed” (p. 77). The board of directors may have a role in constraining earnings management. The Blue Ribbon Panel recommends, among other things, that board members serving on audit committees should be financially sophisticated to help detect earnings management.

We examine the relation between earnings management and the structure, background, and composition of a firm’s board of directors. We are particularly interested in the role played by outside directors; their background in corporations, finance, or law; and their membership on two key board committees, the audit and executive committees.

Our results are consistent with the Blue Ribbon Panel recommendation, indicating that a lower level of earnings management is associated with greater independent outside representation on the board. The monitoring that outside directors provide may improve when they are financially

sophisticated (e.g., experienced in other corporations or in investment banking). We also find that the presence of corporate executives and investment bankers on audit committees are associated with a reduced extent of earnings management. Finally, our results show that more active boards, as proxied by the number of board meetings, and more active audit committees, as proxied by the number of committee meetings, are also associated with a lower level of earnings management. In section 2 we discuss earnings management and the role of the board in controlling this problem. Section 3 contains our statistical methodology while section 4 presents our sample selection and data source discussions. We present our results in section 5 and conclusions in section 6.

2. Earnings Management and the Role of the Board of Directors

2.1 Earnings Management

Under Generally Accepted Accounting Principles (GAAP), firms use accrual accounting which “attempts to record the financial effects on an entity of transactions and other events and circumstances that have cash consequences for the entity in the periods in which those transactions, events, and consequences occur rather than only in the period in which cash is received or paid by the entity.”¹ The nature of accrual accounting gives managers a great deal of discretion in determining the actual earnings a firm reports in any given period. Management has considerable control over the timing of actual expense items (e.g., advertising expenses or outlays for research and development). They also can to some extent alter the timing of recognition of revenues and expenses by, for example, advancing recognition of sales revenue through credit sales, or delaying recognition of losses by waiting to establish loss reserves (Teoh, Welch, and Wong, 1998a).

Healy and Wahlen (1998) define earnings management as occurring:

. . . when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholder about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers (p. 6).

When manager incentives are based on their companies' financial performance, it may be in their self-interest to give the appearance of better performance through earnings management. In many companies, managers are compensated both directly (in terms of salary and bonus) and indirectly (in terms of prestige, future promotions, and job security) depending on a firm's earnings performance relative to some pre-established benchmark. This combination of management's discretion over reported earnings and the effect these earnings have on their compensation leads to a potential agency problem.

Beyond the management compensation problem, earnings management may impact investors by giving them false information. Capital markets use financial information to set security prices. Investors use financial information to decide whether to buy, sell, or hold securities. Market efficiency is based upon the information flow to capital markets. When the information is incorrect, it may not be possible for the markets to value securities correctly. To the extent that earnings management obscures real performance and lessens the ability of shareholders to make informed decisions, we can view earnings management as an agency cost.

A large body of academic literature has examined the extent to which earnings management occurs around specific corporate events in which this agency conflict is most likely to occur, but the results have been mixed.² Of note is the literature of earnings management's influence on capital markets in which there may be contractual incentives for firms to manage earnings (Dye, 1988; and Trueman & Titman, 1988). For example, in a management buyout, there are clear incentives for managers to understate earnings in an attempt to acquire a firm at a lower price. While DeAngelo (1988) finds no evidence of this understatement problem, Perry and Williams (1994) and Wu (1997) (using larger sample sizes and more powerful methodologies), do.

In takeover or merger settings, Easterwood (1997) and Erickson and Wang (1999) have found evidence of earnings management in both hostile takeovers and in stock for stock mergers.

Easterwood (1997) finds evidence consistent with the hypothesis that targets of hostile takeover attempts inflate earnings in the period prior to a hostile takeover attempt in an attempt to dissuade their shareholders from supporting the takeover. Likewise, in the case of mergers, Erickson and Wang (1999) find that firms engaging in stock for stock mergers inflate their earnings prior to the merger in order to inflate their stock price and thereby reduce the cost of the merger.

Other studies have examined the incentives of managers to manipulate earnings in an attempt to influence various capital market participants. Teoh, Welch, and Wong (1998a), Rangan (1998) and Dechow, Sloan, and Sweeney (1996) provide evidence that managers inflate earnings prior to seasoned equity offerings. Their results are consistent with the notion that managers seek to manage pre-issue earnings in an attempt to improve investors' expectations about future performance. There is, however, a cost associated with earnings management. Teoh, Welch, and Wong (1998b) show that firms that managed earnings prior to initial public equity offerings experience poor stock return performance in the subsequent three years.

2.2. The Role of Boards

2.2.1. Board Composition

The extent to which increased levels of outside director representation on the board of directors benefit shareholders is the subject of much debate. The empirical evidence on the efficacy of the monitoring that outsiders provide appears to depend on the setting in which it is examined. There has been considerable evidence supporting the hypothesis that independent outside directors protect shareholders in specific instances when there is an agency problem (Brickley & James, 1987; Weisbach, 1988; Byrd & Hickman, 1992; and Lee, Rosenstein, Rangan, & Davidson, 1992). The relation between the proportion of outside directors and long-term financial performance, however, has not been supported in empirical research (Bhagat & Black, 2000; Klein, 1998).

One potential explanation for these findings may be the endogenous relation between firm performance and board structure (Hermalin & Weisbach, 2000). The financial performance of a firm

may be affected by existing board structure or composition, but the performance of a firm may influence subsequent director selection. Hence, the results on the relation between board structure and financial performance may be difficult to interpret.

Our analysis of the board composition/performance relationship fits somewhere in the middle of the continuum of ways in which the issue is typically examined. On the one hand, earnings management by definition is observed around the specific, predictable events of the reporting of periodic earnings. On the other, the potential for managers to engage in earnings management may negatively affect the ability of shareholders to accurately assess the true value of the firm, which will in turn affect the long run stock market performance of the firm.

Boards are charged with monitoring management to protect shareholders' interests, and we expect that board composition will influence whether or not a company engages in earnings management. To the extent that independent outside directors monitor management more effectively than inside directors, we hypothesize that companies with a greater proportion of independent directors will be less likely to engage in earnings management than those whose boards are staffed primarily with inside directors.

Consistent with the recommendation of the Blue Ribbon Panel, we also expect that the background of these independent outside directors may be an important determinant of their monitoring effectiveness. A director with a corporate or financial background may be more familiar with the ways that earnings can be managed and may better understand the implications of earnings manipulation. In contrast, a director with no corporate or financial background may be a well-intentioned monitor but may not have the training or financial sophistication to fully understand earnings management.

2.2.2. Board Structure

The perspective that board monitoring is a function of not only the composition of the board as a whole but also of the structure and composition of the board's subcommittees is a relatively

recent one. Kesner (1988) maintains that most important board decisions originate at the committee level, and Vance (1983) argues that there are four board committees that greatly influence corporate activities: audit, executive, compensation, nomination committee. Klein (1998) finds that overall board composition is unrelated to firm performance but that the structure of the accounting and finance committees does impact performance. Similarly, Davidson, Pilger, and Szakmary (1998) find that the composition of a firm's compensation committee influences the market's perception of golden parachute adoption. The insight in these works is that outside directors may be more important on committees that handle agency issues (e.g., compensation and audit committees), and insiders may best use their company knowledge on committees that focus on firm-specific issues (e.g., investment and finance committees). Following this line of reasoning, we argue that board committee structure and composition may likely impact management's willingness to manage earnings. We focus our attention on the first two, the audit and executive committees.

While a typical committee includes only a subset of the board, it influences topics seen and discussed by the entire board. This may be particularly true for the executive committee; the executive committee acts for the full board when immediate actions are required. It hears from the CEO on proposals prior to full board debate and may heavily influence the board's agenda. Given this committee's role, independent and financially sophisticated outsiders on the executive committee may provide valuable monitoring that could constrain the extent of earnings management.

The executive committee may only play an indirect role, but the audit or finance committee may have a more direct role in controlling earnings management. Its function is to monitor a firm's financial performance and financial reporting. In a survey of the practitioner and academic literature on audit committee effectiveness, Spira (1999) concludes that these committees are largely ceremonial and that they are largely ineffective in improving financial reporting. His survey does not address the issue of the background and experience of audit committee members, however, which is precisely the issue raised by the Blue Ribbon Panel. That is, the Blue Ribbon Panel argues that audit

committee members should be financially sophisticated. An audit committee, without financially sophisticated members may indeed be largely ceremonial.

An active, well-functioning, and well-structured audit committee may be able to prevent earnings management. We would expect audit committees with a large proportion of independent outside directors to be more effective monitors. Audit committee members with corporate and financial backgrounds should have the experience and training to understand earnings management. Therefore, we expect that if a large proportion of the committee is made up of independent outside members with corporate and financial backgrounds, earnings management will be less likely. This expectation is consistent with the recommendations of Levitt's Blue Ribbon Panel.

Arthur Levitt, Chairman of the SEC, has pushed for improvements in the structure and function of audit committees. In September 1998 the SEC, the New York Stock Exchange and the National Association of Security Dealers convened a Blue Ribbon Panel "to make recommendations on strengthening the role of audit committees in overseeing the corporate financial reporting process" (SEC Press Release).

In February 1999, panel released its Report and Recommendations, affirming that a board must provide "active" and "independent" oversight for investors. It also argued that the audit committee's role is "oversight and monitoring" of a firm's financial reporting, and that the audit committee is "first among equals" in this monitoring process that also includes management and external auditors. (p. 7).

The panel's recommendations focus on the independence of the board members who serve on the audit committee and on the active and formal role of the audit committee in the oversight process. It further recommended that audit committee members be "financially literate," presumably so that the committee functions properly.

We also expect that more active audit committees will be more effective monitors. An audit committee that seldomly meets may be less likely to monitor earnings management. A more active

audit committee that meets more often should be in a better position to monitor issues such as earnings management.

2.2.3. Other Board Considerations

Empirical research has documented that board size and number of board meetings may be related to firm performance. The evidence on the role of board size is inconclusive. Yermack (1996) and Eisenberg, Sundgren, and Wells (1998) demonstrate that smaller boards are associated with better firm performances. However, in a meta-analysis of 131 different study-samples with a combined sample size of 20,620 observations, Dalton, Daily, Johnson, and Ellstrand (1999) document a positive and significant relation between board size and financial performance. Given these conflicting results, we offer no directional expectations between earnings management and board size.

A smaller board may be less encumbered with bureaucratic problems and may be more functional. Smaller boards may provide better financial reporting oversight. Alternately, a larger board may be able to draw from a broader range of experience. In the case of earnings management, a larger board may be more likely to have independent directors with corporate or financial experience. If so, a larger board might be better at preventing earnings management.

Vafeas (1999) has demonstrated that boards meet more often during periods of turmoil, and that boards meeting more often show improved financial performance. A board that meets more often should be able to devote more time to issues such as earnings management. A board that seldomly meets may not focus on these issues and may perhaps only rubber-stamp management plans. We therefore expect the incidence of earnings management to be inversely related to the number of board meetings.

3. Statistical Methodology

Our statistical approach in measuring and decomposing accruals is based on the method in Teoh, Welch, and Wong (1998a) and Jones (1991). As we use the same procedure and for the sake

of brevity, we only summarize it here and refer the reader to Teoh, Welch, and Wong (1998a) and Jones (1991) for details.

We focus on current accruals because current accruals are easier for managers to manipulate.³ We define current accruals, CA, as the change in non-cash current assets less the change in operating current liabilities.⁴ Total current accruals are assumed to be the sum of both discretionary and non-discretionary components. To identify the non-discretionary component of accruals for a given firm-year observation, we first estimate ordinary least squares regressions of current accruals on the change in sales from the previous year for all non-sample firms in the same two-digit SIC code, industry j , listed on Compustat for the year in question. Since the error terms of this regression exhibit heteroskedasticity, we follow Teoh, Welch, and Wong (1998a) and deflate each variable in the model by the book value of total assets from the prior year:

$$\frac{CA_{jt}}{TA_{j,t-1}} = \mathbf{g}_0 \frac{1}{TA_{j,t-1}} + \mathbf{g}_1 \frac{\Delta Sales_{jt}}{TA_{j,t-1}} \quad (1)$$

Using the estimates for the regression parameters in (1) $\hat{\mathbf{g}}_0$ and $\hat{\mathbf{g}}_1$, we estimate each sample firm's nondiscretionary current accruals.⁵ The nondiscretionary current accruals are the part of current accruals caused by a firm's sales growth and are "viewed as independent of managerial control" (Teoh, Welch, and Wong, 1998a, p. 95). We estimate the nondiscretionary current accruals for firm i at time t , $NDCA_{it}$ as:

$$NDCA_{it} = \hat{\mathbf{g}}_0 \frac{1}{TA_{i,t-1}} + \hat{\mathbf{g}}_1 \frac{\Delta Sales_{it} - \Delta AR_{it}}{TA_{i,t-1}} \quad (2)$$

We then define the discretionary current accruals, DCA_{it} , as the remaining portion of the current accruals:

$$DCA_{it} = \frac{CA_{it}}{TA_{i,t-1}} - NDCA_{it} \quad (3)$$

----- *Insert Table 1 About Here* -----

Table 1 provides summary statistics for the discretionary and non-discretionary current accruals for the entire sample and for each year in the analysis. DCA ranges from -0.16 to 0.54 with a mean of 0.0105. This mean is only 0.0049 in 1992 but increases to 0.0218 in 1996. Because of this variation across years, it is possible that our results may reflect only intertemporal variation in accruals. To control for this possibility, we include two dummy variables in our regressions. The first dummy variable takes the value of 1 for year 1994 and zero otherwise while the second takes the value 1 for 1994 and zero otherwise.

4. Data

4.1 Sample Selection

We chose the sample selection procedure to balance the need for a sample size that is sufficiently large to yield reasonable power in our tests (and to ensure that the results are somewhat generalizable) against the costs in time and effort of obtaining board of director information from proxy statements. We began by selecting the first 110 firms (alphabetically) from the S&P 500 index as listed in the June Standard & Poor's directory for each of the years 1992, 1994, and 1996. Our initial sample includes these 330 firms. We gathered data on board of director composition and structure for these firms from the proxy statements nearest to but preceding the date of announcement of annual earnings in each year. Of the 330 initial firm-year observations, 48 either were missing information on the proxy statements or had insufficient data on Compustat to enable us to estimate discretionary accruals, leaving us with a final sample of 282 firm-year observations.

4.2 Data

Information on boards of directors comes from proxy statements. We obtained the proxy statement that defined the board of directors for each firm in year t . Specific definitions for the variables appear below, with descriptive statistics in Table 2.

4.2.1. CEO Duality

We categorize a firm as having a “dual CEO” when one person occupies both board chair and CEO positions. We define this variable to take the value 1 when there is CEO duality and as 0 otherwise. As shown in Table 2, 85% of our sample firms have duality governance structures. This is consistent with the results in Brickley, Coles, and Jarrell (1997) who find approximately 81% of their sample firms to have CEO duality.

----- *Insert Table 2 About Here* -----

4.2.2. Number of Board Meetings

Companies generally report the number of board meetings in the proxy statement, and we take this as a measure of board activity. Following Vafeas (1999), we exclude actions resulting from written consent of the board since these involve less director action and input and are less likely to result in effective monitoring. We, therefore, only include face-to-face board meetings. For our sample firms the mean number of board meetings is 8.26, but the range is from 4 to 35.

4.2.3. Board Composition

We categorize board members as insiders if the proxy statement shows that they are employed by the firm; as affiliated if they have some relationship with the firm or its executives (as in Baysinger & Butler, 1985, Byrd & Hickman, 1992 and Lee, Rosenstein, Rangan & Davidson, 1992); or as outsiders if their only relationship to the firm or its executives is through the board of directors.

Table 2 shows that in our sample, insiders average 18% of total board seats; affiliated directors average 15%; and outsiders average 67%. These percentages are similar to those reported in the studies cited above, although board compositions vary widely from firm to firm in our sample. Some boards are composed of entirely one category of director.

In addition to the usual insider-affiliated-outsider typology, we also categorize affiliated and outside directors according to background. Corporate directors are those who are currently or previously employed as executives in publicly held corporations. As shown in Table 2, 74% of our sample directors have corporate backgrounds. We define “finance” directors as current or past executives in a financial institution. The average is 16.3% in our sample. We then determine which of these finance directors are current or past employees of commercial banks, 4.2% in our sample, or investment banks, 3.5% in our sample. Directors who are lawyers are “legal” directors, and they average 10.8% of the sample. Finally, outside directors who are blockholders or employees or representatives of blockholders are “blockholder” directors. They average 8.8% of the sample.

Except for the classification as inside, affiliated, and outside, the categories are not mutually exclusive. For example, an executive of a corporation who is also a lawyer could be both a corporate and a legal director.

4.2.4. Audit Committee

We were able to obtain data for 280 firm-year observations on the structure and composition of their audit committees. The average number of audit committee meetings, proxying for the level of audit committee activity, is 3.87, but individual firm audit committees met as seldom as once during the year and as often as 58 times. Audit committee size averages 4.53 and ranges from 2 to 12.

Audit committees are composed of outside and affiliated directors. Affiliated directors average 15% of the seats on the committee, but this ranges from 0 to 100%. Following our director

classification scheme, we further categorize audit committee members into corporate, finance, commercial banking, investment banking, legal, and blockholder directors.

Table 2 shows these percentages. Most notably, corporate directors make up 77% of audit committee membership.

4.2.5. Executive Committee

181 firms in our sample list executive committees. Executive committees average 3.2 meetings per year but this ranges from 0 to 51. The average size of the executive committees is 4.86 members, but the range is from 2 to 12.

Executive committees, in our sample, have an average of 35.2% insiders, 16.2% affiliated, and 48.4% outsiders. The other background categories are as shown in Table 2.

5. Results

5.1 Overall Board Results

Table 3 provides the univariate ordinary least square regression results with discretionary current accruals as the dependent variable and overall company and total board characteristic variables as the independent variables.

-----*Insert Table 3 About Here*-----

CEO duality is unrelated to discretionary current accruals. Similarly, the proportions of outside directors with finance or, legal backgrounds, or employment with or representative of a blockholder, are unrelated as well. Proportions of finance directors with experience at either commercial or investment banks, and their proportion of the total board, are unrelated to the discretionary current accruals. The proportion of votes controlled by blockholders is also unrelated to the dependent variable.

The number of board meetings has a negative coefficient that is marginally significant at the 0.10 level, indicating that when boards meet more often, discretionary accruals are lower. This

finding is consistent with the idea that an active board may be a better monitor than an inactive board.

We find that the percentage of independent outside directors is negatively related to the discretionary current accruals at the 0.10 level. This finding is consistent with past research and illustrates another setting in which a large proportion of outside directors is associated with better monitoring. The coefficient for the proportion of outside directors with a corporate background (as a percent of the total board) is similarly negative and significant at the 0.05 level. Since outside directors with corporate backgrounds are more likely to be financially sophisticated, their presence is associated with a reduced level of earnings management. This finding is consistent with the contention of the Blue Ribbon Panel.

We also find that the coefficient for board size is negative and significant at 0.05. If, as shown in prior research, smaller boards are more effective monitors than larger boards, this result is counterintuitive. Larger boards are associated with lower levels of discretionary current accruals. One argument for larger boards is that they may bring a greater number of experienced directors to a board. Perhaps our findings reflect this, since experienced directors seem to play a role in limiting earnings management.

Finally, we show that the log of book value to total assets, the log of sales, and the log of the market value of equity are significantly and negatively correlated with discretionary current accruals. Smaller firms, therefore, tend to report higher levels of discretionary current accruals. This is consistent with the notion that smaller firms may operate with less scrutiny and may be able to engage in more earnings management.

Table 4 shows multiple regression results. In these regressions we control for firm size using the log of the market value of equity and year, using two dummy variables taking the value of 1 if the analysis year is 1992 or 1994.

-----*Insert Table 4 About Here*-----

Regression 1 in Table 4 contains variables intended to capture various director characteristics. Outside directors can be corporate, finance, legal, or blockholder. We include the proportion of these directors of the total board. Of these variables only the corporate director coefficient is significant, and, as in the simple regressions, has a negative coefficient.

Regressions 2-6 contain various combinations of independent variables. The coefficients for percentages of outside directors and corporate directors are insignificant when included simultaneously. However, the two variables are highly correlated, so this result may be driven by multicollinearity. The percentage of corporate directors has a stronger relation with discretionary current accruals than the percentage of outside directors; we interpret this to imply that outside directors with a corporate background appear to be associated with better monitoring than outside directors without corporate experience.

After dropping the outside director variable from the regression the coefficient for the percentage of corporate directors is significant and negative. Similarly, the size of the board of directors is also always significant and negative. As noted earlier, this result is counter to the recent findings that small boards are better monitors. One possibility is that since board size is positively correlated with firm size, the relation we find is really measuring firm size (although the coefficient for board size is unaffected whether we include or exclude firm size in the regression).

We also find that the tenure of outside directors is positively related to the level of discretionary current accruals. Board members with longer tenure as directors, in this case, may be less effective monitors and perhaps have been co-opted by management.

5.2 Audit Committee Results

We do not include the audit committee variables in the same regressions with total board variables because of correlation between the two sets of variables. The results for the univariate regressions for the audit committee variables appear in Table 5.

-----Insert Table 5 About Here-----

The percentage of independent outsiders on the audit committee is unrelated to the dependent variable, discretionary current accruals. We do find in regression 2 that the percentage of outside corporate directors on the audit committee has a negative coefficient that is significant at better than 0.001. The audit committee is responsible for monitoring financial performance and reporting, and having outside corporate members is associated with this committee's ability to monitor.

The percentage of outside legal and financial members is unrelated to the discretionary current accruals. The presence of audit committee financial members from commercial banks does not influence the results either, but outside directors from investment banks do (negative coefficient that is significant at better than 0.05). Investment bankers who serve on audit committees seem to improve the monitoring function of this committee. The size of the audit committee and the proportion of blockholders are insignificantly related to the discretionary current accruals.

Finally, the number of audit committee meetings has a significantly negative coefficient. These results are as expected, and imply that a more active audit committee is associated with a reduced level of discretionary current accruals.

-----*Insert Table 6 About Here*-----

Table 6 provides multiple regression results for the audit committee variables. Even after controlling for firm size and year, these three regressions show that the number of audit committee meetings and the proportions of outside corporate committee members and the proportion of outside investment banking members have negative coefficients.

Overall, these results suggest that an active audit committee of experienced members performs its intended capacity. That is, an audit committee that has members with some financial and/or corporate background is associated with a reduced level of earnings management; and it therefore may better serve as a financial monitor.

5.3 Executive Committee Results

Table 7 gives the univariate regression results for the executive committee variables. While the executive committee does not generally have as direct a role as the audit committee in financial matters, it can dictate what is seen by the whole board, and may, therefore, play a role in controlling earnings management.

-----*Insert Table 7 About Here*-----

The variable coefficient for the proportion of outside directors on the executive committee is significant and negative at the 0.05 level. When there is a high proportion of outside directors on the executive committee, discretionary current accruals are smaller. While the coefficient for the proportion of corporate directors has a negative coefficient, it is statistically insignificant at conventional levels. Coefficients for the proportions of legal committee members, financial committee members and blockholder committee members are all insignificantly related to discretionary current accruals.

We do find that a larger executive committee is associated with smaller discretionary current accruals since its coefficient is negative and significant at 0.10. The coefficient for the number of executive committee meetings is nominally negative but statistically insignificant.

-----*Insert Table 8 About Here*-----

Table 8 shows the multiple regressions including both executive committee and control variables. In regression 1 none of the independent variables is significant. Executive committee size is correlated with the percentage of outside directors serving on the committee. Hence, size does not seem to matter, but a larger committee is more likely to have greater outside representation. When we drop committee size and keep the control variables, as in regressions 2 and 3, the proportion of outside executive committee members has a significantly negative coefficient.

The number of executive committee meetings has a negative coefficient, significant in regressions 3 and 4. Thus, a more active executive committee is associated with smaller discretionary current accruals.

6. Conclusions

Our findings largely support the SEC Chairman's Blue Ribbon Panel Report and Recommendations for audit committees that audit committee members be independent board members with financial expertise. We find that earnings management is less likely to occur or occurs less often in companies whose boards include both more independent outside directors and directors with corporate experience. We also find that the composition of the audit committee (and to a lesser extent the executive committee) is associated with the level of earnings management and thereby may allow a committee to better perform oversight functions. The proportion of audit committee members with corporate or investment banking backgrounds is negatively related to the level of earnings management. The panel also recommends that these committees serve an active role. Our results find an association between lower levels of earnings management and the meeting frequency of boards and audit committees. Thus, board and committee activity influences members' ability to serve as effective monitors. The recommendations of this panel, appear, in our sample, to make boards and audit committees more effective monitors of corporate financial reporting.

One caveat is that we cannot interpret our results as demonstrating a causal link between board and audit committee composition and earnings management because of the endogeneity problem that impacts much of the board literature (Hermalin & Weisbach, 2000). An active and financially oriented board and audit committee may influence the level of earnings management, but the level of earnings management may influence the subsequent selection of board and audit committee members. Nevertheless, our results do imply an associative link between the board and earnings management.

¹ FASB 1985, SFAC No. 6, para 139.

² Some researchers have found that earnings management occurs to meet company forecasts (Kasnik, 1999) or analyst forecasts (Burgstahler & Eames, 1998). Banks that manage earnings with low loan loss provisions have poor future cashflows (Wahlen, 1994) and this may also impact stock returns. (Beaver & Engel, 1996; and Liu, Ryan & Wahlen, 1998). Still others (Magnan, Nadeau, & Cormier, 1999; Makar & Alam, 1998; Key, 1997; Hall & Stammerjohan, 1997; Mensah, Considine & Oakes, 1994; Jones, 1991; and Lim & Matolosa, 1999) have studied earnings management during political, regulatory and legal proceedings. These researchers generally document that companies tend to manage their earnings to facilitate their desired goals.

³ When we repeat the analysis using long-term accruals in place of short-term accruals, all results are qualitatively unchanged (but with lower statistical significance). Hence, to be brief, we report only the results for current accruals (the results for the analysis of long-term accruals are available upon request).

⁴ The change in non cash current assets is the sum of the changes in Compustat data items 2, 3, and 68. The change in operating current liabilities is the sum of the changes in Compustat data items 70, 71, and 72.

⁵ Although we estimate the regression parameters \bar{g}_0 and \bar{g}_1 using the change in sales as the independent variable, we follow Teoh, Welch, and Wong (1998a) and adjust the change in sales for the change in accounts receivable to correct for the possibility that firms could have manipulated sales by changing credit terms.

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Table 1

Descriptive Statistics on a Sample of 281 firms from 1992, 1994, and 1996. The accrual information came from financial statements obtained from Compustat. Discretionary and Non-Discretionary accruals are computed following Teoh, Welch, and Wong (1998a).

	Total Sample				1992 Mean	1994 Mean	1996 Mean
	Minimum	Maximum	Mean	Standard Deviation			
Non-Discretionary Current	-0.14	0.13	0.0006	0.0229	-0.0005	0.0062	-0.004
Discretionary Current	-0.16	0.54	0.0105	0.074	0.0049	0.0053	0.0218
Non-Discretionary Total	-0.72	0.12	-0.0569	0.0824	-0.0764	-0.0445	-0.0492
Discretionary Total	-0.27	0.67	0.0051	0.0837	0.0137	-0.0021	0.0036
Book Value of Assets	313.93	250,753.00	17,369.48	32,805.53	16,591.73	17,952.38	17,614.68
Sales	76.72	75,094.00	7,508.52	10,053.61	6,815.45	7,493.18	8,274.38
Market Value of Equity	70.21	78,842.55	8,635.93	11,903.42	6,821.68	7,603.26	11,656.57

Table 2

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Descriptive Statistics for a Sample of 282 firms from 1992, 1994, and 1996. Board of Director, Audit Committee, and Executive Committee Information came from Proxy Statements closest to but Preceding the Announcement of Annual Earnings.

Total Board Statistics	<u>Mean</u>	<u>Range</u>
Percent of Firms with CEO Duality	85	-
Number of Board Meetings	8.26	4 - 35
Percent of Inside Directors	18	0 - 100
Affiliated Directors	15	0 - 100
Outside Directors	67	0 - 100
Board Size	12.48	6 - 39
Percent of Corporate Directors	74	0 - 100
Finance Directors	16.3	0 - 88
Bank Directors	4.2	0 - 30
Investment Bank Directors	3.5	0 - 85
Blockholder Directors	10.8	0 - 44
Legal Directors	10.8	0 - 44
Blockholder Votes as Percent of Total Outstanding	8.8	0 - 64
 Audit Committee Statistics		
Number of Audit Committee Meetings	3.87	1 - 58
Audit Committee Size	4.53	2 - 12
Percent of Inside Directors	0	0 - 0
Affiliated Directors	15	0 - 100
Outside Directors	85	0 - 100
Percent of Corporate Directors	77	0 - 100
Finance Directors	21.1	0 - 100
Bank Directors	4.7	0 - 75
Investment Bank Directors	3.4	0 - 67
Legal Directors	14	0 - 67
Blockholder Directors	0.1	0 - 25
 Executive Committee Statistics		
Number of Executive Committee Meetings	3.2	0 - 51
Executive Committee Size	4.86	2 - 12
Percent of Inside Directors	35.2	0 - 100
Affiliated Directors	16.2	0 - 100
Outside Directors	48.4	0 - 100
Percent of Corporate Directors	57	0 - 100
Finance Directors	16.4	0 - 100
Bank Directors	5	0 - 75
Investment Bank Directors	2.7	0 - 100
Legal Directors	6.9	0 - 50
Blockholder Directors	7.9	0 - 14

Table 3

Board of Director Regression Results. Dependent Variable is Discretionary Current Accruals.

Reg #	Constant	CEO Duality	Number of Board Meetings	Percent Outside Directors	Percentage				Board Size	Percent Blockholder Votes	Log		Adjusted R ² (F)	
					Finance Outside Directors	Corporate Outside Directors	Legal Outside Directors	Blockholder Outside Directors			Book Value of Total Assets	Log Sales		Log Market Value Equity
1	0.0195 (1.68) [†]	-0.0101 (-0.80)											-0.001 (0.64)	
2	0.0299 (2.59)**	-	-0.0023 (-1.83) [†]										0.009 (3.34) [†]	
3	0.0427 (2.38)*	-	-	-0.0482 (-1.85) [†]									0.013 (3.44) [†]	
4	0.0088 (1.27)	-	-	-	0.0102 (0.32)								-0.003 (0.10)	
5	0.0414 (2.79)**	-	-	-	-	-0.0420 (-2.11)*							0.016 (4.45)*	
6	0.0067 (0.96)	-	-	-	-	-	0.0344 (0.69)						-0.002 (0.47)	
7	0.0109 (2.39)*	-	-	-	-	-	-	-0.2510 (-0.65)					-0.002 (0.52)	
8	0.0423 (2.85)**	-	-	-	-	-	-	-	-0.0026 (-2.25)*				0.015 (5.06)*	
9	0.0055 (0.96)	-	-	-	-	-	-	-	-	0.0574 (1.44)			0.008 (2.08)	
10	0.0877 (3.27)***	-	-	-	-	-	-	-	-	-	-0.0091 (-2.98)**		0.029 (8.88)**	
11	0.0999 (2.96)**	-	-	-	-	-	-	-	-	-	-	-0.0109 (-2.73)**	0.024 (7.43)**	
12	0.0625 (1.98)*	-	-	-	-	-	-	-	-	-	-	-	-0.0064 (-1.73) [†]	0.008 (3.01) [†]

** Significant at 0.01 or better.

* Significant at 0.05 or better.

† Significant at 0.10 or better.

Table 4

Board of Director Regression Results.^a Dependent Variable is Discretionary Current Accruals.

Reg #	Constant	Percent of				Log Market Value Equity	D = 1 if year = 1992	D = 1 if year = 1994	Adjusted R ² (F)			
		Corporate Directors	Finance Directors	Legal Directors	Blockholder Directors							
1	0.0896 (2.49)*	-0.0344 (-1.68) [†]	-0.0050 (-0.15)	0.0155 (0.31)	-0.1690 (-0.44)	-0.0056 (-1.42)	-0.0150 (-1.34)	-0.0126 (-1.12)	0.005 (1.20)			
2	Constant	Percent				Percent Blockholder Votes	Average Outside Director Tenure	Number of Board Meetings	Log Market Value of Equity	D = 1 if year = 1992	D = 1 if year = 1994	Adjusted R ² (F)
		Outside Directors	Corporate Directors	Blockholder Directors	Board Size							
	0.0790 (1.93) [†]	-0.0169 (-0.54)	-0.0358 (-1.51)	-0.2640 (-0.66)	-0.0024 (-2.04)*	0.0517 (1.16)	0.0030 (2.20)*	-0.0011 (-0.86)	-0.0017 (-0.40)	-0.0111 (-0.95)	-0.0112 (-0.98)	0.040 (2.06)*
3	0.0776 (1.97)*	-	-0.0427 (-2.06)*	-	-0.0025 (-2.12)*	0.0410 (0.97)	0.0031 (2.25)*	-0.0013 (-0.99)	-0.0019 (-0.45)	-0.0151 (-1.00)	-0.0125 (-1.11)	0.044 (2.48)*
4	0.0870 (2.45)*	-	-0.0451 (-2.21)*	-	-0.0026 (-2.25)*	-	0.0031 (2.29)*	-	-0.0033 (-0.82)	-0.0141 (-1.27)	-0.0145 (-1.32)	0.046 (3.07)**
5	0.0693 (2.92)**	-	-0.0520 (-2.61)**	-	-0.0026 (-2.32)*	-	0.0031 (2.25)*	-	-	-0.0187 (-1.69) [†]	-0.0192 (-1.75) [†]	0.049 (3.74)*
6	0.0559 (2.45)*	-	-0.0481 (2.42)*	-	-0.0027 (-2.40)*	-	0.0029 (2.15)*	-	-	-	-	0.042 (4.89)**

^aPercent of outside directors has a significant and positive correlation with number of board meetings and corporate directors and market value of equity. Corporate directors is significantly correlated with market value of equity. Board size is highly correlated with all measures of firm size. These correlations dictated the combinations of independent variables in the multiple regressions as we attempt to avoid multicollinearity problems.

** Significant at 0.01 or better.

* Significant at 0.05 or better.

[†] Significant at 0.10 or better.

Table 5

Audit Committee Regression Results

Reg #	Constant	Audit Committee Outside Directors	Audit Committee Corporate Members	Audit Committee Legal Members	Audit Committee Financial Members	Audit Committee Banking Members	Audit Committee Investment Banking Members	Audit Committee Blockholder Members	Audit Committee Size	Number of Audit Committee Meetings	Adjusted R ² (F)
1	0.0149 (0.94)	-0.0074 (-0.41)									-0.003 (0.17)
2	0.0488 (3.94)***	-	-0.0523 (-3.44)***								0.039 (11.83)***
3	0.0054 (1.00)	-	-	0.0218 (0.88)							-0.001 (0.77)
4	0.0046 (0.80)	-	-	-	0.0182 (0.94)						0.000 (0.89)
5	0.0062 (1.41)	-	-	-	-	0.0475 (1.36)					0.003 (1.86)
6	0.0115 (2.67)**	-	-	-	-	-	-0.0840 (-2.07)*				0.012 (4.28)*
7	0.0087 (2.11)*	-	-	-	-	-	-	-0.1050 (-0.47)			-0.003 (0.22)
8	0.0248 (1.85) [†]	-	-	-	-	-	-	-	-0.0036 (-1.27)		0.006 (1.61)
9	0.0216 (3.31)***	-	-	-	-	-	-	-	-	-0.0029 (-2.34)*	0.020 (5.47)*

***Significant at 0.001 or better.

*Significant at 0.05 or better.

Table 6

Audit Committee Regression Results

<u>Reg #</u>	<u>Constant</u>	<u>Number of Audit Committee Meetings</u>	<u>Audit Committee Corporate Members</u>	<u>Audit Committee Investment Banking Members</u>	<u>Audit Committee Size</u>	<u>D = 1 if Year = 1992</u>	<u>D = 1 if Year = 1994</u>	<u>Log Market Value of Equity</u>	<u>Adjusted R² (F)</u>
1	0.1111 (3.53)***	-0.0029 (-2.77)**	-0.0406 (2.71)**	-0.0685 (-1.77) [†]	-0.0019 (-0.70)	-0.0095 (-0.99)	-0.0060 (-0.61)	-0.0054 (-1.61)	0.064 (3.54)***
2	0.1050 (3.47)***	-0.0030 (-2.78)**	-0.0411 (-2.75)**	-0.0683 (-1.77) [†]	-	-0.0099 (-1.02)	-0.0058 (-0.60)	-0.0057 (-1.69) [†]	0.066 (4.06)***
3	0.0620 (4.79)***	-0.0030 (-2.79)**	-0.0510 (-3.40)***	-0.0756 (-1.91) [†]	-	-	-	-	0.072 (7.84)***

*** Significant at 0.001 or better.
 ** Significant at 0.01 or better.
 * Significant at 0.05 or better.
 † Significant at 0.10 or better.

Table 7

Executive Committee Regression Results

Reg #	Constant	Executive Committee Outside Directors	Executive Committee Corporate Members	Executive Committee Legal Members	Executive Committee Financial Members	Executive Committee Banking Members	Executive Committee Investment Banking Members	Executive Committee Blockholder Members	Executive Committee Size	Number of Executive Committee Meetings	Adjusted R ² (F)
1	0.0268 (2.71)**	-0.0366 (-2.04)*									0.018 (4.18)*
2	0.0319 (1.86) [†]	-	-0.0289 (-1.38)								0.005 (1.90)
3	0.0099 (1.72) [†]	-	-	-0.0093 (-0.22)							-0.006 (0.05)
4	0.0151 (2.47)*	-	-	-	-0.0358 (-1.61)						0.009 (2.60)
5	0.0116 (2.12)*	-	-	-	-	-0.0557 (-1.02)					0.000 (1.05)
6	0.0105 (2.04)*	-	-	-	-	-	-0.0407 (-0.96)				-0.001 (0.91)
7	0.0094 (1.89) [†]	-	-	-	-	-	-	-0.1981 (-0.44)			-0.005 (0.19)
8	0.0315 (2.28)*	-	-	-	-	-	-	-	-0.0045 (-1.72) [†]		0.011 (2.95) [†]
9	0.0084 (1.72) [†]	-	-	-	-	-	-	-	-	-0.0011 (-1.45)	0.009 (2.09)

** Significant at 0.01 or better.

* Significant at 0.05 or better.

[†] Significant at 0.10 or better.

Table 8

Reg #	Constant	Number of Executive Committee Meetings	Executive Committee Outside Director	Executive Committee Finance Member	Executive Committee Size	D = 1 if Year = 1992	D = 1 if Year = 1994	Log Market Value of Equity	Adjusted R ² (F)
1	0.0794 (2.84)**	-0.0010 (-1.30)	-0.0245 (-1.62)	-0.0196 (-1.22)	-0.0006 (-0.30)	-0.0125 (-1.37)	-0.0186 (-2.13)*	-0.0053 (-1.77) [†]	0.079 (2.40)*
2	0.0768 (2.90)**	-0.0010 (-1.34)	-0.0257 (-1.77) [†]	-0.0202 (-1.27)	-	-0.0130 (-1.46)	-0.0185 (-2.13)*	-0.0052 (-1.75) [†]	0.086 (2.81)*
3	0.0774 (2.92)**	-0.0013 (-1.89) [†]	-0.0278 (-1.93) [†]	-	-	-0.0133 (-1.48)	-0.0202 (-2.33)*	-0.0055 (-1.83) [†]	0.081 (3.04)*
4	0.0236 (2.21)*	-0.0016 (-2.00)*	-0.0282 (-1.61)	-	-	-	-	-	0.039 (2.37) [†]

** Significant at 0.01 or better.

* Significant at 0.05 or better.

[†] Significant at 0.10 or better.