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Miami, Florida

GENDER DIFFERENCES IN AUDIT COMMITTEES

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To: Dean Joyce Elam
College of Business Administration

This dissertation, written by Sheela Thiruvadi, and entitled Gender Differences in Audit Committees, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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DEDICATION

I dedicate this dissertation to my parents, brothers and sister for their unconditional love and encouragement. Especially, I want to thank my mom for her patience, understanding, support, encouragement and most of all love in everything I do which made it possible to achieve this work.

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I wish to express my sincere thanks to all my family members for their unconditional love, continual support and faith. I wish to express my eternal thanks to God for all the love and blessings. I wish to express my appreciation to all my friends, accounting faculty members and staff for their encouragement and support.

ABSTRACT OF THE DISSERTATION

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by

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Florida International University, 2008

Miami, Florida

Professor Kannan Raghunandan, Co-Major Professor

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Issues related to the composition of audit committees have attracted significant interest from legislators and regulators in recent years. In my dissertation, I examine one overlooked component of audit committee composition – namely, the presence of female directors on the audit committee. I empirically test to see if there are any differences in the functioning of audit committee when there is at least one female director on the audit committee. My dissertation examines three issues: audit committee diligence, audit pricing and earnings management.

The absence of females on corporate boards has become the focus of legislators in some countries. Prior research, in a variety of contexts, suggests that women are in general more conservative in their judgments and decisions. The first part of my dissertation empirically shows that the presence of at least one female director on the audit committee makes the audit committee have more meetings. The second essay empirically examines if there is a positive association between audit fees and the presence of female directors in the audit committee. I posit that having a female director on the audit committee will result in higher audit fees. I find no significant evidence to

show that audit fees are higher when there is a female director on the audit committee. The third part of my dissertation empirically examines if there an association between the presence of a female director on the audit committee and earnings management. I find no significant evidence to show that the presence of female directors on the audit committee constrains earnings management. Overall, the results suggest that having a female on the audit committee changes the form – if not the substance – of audit committee functioning.

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I. Introduction

Sarbanes Oxley Act (SOX) 2002 was one of the most sweeping modernizations of securities regulation since the enactment of the Securities Act of 1933 and the Exchange Act of 1934. SOX has specific requirements relating to the composition of audit committees as audit committees' play an important role in the financial reporting and governance process. The SEC has adopted new rules related to the independence and functioning of corporate audit committees (SEC 1999a, 1999b, 2003a, 2003b) but there has not been much focus on the issue of gender. In my dissertation, I develop arguments as to why we can expect differences in audit committee behavior due to the presence of females on the audit committee. I then empirically test to see if there are indeed differences in audit committee behavior due to the presence of females on the audit committee.

My doctoral dissertation consists of three essays on *"Gender Differences in Audit Committees."* The following are the three issues that I investigate: audit committee diligence, audit pricing, and earnings management.

The first part of my dissertation empirically examines whether there is a positive association between the presence of female directors on the audit committee and the number of audit committee meetings as a proxy for audit committee diligence. The primary motivation for the first essay arises from the concerns expressed by the US Securities and Exchange Commissission (SEC 1999a, 1999b, 2003a, 2003b) about the composition and activities of audit committees. Moreover, the absence of females in

corporate boards of directors has become the focus of legislators in some countries (e.g., Waters 2004).

Prior studies show that women are under-represented in corporate boards (Burke and Mattis, 2000). Women can greatly enhance board deliberations because they "provide unique perspectives, experiences, and work styles as compared to their male counterparts" (Daily and Dalton 2003). Daily and Dalton (2003) argue that women's "communication styles tend to be more participative and process-oriented." Hence, the presence of at least one female director on the audit committee will likely lead to an increase in the number of audit committee meetings.

The second part of my dissertation empirically examines if there is a positive association between audit fees and the presence of female directors in the audit committee. The Securities and Exchange Commission (SEC), the Public Oversight Board (POB 1993) and the National Association of Corporate Directors (NACD 2000) have emphasized that audit committee needs to be cautious in assessing the relationship between the firm's management and its external auditors. The work of the audit committee is to review the preliminary audit program and the results thereof (DeZoort 1997; BRC 1999; Abbott et al, 2003a), so audit committees can influence the level of audit coverage. I posit that a female audit committee member will be more cautious and hence demand higher audit quality (greater assurance through more audit work), thereby resulting in higher audit fees.

The third part of my dissertation empirically examines if there is a negative association between the presence of female director on the audit committee and aggressive earnings management. Audit committees have an important role in ensuring

financial reporting quality and in minimizing earnings management by managers of public companies (Levitt 1998; Blue Ribbon Committee [BRC] 1999). Some prior studies have examined the association between earnings management and some audit committee composition variables such as independence and expertise (Klein 2002; Bedard et al. 2004; Xie et al. 2003). I test to see if having a female director on the audit committee is effective in constraining earnings management.

Organizations of the following sections

I organize the remaining sections as follows. Chapter II discusses gender differences in a variety of contexts, including business and accounting. Chapter III examines the diligence of audit committees. I use audit committee meeting frequency as a proxy for audit committee diligence, and use regression model to test the effect of having at least one female director on the audit committee. I find that audit committees that have at least one female director will meet more often than all-male audit committees. Chapter IV examines the association between audit fees and the presence of female directors in the audit committee. I use the Abbott, Parker, Peters and Raghunandan (2003a) audit fee model to test the data. I find that there is no change in the audit fee in the presence of female directors in the audit committee. Chapter V discusses issues related to earnings management and tests if the presence of female director in the audit committee leads to lower earnings management. The empirical tests show no evidence to support that the presence of female directors is likely to reduce earnings management. Section VI describes the contributions, limitations and potential future research extensions of the three essays.

II. Gender Differences in Judgments and Decisions

In this chapter, I discuss prior research related to gender differences in a variety of contexts. I begin with a discussion about differences based on gender in personal financial decisions, and then discuss gender-based differences in business contexts; finally, I summarize gender-based differences in accounting contexts.

Gender differences in personal financial decisions

Estes and Hosseini (1988) examine the association of personal characteristics influencing confidence in an investment decision context. Total of 1359 subjects belonging to four categories viz. shareholders, security analysis, institutional investors and general business persons participated. The first three groups were contacted by email and the last group in person in classrooms. Multiple regression was used to statistically control for variation in personal characteristics, and also develop a model of investment decision confidence. Results show that after controlling for relevant variables, there is less confidence among women than men in investment decisions given the same age, business experience, college education, knowledge of common stock, same accounting and finance hours and market and investment decisions. Similarly, there was less confidence among stockholders especially those less familiar with stock prices when compared with professional investors and general business persons. However, there was an increase in confidence with rising stock market, studies in the fields of accounting & finance and a positive investment attitude.

Stinerock et al. (1991) examine if there is a difference in the usage of financial advisors as a surrogate consumer among men and women and if so, what are the psychographic patterns. Sample of 2500 randomly chosen subscribers was obtained from a mailing list who subscribe to an executive newsletter that offers financial and personal investment advice on conditions of anonymity. Results show that females have a higher probability of using a financial planner than males. The psychographic analysis for four out of five scales shows that females had higher scores in financial anxiety, risk averse and need for financial surrogacy than males but had lower scores in financial opinion leadership.

Jianakoplos and Bernasek (1998) examine if there is a greater financial risk aversion among women than men. Sample of data consists of 3143 households that depict the financial situation of all U.S. households from the *Survey of Consumer Finances* SCF89. Results show that single women are more risk averse than single men in financial decisions even if there is an increase in household wealth measured by excluding residential housing and human capital. Further, results show that small portions of risky assets is held by single women than single men or married couples and they further reduce the assets if there is an increase in the number of children in their household, ceteris paribus. However, on an average, there is a higher likelihood of black women willing to hold more risky assets than men, single white women and married couples.

Sunden and Surette (1998) examine if there is a difference in the allocation of assets in defined contribution plans among workers based on gender using data from 1992 and 1995 *Surveys of Consumers Finances*. The sample size for the survey was 3,906 households in 1992 and 4,299 households in 1995. Results show that investment

choices for defined contributions are not determined by gender alone but a combination of gender and marital status. There is a lesser likelihood of single women and married men to choose 'mostly stocks' than single men. Similarly, married women are more likely to choose 'mostly bonds'.

Bajtelsmit et al. (1999) investigate gender differences in the allocation of household wealth to defined contribution pension using data from the 1989 *Survey of Consumer Finances* (SCF89). Their sample includes 5,287 individuals. Results show that women are more risk averse in the allocation of wealth into defined contributions pensions.

Bernasek and Shwiff (2001) examine the effects of gender and household financial decision making process on an individual's decision to allocate defined contribution pension assets in stock. Data was collected in the form of a mail survey in spring 2000 from faculty employed in five universities in Colorado. Results show that men take greater risk in the allocation of their defined contribution pension if their partners or spouses are willing to take average risk for gaining average returns compared to that of men whose partners or spouses are unwilling to take any risks. In contrast, women are willing to take less risk in allocation of their pension if they have spouses or partners who are willing to take average risk for gaining average returns.

Barber and Odean (2001) test if excessive market trading is due to over confidence by investors based on gender. Since psychologists research find that men in finance areas are overconfident than women, this can lead to two predictions: trading will be done by more men than women and men's performance will be hurt more than women due to excessive trading. Primary data set is based on common stock investments of

78,000 households for the six years ending in December 1996 from a large discount brokerage firm. Secondary data set identifies the gender of persons who opened a household's first account, for 37,664 households of which 29,659 (79 %) were by men and 8005 (21%) were by women. This data was provided by the brokerage house consisting of demographic information compiled by Infobase Inc. Results show that men on an average have one and a half times higher turnover rate of common stocks than women. Moreover, men reduce their net returns through trading by 0.94 percentage points more than women per year and it is more noticeable between single men and women. Single men reduce their returns by 1.44 percentage points due to 67 percent more trading than single women per year.

Watson and McNaughton (2007) examine how superannuation (retirement) fund risk preferences of staff in the Australian university sector is impacted by gender. Final dataset of 32,061 containing member details who selected investment plan for the period 1 July 1997 to 30 June 2003 was obtained from the superannuation fund UniSuper, sole provider to academic and general staff at Australian Universities. Results show that investment plans with lower risks are chosen by female members of UniSuper than their male counterparts even after controlling for age, income and educational differences.

In summary, prior research suggests that there are gender differences in personal financial decisions. The data suggest that women tend to be more cautious in their investment decisions than men.

Lenney (1977) examines the empirical validity of suggestions that women exhibit lower self-confidence than men in all achievement situations. Results show that women

do not exhibit lower self confidence than men in all achievement situations although this problem is frequent among women than men. In fact, evidence shows that women's self confidence is influenced by certain situation variables such as nature of the specific task, availability of unambiguous performance feedback and emphasis given to social comparison or evaluation.

Gender differences in board composition

Some prior studies have examined gender based differences in board composition. Bilimoria and Piderit (1994) examine the odds of male and female directors' board committee membership by examining the joint influence of a set of qualifications. The sample consisted of 1,940 male and 175 female directors from 133 companies having atleast one women on their board. The results show that women face a disadvantage in their odds of procuring executive committee membership inspite of controlling for experience characteristics. Further, male outside directors are favored over female outside directors for audit committee membership after controlling for relevant characteristics. Finally, there is a preference of females in public affairs committee membership than males.

Burke (1994) examines the roles and responsibilities of women on Canadian corporate boards of directors with the help of an eleven page survey questionnaire. The Canadian women director's names and addresses were obtained from the 1992 Financial Post Directory of Directors. Total response rate was 50 percent totaling 248. Results show that 58 % of the respondents that it was their responsibility to address policy issues relevant to women compared to about 43% who said that it was expected of them.

Although, policy issues on equal opportunities for women, work and family were ranked among the top three policy issues and two third of the women director has raised one or two of this issues yet, less than one third of directors focused on these issues. Data taken together show that woman on private corporate boards strives for changing issues relevant to women. Similarly, only about two thirds of women directors interacted with their senior level women in the company's board they serve and it was mostly related to board matters and meetings.

Holton (1995) compares the findings of a survey conducted in 1993 by Ashridge management group about women on board with top 200 companies in Britain with that of an earlier survey conducted in 1989. Most of the women in the survey hold non-executive positions. Results show that although there is an increase in the number of women directors since 1989 from 24 women directors to 57 women directors on board of Britain's top 200 companies, yet the 57 women directors appointments across the 200 companies surveyed represents only 4 percent of all directorships in 1993.

Burke (1997) examines 278 women directors serving on the board of Canadian private and public sector organizations. An eleven page survey questionnaire was sent to Canadian women directors whose addresses were obtained from the 1992 financial post directory of directors. Results show that ninety percent of the directors were university graduates with one third having professional designations (e.g., CPA), majority of them married with children and having compensation (base plus bonus) ranging below $50,000 – 400,000 with an average age of 45. They hold four types of directorships (an average of 1.3 directorships in private sector, 1.3 in not-for-profit, 0.6 in public sector and 0.2 in other). Nomination to the board was still the result of the "old boy's" network. However,

women directors felt that they were impacting the female employees by increasing board sensitivity to issues affecting women and creating a positive work atmosphere.

Singh et al. (2001) examine the business case for increased female directors and lack of female representation on UK FTSE 100 company boards in 1999 and 2000 and also compares the same to US data. Data about FTSE 100 companies was obtained from the database service of one source data on July 1991 and again on 31 July 2000 through the Financial Times database. Biographical details of directors were obtained from FTSE 100 companies' annual reports and websites. Results show that there was presence of a female director in 64 percent FTSE 100 companies' in July 1999 but this dropped down to 58 percent by July 2000, similar to the top-level reported in US fortune 500 companies. There was not much representation of women on UK boards similar to US except for appointments of executive directors. However, there was evidence of female directors in bigger, more profitable and large turnover FTSE 100 firms, similar to findings in US.

Singh and Vinnicombe (2004) examine the homogeneity of top UK boards using evidence from a survey of women directors in FTSE 100 companies. Details of company size, directors and sector of FTSE 100 companies were taken from a commercial database in September 2002. Findings show that the number of women directors had gone down from 64 percent in 1999 to 61 percent in 2002. There was an increase of female executive (inside) directors from 10 in 2001 to 15 in 2002, a percentage increase of 3 percent from 2 percent. There was no female executive director on the main board of 88 percent FTSE 100 companies thereby lacking female role models to follow a career path similar to that of men. Although prior research has disproved reasons like lack of experience,

commitment and ambition for lack of women directors, yet further analysis has to be done using underlying theories and perspective of social identity and exclusions.

Farrell and Hersch (2005) examine if the selection of a director to serve on the board is impacted by gender. Final sample consists of 309 non-regulated industries for the first 7 out of 10 sample years and then 300, 291 & 266 firms for periods 1997, 1998 and 1999 from fortune 500 and service 500 lists in 1990. Results show that selection to the board is not gender neutral and the likelihood of adding a woman to the board is negatively associated to the presence of women already on the board. There is a greater probability of adding a woman on the board when a woman departs from the board. This suggests that the choice of director is impacted by gender.

Sheridan and Milgate (2005) examine the process by which men and women appointed to the board are different among the two groups. Random selection of men and women board members of publicly listed companies was obtained from the Australian Stock Exchange (ASX) and the survey questionnaire was sent out to 152 women and 430 men. The response rate was 37 percent (47 participants) for women and 11 percent (47 participants) for men. Results show that there is a significant difference in terms of family affiliations wherein 11 percent of the women stated that they were recommended by their affiliations compared to men who did not cite the above reason. Similarly, there was a significant difference in terms of visibility between the two groups wherein 32 percent of women said that they were selected due to high visibility compared to 11 percent of men.

Huse and Solberg (2006) analyze how women can make contributions on corporate board by examining and conceptualizing the gender-related boardroom

dynamics. Data was collected by interviewing women directors in Scandinavia and getting their board life stories; a narrative approach was use for analyzing data. Interview was focused on three areas: their background, experience as director and advice to other women regarding being on board. Findings show that power game inside and outside the boardroom was to be understood by both men and women. Contribution of women directors depends on their ability and willingness to make association with influential actors, spend time on preparations, and take leadership roles besides being present during important decision making arenas.

Peterson and Philpot (2007) examine the background and committee involvement of female directors and a random sample of male directors. Data of directors was collected from the proxy statements and annual meeting notices of U.S.Fortune 500 firms. After controlling for director and firm characteristics, resource dependency roles of directors and gender and characteristics interaction in the logistic regression model, several observations are noted from the analysis: (a) In terms of professional background, females tend to be as highly qualified as men; (b) there is a higher likelihood of female directors to sit on public affairs committees than executive committee in comparison to their male counterparts; (c) there is not much evidence of gender bias in assigning director to other board committees like finance, compensation etc.; and (d) there is evidence to show that the evaluation of men and women are different for resource dependency by board.

In summary, prior studies reveal that the likelihood of membership in some board committees varies with gender. Specifically, women are less likely to be included in

nominating, executive, and audit committees compared to men, after controlling for experience-based differences.

Carter et al. (2003) examine the association between board diversity and firm value by analyzing fortune 1000 firms. Board characteristics data for 1997 was obtained from *Significant Data for Directors 1999*: *Board Policies and Governance Trends*, and accounting data from Compustat database. Final sample of data consists of 638 firms. Results show that Tobin's Q measure shows a positive association between the presence of women or minorities on the board and firm value after controlling for size, industry and other corporate governance measures. Similarly, there is an increase of women and minorities directors with firm size increase but a decrease with the increase in the number of insiders. Overall, results show evidence of a positive association between firm value and diversity on the board of directors.

Erhardt et al. (2003) examine the association between demographic diversity on board of directors and firm performance. Organizational performance was measured using two financial ratios: return on assets & return on investments and board diversity was represented as a percentage of women and minorities. The sample includes 112 large public companies of various industries. The financial performance measures were obtained from Compact Disclosure database for year 1993 and 1998. Results show that there was a positive association between the board of director diversity and return on investment and return on assets. Thus, increase board diversity has an impact on the organization's financial performance.

Adams and Ferreira (2003) provide evidence of an association between the variability of stock returns, director compensation and board diversity proxied by gender

composition. Cross sectional sample of data was 1462 publicly traded firms consisting of financial data and director's compensation for fiscal year 1998 from proxy statements, Compustat, CRSP, ExecuComp, Moody's manuals and firms' websites. Findings show that there are fewer women on the board of directors of firms facing more variability in their stock returns. Further, findings show that firms with diverse boards provide compensation to directors in the form of restricted shares, reduce the importance of fixed salary while maintaining the fraction of stock option at the same level. The above evidence states that board homogeneity and incentive pay are substitutes. Overall, evidence shows that board diversity, particularly gender composition plays an important role with regard to compensation and organization design.

As noted earlier, Farrell and Hersch (2005) examine if the selection of a director to serve on the board is impacted by gender. Their study also indicates that women tend to choose better performing firms; there is also evidence of an insignificant abnormal return on the date the woman is added to the board.

Thus, the evidence from some prior studies provides some evidence of differences in the performance of firms that have at least one female director on the board. However, it is noteworthy that all such studies have only examined the entire board as opposed to the presence of women in specific committees of the board.

Gender differences in business

Powell and Ansic (1997) evaluate the degree of risk seeking behavior trait exhibited by women then men in financial decision-making using a computerized experimental approach. The two experiments used are *insurance study method* and

currency market study method. Sample for insurance study were unmatched subjects of 64 male and 62 female volunteers from the undergraduate and post graduate population with a mean age of 20.57 and SD of 30.08 years. Similarly, there were 66 males and 35 female volunteers for the current market study method. Results from both studies reveal that there is a lower preference for risk among females irrespective of familiarity, framing or costs. Further, results show that irrespective of ambiguity, framing or familiarity, different strategies are adopted by male and female in financial decision making with men using multiple strategies more often and perceiving sources of information than females. This reinforces the conventional belief that women are not able financial managers due to strategy difference.

Byrnes et al. (1999) examined the risk-taking tendencies of male & female participants by conducting a meta-analysis of 150 studies. The studies were retrieved using five steps from PsycLIT and PsycINFO database and coded according to the type of task, content and age. The three types of tasks that were identified are hypothetical choice with three content categories, self-reported behavior with five content categories and observed behavior with eight content categories. Results show that there is a higher likelihood of male participants taking more risk than female participants as the mean effect size was greater than zero for 14 out of 16 types for a given type of risk and nearly half the effects were greater than .20. A large gender difference was noticed for certain topics (e.g. physical skills and intellectual risk taking) than others. Additionally, there was nontrivial gender differences for certain topics associated with age (e.g. driving), whereas there was small gender differences at most ages (e.g. smoking) or shifts to negative effects (e.g. sexual activity) and the gap seemed to be growing smaller.

Venkatesh et al. (2000) examine if gender differences exist in the adoption and usage of technology in the workplace using theory of planned behavior. Four organizations having new technology application participated in this study. Total usable responses were 355 including 160 women (45%) for the test over a five month period. Results show that there are differences among men and women's decision processes in adopting new technologies. Men were more prone to using technology and they were not influenced by subjective norm whereas women were more influenced by subjective norm and perceived behavioral control.

Dwyer et al. (2002) examine if there is a gender difference in risk taking across mutual fund investment decisions. A survey was conducted on 2000 randomly selected mutual fund investors by the Office of the Comptroller of the Currency and the Securities Exchange Commission in 1995. Results show that in mutual fund investments, women take less risk than men. However, this gender difference in risk taking is significantly reduced when a financial investment knowledge control variable is added to the regression model.

Fehr-Duda et al. (2006) examine if gender differences in risk taking behavior are due to probability weighting functions or valuation of outcomes using laboratory experiment with monetary incentives. Data for analysis includes 181 students from various faculties of the Swiss Federal Institute of Technology and the University of Zurich. Results show that the probability weighting functions for females are different than males but there is not much difference in the value functions. Moreover, irrespective of the treatment condition, women's curves are more curved and women are more inclined to underestimate large probabilities in the domain of gain than men especially in

investment terms than abstract terms. Further, women tend to be more risk averse than men especially in investment decisions.

Gender differences in accounting contexts

Fallan (1999) examine if tax knowledge has an influence on tax attitude changes among gender. The study employs an identical pre-test and post-test questionnaire on male and female student groups as a quasi-experiment. The knowledge on tax was measured through an additive index where scores from 12 questions related to allowance and tax liabilities were calculated in the pre & post test. Findings show that there was a significant attitude change among male and female tax law students towards the fairness of the tax system after gaining tax knowledge. Results show that gender is significant in explaining attitude changes in tax ethics. There is a stricter attitude by female students over other people's tax evasion after more exposure to tax knowledge.

Neidermeyer et al. (2003) examine if gender differences exist in their values towards low balling for male and female professional auditors in four public accounting firms. The study was conducted through a survey approach administered in three of the Big Six (Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick and Price Waterhouse). In addition, surveys were mailed to one firm where survey participants were randomly selected. Total response rate was 90 percent totaling 152 usable responses. Results show significant gender differences in (a) accepting lowballing as an accounting practice; (b) viewing lowballing as a violation of the code of professional conduct; and, (c) personal beliefs about profession's stated values. Specifically, females are significantly against the practice with female. Women also feel that lowballing violates the code of professional conduct than their male

counterparts. Finally, women report a greater disparity between their personal and professional values when compared to their male counterparts.

Cullis et al. (2006) examined detection rates, instrumentality, framing effects and individual differences in the context of experimental tax evasion by conducting tax compliance study with five hundred and thirty nine psychology and economic majors. Four versions of questionnaires were distributed among 539 respondents from the University of Bath (241 males, 295 females, 3 with no disclosure about gender). Results show that the amount of declared income is strongly influenced by the probability of audit (detection). There is no statistical significance for effects of tax framing (framing) and instructions to act instrumentally or not (instrumental). Economists declared significantly less in all three detection conditions, (less income, influenced by framing effects and in qualitative analysis, less cooperative and not concerned with tax morality). However, when gender respondents were taken into account and general linear model was repeated separately for male and female, males declare less when framing tax as a loss.

In summary, prior research shows that women have lesser visibility, are more risk averse, have lesser confidence and are more compliant with tax and accounting rules and regulations than men. Women also exhibit a higher code of professional conduct when compared to men and increase board sensitivity to address women issues thereby creating a positive work atmosphere. Moreover, the presence of women on the corporate board has led to good outcomes like firm value, lesser variability in stock returns, better investment choices, and greater return on assets etc. Hence, board diversity has a significant and positive impact on the overall performance of the organization.

III. Gender Differences and Audit Committee Diligence

Motivation

The motivation for this essay comes from the concerns by US Securities and Exchange Commissission (SEC 1999a, 1999b, 2003a, 2003b) about the importance of the composition and activities of audit committees. Private sector commissions and large audit firms have repeatedly emphasized the need for frequent audit committee meetings. The National Commission on Fraudulent Financial Reporting (NCFFR 1987) recommends regular meetings of the audit committee as it would enable the audit committee to have timely discussions with the internal auditor, management and outside auditors. In an important speech, the then SEC Chairman Levitt (1998) recommends that an audit committee should hold at least 12 meetings per year in order to address the interest of the investor. The Blue Ribbon Commission on Audit Committees that was established following the speech by Levitt (BRC 1999) recommends that audit committees should hold at least 4 regular meetings annually. Regular meetings between audit committees, auditors and management strengthen their relationship and also enable them to address issues well in advance.

PricewaterhouseCoopers (1999) states that it is necessary for audit committees to hold regular meetings as it enables review of financial statements well in advance and address any issues arising during the meetings. KPMG (1999) recommends at least three to four audit committee meetings per year to keep the audit committee focused.

The absence of females in corporate boards of directors has become the focus of legislators in some countries (e.g., Waters 2004). As noted in the previous chapter, there is a growing stream of research indicating the presence of women could alter corporate decision making processes. There is extensive prior research in psychology and sociology indicating that women are more risk-averse than men, and that women are more likely to use a democratic and trust building approach to decision making.

Prior studies show that women are under-represented in corporate boards (Burke and Mattis, 2000). Women can greatly enhance board deliberations because they "provide unique perspectives, experiences, and work styles as compared to their male counterparts" (Daily and Dalton 2003). Daily and Dalton (2003) argue that women's "communication styles tend to be more participative and process-oriented." Hence, the presence of at least one female director on the audit committee will likely lead to an increase in the number of audit committee meetings. I examine if audit committees that have at least one female director will meet more often than all male audit committees.

Related Literature

Audit committee diligence

Menon and Williams (1994) investigate the factors that are associated with meeting frequency and the presence of insiders of the audit committee (AC). Their data consists of 200 randomly selected OTC (over the counter) firms which have data on AC existence for the period 1986-1987. Results show that audit committee is influenced by board composition. The probability that audit committees will exclude officers of the company and also meet more frequently increases when there is an increase in the

proportion of outside directors. Further, findings show that there is an association between firm size and audit committee meetings. In all firms with and without audit committees, there is a higher likelihood of large firms having a more active audit committee than smaller firms.

McMullen and Raghunandan (1996) study the differences in meeting frequency and composition of audit committees of companies with and without financial problems. The sample includes 51 companies with financial problems (enforcement action by SEC and quarterly earnings restatement) and 77 companies without financial problems for the four-year period before 1989. The results show that there is a lower likelihood of audit committee having solely outside directors in companies having financial problems (only 67% of companies fulfilled this criteria compared to companies without financial problem, of which 86% had solely outside directors). Only 23 % of companies having financial problems had regular audit committee meetings (3 or 4 times/year) whereas 40% of companies without financial problems held audit committee meetings regularly.

Scarbrough et al. (1998) investigates if there is an association between the composition of audit committees and its interaction with internal auditing measured by (a) audit committee's engagement in decisions to dismiss the chief internal auditor (b) meetings with chief internal auditor and audit committee and (c) review of internal auditing program and results by the audit committee. Data was collected in the form of questionnaire that was mailed to chief internal auditor of 398 Canadian manufacturing companies identified from Compact Disclosure-Canada. The final sample included 72 companies having internal auditing (52 large companies & 20 small companies). Results show that audit committees consisting solely of non employee directors were likely to (a)

have more frequent meetings with the chief internal auditor and (b) review the program and results of internal auditing.

Klein (1998) examines if differences in the composition & activity (frequency of meetings) of audit committees are due to economic reasons for largely publicly traded firms. Her final sample consists of 771 firms: proxy statements were collected from U.S firms listed on S&P 500 as of March 31, 1992 along with annual shareholder meetings for the period July 1, 1991 and June 30, 1993. Univariate results show that an association exists between audit committee composition and activity with the firm's monitoring needs and the level of control the CEO has over the board. There is very little evidence of a relationship between audit committee composition and activity with ex-ante litigation risk or corporate governance mechanism of the firm. Multivariate results show that there is some evidence that shareholder agency problems, domination of CEO on the board and ex-ante ligitation risk influences audit committee composition and activity across firms. There is a higher probability that strong CEOs are more likely to place insiders and related directors on their audit committees than firms having weak CEOs. Moreover, there is a lesser frequency of audit committee meetings for firms when there is presence of strong CEOs.

Collier and Gregory (1999) examine if firm specific agency factors affect the activity of the audit committee in major companies in United Kingdom (UK). Data was related to 141 companies with audit committees collected from the results of a questionnaire by (Collier 1992) from major UK companies listed in the London Stock Exchange for the period 1989-1990. Results show that there is a positive association between audit committee activity and high quality (Big Six) auditors consistent with their

agency theoretic view of monitoring. There is a reduction in the activity of the audit committee of firms where the roles of the chairman & chief executive are combined. Moreover, there is a negative association between insiders (executive directors) on an audit committee and audit committee activity.

Abbott and Parker (2000) examine if there is an association between audit committee independence and activity with the engagement of an industry specialist auditor. Their sample consists of 500 firms with a December 31, 1994 fiscal year end. Results show that a positive association exists between audit committee independence (consisting of non employees) and activity (at least 2 meetings per year) with industry specialist auditor selection.

Abbott et al. (2000) examine if there is an association between fraudulent financial statements and two audit committee characteristics (independence and activity). The sample includes 78 firms sanctioned by SEC as fraud or aggressive accounting along with a matching control sample of 78 non sanctioned firms similar in size, industry, time period and exchange during the year 1980-1996. Results show that the probability of sanction by SEC is lower if the firm has an audit committee that meets at least twice a year and consists of audit committee members who are non employee (meet the minimum threshold level).

Beasley et al. (2000) investigate the financial statement fraud techniques of three volatile industries (technology, healthcare and financial services) for the period January, 1987 to December, 1997. The fraud sample consists of 66 companies belonging to the three category of industries mentioned above with a matching control sample. The results show that the fraud companies in all these three industries have fewer independent boards

and audit committees. Finally, findings show that there are lesser audit committee meetings (generally one time per year) in fraud companies of technology and health care industries than no fraud companies.

Raghunandan et al. (2001) examine the relationship between the composition of audit committees and its interaction with internal auditing. The final sample of 114 responses comes from responses collected in the form of a questionnaire sent to the chief internal auditor of medium-sized U.S. manufacturing companies. Results show that audit committees having only independent directors with at least one financial / accounting expertise will have longer meeting with chief internal auditor with a higher probability of giving private access to the chief internal auditor, inspect the proposal and results of internal auditing and review management and internal auditing interactions. Further, results show that there is a higher probability of longer meetings with the chief internal auditor by audit committees of large companies.

Archambeault and DeZoort (2001) examine if there is an association between suspicious auditor switching and the efficiency of audit committee characteristics. Their final sample consists of 30 publicly traded U.S. companies that had suspicious audit switch and a matched sample of 30 companies that had no suspicious auditor switch for the period 1994-1996. Results show that companies with a suspicious auditor switch are less likely to have (a) frequent meetings of the audit committee and (b) audit committee directors and accounting or finance expertise. Further analysis shows that audit committees in companies that had suspicious auditor switches had members who were young and had few or no stock ownership.

Abbott et al. (2003a) examine if there is a relationship between certain audit committee characteristics and audit fees. Their sample consists of 492 companies that filed proxy statements with the SEC during the period February 5, 2001 to June 30, 2001. Results show that a significant positive association exists between audit committee expertise and independence with audit fees. However, there was no association between audit committee meeting frequency and audit fees.

Abbott et al. (2003b) examine if there is a relationship between audit committee characteristics and nonaudit services (NAS) to audit fees paid to incumbent auditors. Their sample consists of 538 companies from proxy statements filed with SEC for the period Feb 5, 2001 to Mar 26, 2001 and March 19, 2001 to June 30, 2001. Results show that there is a likelihood of firms having only independent audit committee directors and meeting atleast four times a year to have a significant lower NAS fee ratio.

Abbott et al. (2004) investigate the effect of certain audit committee characteristics on improving the efficiency of audit committee when there is a probability of restatement. Their final sample includes 88 firms with restatements relating to annual reports for the period January 1, 1991 and December 31, 1999 along with a matching control sample of similar industry, size, auditor types and listing. Results show that a significant negative association exists between audit committee independence and meeting frequency with restatement. Similarly, a significant negative association exists between an audit committee with atleast one financial expert and restatement.

Song and Windram (2004) examine the efficiency of UK audit committees in monitoring financial reporting. Their final sample consists of 54 companies (27 FRPP (financial reporting review panel) companies) for the period 1990-2000 with a match

control sample (27 companies). They find weak evidence to show that audit committee financial literacy, meeting frequency and outside directorships contribute to the efficiency of the audit committee. Moreover, there is some evidence to show that a large board size may weaken the efficiency of audit committee in financial reporting.

Farber (2005) examines (i) if there is an association between disclosure of financial fraud and the subsequent steps taken to improve the quality of corporate governance mechanism and (ii) whether fraud firms are able to reestablish their reputation and recover share values due to their improvements especially in their board and audit committees following fraud detection. The fraud sample was 87 companies identified by SEC and AAERs for misstating financial reports. A matched sample was used to test for changes in governance mechanism following fraud detection. Results show that the frequency of audit committee meetings is higher for fraud firms, after the discovery, than for control firms during the same period.

Gendron and Bedard (2006) examine the process by which a small group of people attending audit committee meetings develop and sustain the meaning of audit committee effectiveness. Data was collected by interviewing 22 individuals in three large Canadian public corporations listed in the Toronto Stock Exchange with an average time of 45 and 75 minutes during the period 2000 and 2001. Results show that the meaning of committee effectiveness is based on the reflection of processes and activities around audit committee meetings by attendees. The configuration of meaning by attendees is made up of a more or less heterogeneous set of emotions regarding the involvement of audit committee that varies from confidence to hopefulness to anxiety.

Raghunandan and Rama (2007) examine if there is a relationship between firm characteristics and the number of audit committee meetings as a proxy for diligence. Their sample consists of 319 firms in the S&P Small Cap 600 index having a December 31st fiscal year end in 2003. Their results show that there is a higher frequency of audit committee meetings for firms that (1) are large, (2) have higher outside block holding levels or (3) are in industries having a higher probability of litigation. Similarly, a positive association exists between the number of board meetings and percentage of accounting experts with the number of audit committee meeting but there was no association between other non accounting experts and audit committee meetings whereas, a positive association exists between audit committee meeting and audit committee size.

In summary, prior research has examined a variety of consequences associated with audit committee diligence. Some studies have also examined the determinants of audit committee diligence. However, no study has examined the impact of gender differences on audit committee diligence. Prior research suggests that females are more risk-averse, less overconfident, and more likely to be compliant with accounting regulations. Further, audit committee directors face significant reputation penalties if financial reporting problems are subsequently discovered (Srinivasan 2005). The possible loss of reputation, coupled with the risk-aversion, reduced overconfidence, and greater likelihood of compliance, suggests that audit committees that have a female director will be more diligent and have more frequent meetings.

Hypothesis Development

In this chapter, I examine the association between frequency of audit committee meetings (proxy for audit committee diligence) and the presence of at least one female director in the audit committee using a sample of 254 firms from *S&P small cap 600 index* with a December 31, 2003 fiscal year end. I then briefly describe the method and data, followed by a discussion of results. We posit that the presence of a female changes the dynamics of the audit committee. Specifically, if women are more risk-averse, less overconfident, more likely to comply with rules and regulations, and have communication styles that tend to be more participative and process-oriented, then it is likely that audit committees with one or more female directors would function differently than audit committees with all male directors. Along these lines, the Conference Board of Canada suggests that boards with more women "surpass all-male boards in their attention to risk oversight and control" (Stephenson 2004). Hence, we hypothesize that audit committees with at least one female director would have a more deliberative and process-oriented style of functioning than all-male audit committees.

There are many ways in which a committee can be more participative, process-oriented and diligent. For example, on the quantity dimension the meetings can be more frequent or longer; on the quality dimension, the nature of the interaction – both among the committee members, as well as with others such as management, internal and external auditors – as well as the types of questions asked can differ. Therefore, my hypothesis is as follows:

H1: Audit committees that have at least one female director will meet more often than all-male audit committees

Method

We use the following model to examine the association between the presence of a female director on the audit committee and audit committee meeting frequency:[1]

$$Log\ (MEET) = \beta_0 + \beta_1 Log\ (MV) + \beta_2 OFDIRW + \beta_3 OTBLKW + \beta_4 DA + \beta_5 LOSS + \beta_6 MB + \beta_7 LTGN + \beta_8 FINCG + \beta_9 Log\ (NMEM) + \beta_{10} AUDACXP + \beta_{11} NACCXP + \beta_{12} SEPCHR + \beta_{13} Log\ (BDSIZE) + \beta_{14} BDIND + \beta_{15} Log\ (BDMTG) + \beta_{16} FEMD + \varepsilon$$

The variables are defined as follows:

LogMV	=	Natural log of market value of firms as of December 31, 2003.
OFDIRW	=	Percent of shares held by officers and directors.
OTBLKW	=	Percent of shares held by outside block-holders.
DA	=	Total debt divided by total assets at year-end.
LOSS	=	1 if a firm had a loss for 2003, otherwise 0.
MB	=	Ratio of market value to book value as of year-end.
LTGN	=	1 if a firm is in any of the following sectors: pharmaceuticals (SIC codes 2833–2836), computers (3570–3577), electronics (3600–3674), retail (5200–5961), or software (7370); 0 otherwise.

[1] This is similar to the model used by Raghunandan and Rama (2007); we add gender as an additional explanatory variable.

FINCG	=	1 if the number of common shares outstanding or the long-term debt increased by atleast 10 percent, otherwise 0.
LogNMEM	=	Natural log of the number of audit committee members
AUDACXP	=	Proportion of directors who are accounting experts (i.e., have experience as a ‘‘public accountant or auditor or principal financial officer, controller, or principal accounting officer”).
NACCXP	=	Proportion of directors who are designated ‘‘audit committee financial experts’’ but are not accounting experts (as defined above).
SEPCHR	=	1 if someone other than the CEO is the Chairperson of the board.
LogBDSIZE	=	Natural log of the number of board directors in 2003.
BDIND	=	Proportion of independent (not insider or gray) directors on the board
LnBDMTG	=	Natural log of the number of board meetings in 2003.
FEMD	=	1 if audit committee has a female director, 0 otherwise.

Log (MEET), measuring the number of annual meetings during 2003, is our dependent variable. We obtain data about the number of meetings from proxy statements filed by firms during 2004 with the SEC.

FEMD is our independent variable of interest. We obtain data about the composition of the audit committee by reading all audit committee reports included in the

proxy statements filed by the firms in 2004 with the SEC. We employ the following rules to classify directors as female. First, we examined the first name of the director (and, the photos if available) to classify the person's gender. If the above rule was inadequate, we then examined the vita of the director and searched for gender identifiers such as "Ms" or "she" or "her."

In our analysis, we control for factors that we believe could be associated with the frequency of audit committee meetings as control variables in our analysis. The audit committee represents a monitoring mechanism, and the demand for monitoring mechanisms varies with agency costs. Since meeting frequency is the only publicly available signal about the diligence of the committee, we expect that audit committees of firms with greater agency costs would be likely to have more frequent meetings. We consider four different variables for agency costs.

Firm size is typically used as a control variable in most accounting and auditing research, and can serve as a proxy for a variety of factors including complexity, monitoring demands, and political costs. We include firm size (market value) as a control factor and expect that larger firms would have more frequent audit committee meetings.

Agency costs are expected to decrease as managerial ownership of the firm increases (Jensen and Meckling 1976). DeFond (1992) finds that changes in insider ownership is negatively correlated with changes in audit firm quality. Thus, higher levels of insider ownership can act as a substitute for a more active audit committee. Therefore, firms with a lower level of insider stock ownership (i.e., higher agency costs) are expected to have more frequent audit committee meetings.

Large shareholders have an incentive to monitor managerial behavior because of their larger investment (Shleifer and Vishny 1997), and prior research suggests that such shareholders play an important role in firm governance through their monitoring of management (e.g., Shleifer and Vishny 1986; Bethel et al. 1998; Bhojraj 2003). While we expect that large block-holders will monitor the firm more closely than other investors, we do not make a directional prediction about the association between block-holdings and audit committee meeting frequency. One argument is that large block-holders will demand more monitoring from the audit committee leading to a positive association between block-holdings and audit committee meeting frequency; the counter-argument is that the large investors have sufficient alternative monitoring mechanisms so that the demand for a more diligent audit committee would be lower at firms with large block-holdings.

We use two control variables relating to the composition of the audit committee. First, we posit that committees that have more members will be likely to have more frequent meetings. It is likely that as the number of members on the committee increases there will be more questions or items that may need to be discussed, so it is likely that there will be more frequent meetings. Second, prior studies have documented an association between audit committee financial expertise and a variety of "good" processes and outcomes including support for auditors' judgments (DeZoort 1998), lower likelihood of suspicious auditor switches (Archambeault and DeZoort 2001), fewer SEC enforcement actions (McMullen and Raghunandan 1996), less earnings management (Bedard et al. 2004), and higher firm value (DeFond et al. 2005). We expect a positive association between the presence of audit committee financial experts and the frequency

of audit committees meetings. We define an accounting/finance expert as a person who is either a CPA or has experience as a chief financial officer, chief accounting officer, or controller of a for-profit corporation.[2]

Data

Our sample selection was guided by the following considerations. First, data about audit committees have to be hand-collected from proxy statements; hence we wanted to keep the sample size manageable. Second, we wanted to focus on a group of firms where alternative monitoring mechanisms would be less strong so that the importance of the audit committee would be higher; since large firms are likely to have other monitoring mechanisms, such as greater analyst following, we decided to concentrate on smaller firms. Third, given the recent flurry of recent legislative and regulatory changes, we wanted to restrict the analyses to firms with an identical fiscal year-end. Hence, we decided to restrict the analysis to firms with a December 31 fiscal year-end.

Based on the above criteria, we restrict our analysis to all non-financial firms with a December 31 fiscal year end in the *S&P SmallCap 600* index. Of the 600 firms in the index, 276 are in non-financial sectors and have a December 31 fiscal year end in 2003. An additional 22 firms did not have the required audit committee data (due to lack of

[2] Section 407 of SOX (and the initial SEC rule proposal implementing that section) specified that the "audit committee financial expert" must have "experience preparing or auditing financial statements" but the final SEC rules changed it to "experience preparing, auditing, analyzing or evaluating financial statements" (SEC 2003a). Thus, for example, a CEO without significant prior accounting or finance background would qualify as an audit committee financial expert under the final SEC rule but not under the original language of SOX or the initial SEC rule proposal.

proxy filings), so our final sample includes 254 firms. We obtain our data from firm filings with the SEC and from the *Compustat* database.

Results

Table 1 provides sample selection process and Table 2 provides descriptive data about the sample. The mean (median) market value of the firms included in our sample is $687 ($618) million. Given that our focus is on relatively smaller firms, it is not surprising that officers/directors and outside block holders hold an average, of 11.73 and 23.79 percent of the shares. The average debt-to-asset ratio is 0.44, while the mean market-to-book ratio is 2.52. Out of the total firms, 19 percent of the firms are operating in litigious industries, and 23 percent of the firms are having financing during the year. The firms had an average of 6.71 board meetings during the year.

The sample companies have, on average, 3.53 members on their audit committees. While 247 of the 254 firms in our sample indicated that they had at least one audit committee financial expert using the SEC's expanded definition, only 146 of the firms had an audit committee financial expert using the stricter definition used in this paper. The average number of audit committee financial experts using the SEC's liberal definition is 1.45, but is only 0.7 when using the stricter definition for such an expert as in the current study.

The mean (median) number of audit committee meetings is 7.06 (7.0), and 247 of the 254 firms report having at least four meetings in 2003. These numbers are much higher than those reported in some recent studies that have examined issues related to

audit committees (e.g., Abbott et al. 2003a), and indicate that audit committees are much more diligent in the post-SOX period than in pre-SOX period.

Only 54 of the 254 firms in our sample have at least one female as an audit committee member; 47 of these 54 firms had only one female audit committee director, while the remaining seven had two female audit committee directors. In only two of the 254 firms did women constitute a majority of the audit committees members.

Analysis of Spearman and Pearson correlations involving the explanatory variables indicates that only four of the correlations exceed .30, suggesting that multicollinearity is not likely to be a problem. This is confirmed later by VIF scores from our regression, none of which exceeds 1.55.

Table 3 presents descriptive data on number of audit committee meetings and Table 4 presents univariate comparisons between companies with and without a female audit committee director. The companies that have a female audit committee director have more audit committee members and are larger in size. In terms of the variable of interest, the average number of meetings for audit committees with and without at least one female director is 8.06 and 6.8, respectively; the difference is statistically significant ($p < .01$). Thus, 212 of the total 254 firms in our sample (84.0 percent) had more than four meetings.

Table 5 presents the regression results. The overall regression is significant ($F = 3.65$, $p < .001$). The positive (negative) and significant coefficient on OUTBLK (OFFDIR) indicates that companies wit a higher percentage of shares held by outside block-holders (insiders) are likely to have more (less) frequent audit committee meetings. Coming to the audit committee related variables, the positive and significant coefficients

for NMEM indicates that audit committees are likely to meet more often when they have more members. The coefficient on the variable of interest, FEMD, is 0.096 and significant – indicating that audit committees that have at least one female director are likely to have more frequent meetings than all-male audit committees. The value of the coefficient also indicates that, on average, the presence of at least one female director leads to a 10 percent increase in the number of audit committee meetings.

We performed the following sensitivity tests. We use various combinations of a dummy or continuous variable for the presence of a female director and for the presence of financial experts. Instead of the number of meetings and the number of audit committee members, we use the square-root of the respective measures. We performed regressions using various combinations of the above variations. In each instance, the results remain substantively similar – the FEMD variable continues to remain positive and significant in the regression.

Our sample includes (a) 5 firms that have an auditor change in 2003, and (b) 10 firms audited by non-Big 4 firms. Deleting either the firms with an auditor change, or the firms audited by a non-Big 4 firm, yields qualitatively similar results for all variables in our model. In addition, we checked if clients of any particular Big 4 firm were driving the results. We add three dummy variables in the regression for such analysis, but none of the dummy variables is significant and the inferences related to the other variables remain unchanged.

Further Analysis

Given the significant changes to the accounting profession during the period from November 2001 to July 2002, including the failures of Enron and Arthur Andersen as well as the enactment of SOX, one interesting question is whether the gender effects were prevalent before SOX. The mean (median) number of audit committee meetings in firms with and without a female director on the committee was 4.21 (4) and 4.28 (4), in 2001 and in 2003 respectively. This difference is not statistically significant.[3] We also performed a regression for fiscal year 2001 similar to the 2003 regression in Table 5; in this multiple regression the FEMD variable was not significant for 2001. Thus, the results indicate that audit committees that had at least one female director reacted differently to the shocks faced by the accounting profession in 2001-2002.

[3] Note that some of the firms that had a female on the audit committee in 2001 did not have a female in 2003, and vice-versa. Hence, we also examined the mean (median) number of meetings based on the presence of a female on the audit committee in 2003. The mean (median) number of audit committee meetings during 2001 for those 54 firms that had a female director on the audit committee in 2003 was 4.60 (4); the corresponding number for the 200 firms without a female director on the audit committee was 4.20 (4). This difference is also not statistically significant.

IV. Gender Differences and Audit Fees

Motivation

The motivation for my second essay comes from the concerns by Securities and Exchange Commission (SEC), the Public Oversight Board (POB 1993) and the National Association of Corporate Directors (NACD 2000) in emphasizing that audit committee needs to be careful in assessing the relationship between the firm's management and its external auditors (Abbott et al. 2003a). Audit committees have a significant influence in the level of audit coverage and can demand a higher level of audit coverage that can lead to an increase in the audit fees.

As noted earlier, the presence of women on corporate board can lead to changes in the monitoring practices of boards and their committees. Hence, I posit that a female director on the audit committee will demand a higher quality of audit (greater assurance through more audit work) thereby resulting in higher audit fees.

Related Literature

Casterella et al. (2004) examine pricing by Big 6 auditors and how audit fees are affected by client bargaining power and industry specialization using data collected through questionnaire. Their sample includes 651 companies audited by Big 6 auditors after excluding financial institutions. They find that audit fees are higher for clients who are small and do not have much bargaining power where as audit fees are lower when companies are large in size especially to their auditor's industry clientele and have a higher bargaining power.

Simunic (1980) examines if there is price competition among auditors and if Big 8 audit firms have monopolized the audit market as a whole using data from survey sample of 397 observations on audit fees and related variables of U.S. public corporations. Results show that irrespective of the market segment serviced by Big eight firms. There is existence of price competition among the audits of publicly held companies.

Francis and Simon (1987) study show evidence of audit pricing for U.S. publicly traded companies of the small client segment. Final audit fee data of 210 usable responses was collected in the form of a questionnaire from companies selected from 1984 Moody's Industrial and OTC industrial manuals. Findings show that premium exists in Big eight firms and it exists in both second tier national and local/regional firms which suggests differentiation in the product offered by Big eight firms. Further tests on initial audit engagements show that audit prices are initially lower than continued engagements but there is no evidence to show that quality of audit is compromised due to lower price cut.

Simon and Francis (1988) examine if there is price reduction in initial audit engagements and if so, does the audit fee return back to its original price level. Data consists of 440 publicly traded firms of which 214 firms had changed auditors during the period 1979 to 1984 whereas there was no change in auditors for the remaining firms and these were treated as control firms. Results show that there was a 24 percent fee reduction in the initial engagement year and this was later reduced to 15 percent for the next two years. However, the auditor had increased their fee to the regular levels by the fourth year for continuous engagements.

Craswell et al. (1995) examine if the audit fees is high for Big 8 auditors due to their development of brand name and industry specialization using a sample of 1484 Australian publicly listed companies. Data for auditor remuneration was collected from Who Audits Australia and other variables were hand collected from proxy statements. Results show that there is no significant difference in audit fees for small sized companies between a specialist Big 8 auditor and a non specialist Big 8 auditor. Similarly, there is a 34% increase premium for industry specialist Big 8 auditors compared to non specialist Big 8 auditors and a 30% premium increase for Big 8 brand name compare to non Big 8 auditors.

Craswell and Francis (1999) examine audit pricing differences during initial engagement in Australia for a sample of 224 initial engagements. Data is obtained from *Who Audits Australia?* database with further data supplemented from annual reports. Results show that there is no significant discount for three of four distinct initial engagements namely (i) changes within Big 8 auditor (ii) changes within non Big 8 auditor (iii) moving from Big 8 to non Big 8 auditor; whereas fee change is observed for (iv) moving from non Big 8 to Big 8 auditor. The results are not consistent with DeAngelo (1981) studies but are more consistent with Dye (1991) findings, that there will be no discounting in initial engagement if audit fees are publicly declared.

Defond et al (2000) examine the audit fees of publicly listed companies in Hong Kong for Big 6 and non Big 6 auditors. Sample of 348 publicly listed Hong Kong companies is collected from the 1992 Pacific-Basin Capital Market Database (PACAP) after excluding the finance industry. Results show that premium exists for Big 6 auditors having brand name and industry specialization. Similarly, audit fee is lower than Big 6

and non Big 6 auditors for a local firm, Kwan Wong Tan & Fong, a market leader in the property sector. Hence, there is varied result for Big 6 and non Big 6 firms due to specialization hinting at a market segment not detected earlier. Similarly, non Big 6 reduces its audit fees for a clientele who seeks low priced audit leading to production economies and capture of market share.

Ferguson et al. (2003) examine if there are differences in audit prices for Big 5 audit firms based on the firm-wide (country level) or the office level industry perspective. Sample consists of 1046 Australian publicly listed companies of which 681 companies have Big 5 auditors for the year 1998. Results show that if an auditor is both city specific industry leader and one of the top two firms nationally, their audit fees is higher with a 24 percent premium but there is no premium for the top two firms in the cities if they are not city leaders. Further, the ranking on national leadership is based on the particular offices where accounting firms are city leaders.

Hay et al. (2006) analyze and summarize the extensive research about the determinants of audit fees for the past 25 years using meta-analysis in order to test the effects of independent variables that are regularly used. Findings show that although there is consistency between the results of many independent variables, yet there is no clear pattern and some of the significant results pertain to a particular period or country. The variables are loss by client and leverage that has recently become significant in recent studies; internal auditing and governance that have mixed results; auditor specialization where there is still no clarity; and audit opinion which is not a significant variable anymore in recent studies.

Hypothesis Development

Audit committees have an important role to play in the financial reporting and governance process. The Securities and Exchange Commission (SEC 2003a) notes that the audit committee

> "Plays a critical role in providing oversight over and serving as a check and balance on a company's financial reporting system. … By effectively carrying out its functions and responsibilities, the audit committee helps to ensure that management properly develops and adheres to a sound system of internal controls, that procedures are in place to objectively assess management's practices and internal controls, and that the outside auditors, through their own review, objectively assess the company's financial reporting practices."

The SEC has, since 1998, acted in a variety of ways to improve the performance of audit committees. Following the report of a Blue-Ribbon Committee (BRC), the NYSE and NASD modified their listing requirements and the SEC adopted new rules related to the independence and functioning of corporate audit committees (SEC 1999a, 1999b). Due to the role of the audit committee in ensuring the integrity of the financial statement, audit committee has a substantial influence on the audit coverage by employing industry specialist and brand name auditor's viz. Big 4.

As noted in chapter 2, many prior studies have noted that women tend to be more cautious in a variety of business settings, including compliance with accounting and tax rules. In addition, research also suggests that women tend to be less overconfident in their judgments than men. Hence, I posit that the presence of a female on the audit committee will lead to the committee being more cautions, and demanding greater audit coverage in turn leading to increased audit fees. My second hypothesis is:

H2: There is a positive association between audit fees and the presence of female director in the audit committee

Method

We use the following model to examine the association between audit fees and the presence of female director:

$$LAFEE = \beta_0 + \beta_1 LTA + \beta_2 RECINV + \beta_3 SQSEG + \beta_4 FORGN + \beta_5 DA + \beta_6 LIQ + \beta_7 ROA + \beta_8 NMEM + \beta_9 AUDACXP + \beta_{10} FEMD + \varepsilon$$

The variables are defined as follows

LAFEE	=	Natural log of total audit fee.
LTA	=	Natural log of total assets at year end.
RECINV	=	Proportion of total assets in receivables and inventories.
SQSEG	=	Square-root of number of business segments reported on Compustat.
FORGN	=	1 if foreign segments reported, else 0.
DA	=	Total debt divided by total assets at year-end.
LIQ	=	Current ratio.
ROA	=	Return on assets.
NMEM	=	Number of audit committee members.
AUDACXP	=	Proportion of directors who are accounting experts (i.e., have experience as a ‘‘public accountant or auditor or

principal financial officer, controller, or principal accounting officer").

FEMD = 1 if audit committee has a female director, 0 otherwise.

The control variables are derived based on prior research. Almost all models that seek to explain audit fees follow the approach in Simunic (1980) and use various measures of client size, complexity and risk such as LNTA, RECINV, FORGN, and SQSEG. We include DA, LIQ, ROA, NMEM, AUDACXP, and FEMD in our model.

Data

The sample includes all non-financial firms in the *S&P Small Cap 600* with a December 31, 2003 fiscal year, available proxy data and financial data from *Compustat* database. I exclude firms in the financial sector. We rely on the *AuditAnalytics* database for audit fee data. Our final sample includes 254 firms.

Results

Table 6 provides descriptive data about the sample for fiscal year ending December 2003. Table 7 provides the results from a regression where the dependent variable is the log of the audit fee. The overall model is significant (F-statistic = 17.07, $p < .001$), and, explanatory power is (adjusted $R^2 = .39$). The coefficients for LTA, RECINV, and FORGN are all positive and significant, whereas the coefficient estimates for SQSEG in the predicted direction, but insignificant. In terms of audit committee

characteristics, the coefficient estimate for NMEM is positive but insignificant. Our results for audit expertise (AUDACXP) were insignificant.

Considering the variables of interest, the coefficient for FEMD (t=0.859) is positive but insignificant indicating that the presence of female directors on the audit committee does not increase audit fees. The findings show that the presence of female directors on the audit committee is not associated with a significant increase in audit fees after controlling for other variables. The finding is subject to the following limitations. Data is collected for only one year and so we cannot come to a conclusion about the validity of the test based on a one year data.

V. Gender Differences and Earnings Management

Motivation

The motivation for my third essay comes from concerns about deterring earnings management (Levitt, 1998) due to various accounting scandals. Concerns related to earnings management have resulted in calls for effective audit committees from regulators, shareholders and others (e.g., Blue Ribbon Committee [BRC] 1999; Securities and Exchange Commission [SEC] 2000. There is also a growing stream of research on the effects of gender differences that state the presence of women on boards/ committees could bring about positive outcomes in corporate monitoring and oversight, thereby leading to reduced earnings management. Prior studies have examined the association between earnings management and some audit committee composition variables such as independence and expertise (Klein 2002; Bedard et al. 2004; Xie et al. 2003). However, most of the previous studies are focused more on independence and financial expertise rather than the facet of gender. I examine if there is an association between earnings management and the presence of female in the audit committee.

Related Literature

Dechow et al. (1995) evaluate the performance of different accrual-based models (The Healy Model, The DeAngelo Model, The Jones Model, The Modified Jones Model and the Industry Model) used for detecting earnings management by comparing the specification and power of commonly used test statistics. This is done by evaluating how frequently the specification of the test generates Type I error and how frequently the

power of the test generates Type II error. Four distinct samples of firm-years as event-years are used for testing earnings management:

(i) Sample of 1000 firm-years that has been randomly selected

(ii) A randomly selected sample from pools of firm-years with extreme financial performance consisting of 1000 firm-years

(iii) 1000 randomly selected firm-years sample in which accrual manipulation has been artificially introduced with a fixed and known amount; and

(iv) Sample consisting of 32 firms that have allegedly overstated their annual earnings in 56-firm-years and subject to SEC enforcement actions.

Results show that all models for a random sample of event-years seem to produce well specified tests but for earnings management with economically plausible magnitude, the power of the test is low (e.g., one to five percent of total assets). Similarly, all models lead to misspecified tests when applied to samples of firm-years experiencing extreme financial performance. Finally, the modified version of Jones 1991 model shows that it is most powerful in detecting earnings management by generating very few Type II errors.

Becker et al. (1998) examine the association between audit quality and earnings management using discretionary accruals as a proxy for earnings management; the discretionary accruals are estimated using a cross-sectional version of Jones 1991 model. Using sample collected from the 1993 Compustat database, discretionary accruals of a sample of firms with non Big six auditors is compared to that of a sample of firms with Big six auditors with the test period ranging from 1989 through 1992. After omissions and deletions, the sample size is 10,397 firm year observations audited by Big six auditors and 2179 firm year observations audited by Non-Big six auditors. Results show

that the discretionary accruals are greater and larger in variation for companies with Non Big six auditors than those of Big six auditors after controlling for several firm-specific characteristics.

Bartov et al. (2000) test the ability of the Cross Sectional Jones model and the Cross Sectional Modified Jones model by examining the association between discretionary accruals and audit qualification to detect earnings managing vis-à-vis their time-series counterparts. Final sample after omissions and deletions is 173 distinct firms: 152 firms with Big six auditors and 21 with non-Big six auditors are collected from the annual Compustat database for the period 1980 – 1997. The test sample for each firm year is matched with a control sample with an unqualified audit report in the event year. Results from the contingency table tests show that both the models are successful in identifying the relation between discretionary accruals and audit qualification. Similarly, univariate logit test also shows that both the above models are helpful in detecting earnings management proxied by a qualified opinion once confounding variables are controlled.

Bradshaw et al. (2001) examine the opinion of sell-side analysts and auditors to see if they provide information to investors about low-quality earnings experienced by firms with high accruals in the form of analysts' earnings forecasts and audit opinions and turnovers. The earnings quality is measured using a refined version of the accrual technique used by Sloan (1996). Final sample data with non-missing accruals, cash flows and earnings data consists of 66,762 firm-years for which data for financial statement is obtained from Compustat annual database, data for analyst forecast is obtained from IBES summary statistics file and stock return data are obtained from the CRSP daily

stock return files for the period beginning fiscal 1988 and ending in fiscal 1998 due to the consistent measurement of cash flows and accruals using SFAS 95, whose standards for governing the preparation of statement of cash flows took effect in fiscal 1988. Results show that for firms with unusually high accruals, the sell-side analysts' forecast errors are negative and large and there is also no evidence of auditor changes or modified audit opinion. This shows evidence that sell-side analysts do not incorporate the earnings decline in their forecast and auditors fail to communicate the information about future earnings decline and GAAP violations to their investors, thereby reinforcing the interpretation in (Sloan, 1996) that investors are not able to anticipate that the decline in stock price is associated with unusually high accruals.

Klein (2002) examines the relationship between audit committee and board characteristics and abnormal accruals (proxy for earnings management) after controlling for other determinant factors. Her final sample includes 692 firm-years as of March 31, 1992 and 1993 listed on the S&P 500 with shareholder meetings between July, 1 1991 and June 30, 1993. Financial and other independent variables data are collected from Compustat & CRSP. Unadjusted abnormal accrual for each sample firm is estimated using the cross-sectional Jones regression model and the firm's abnormal accruals is adjusted using Kasznik's 1999 matched portfolio technique. Results show a negative association between abnormal accrual and board or audit committee independence. There is no association found between audit committee independence and earnings management. Similarly, firms experience high increase in the magnitude of abnormal accruals when there is a decrease of a majority of independent directors on the board or audit committee.

Davis et al. (2002) examine the association between earnings management and auditor tenure. The sample was collected from Compustat for the year 1980-1998 for firms with SIC codes less than 6000 and having complete auditor, audit opinion and accruals data. Auditor and audit opinion data was supplemented using LEXIS / NEXIS and NAARS for those accruals data having missing or incomplete auditor and audit opinion information. The final sample complete with accrual, auditor audit opinion data was 855 firms. Results show that there is an increase in discretionary accruals with auditor tenure and a decrease in absolute forecast errors with the length of an auditor‘s tenure, enabling a client to exceed analysts’ forecast with increased tenure. Results further show that signed discretionary accruals tend to be negative when there is an increase in auditor tenure.

Pincus and Rajgopal (2002) examine the relation between two alternative mechanisms; abnormal accruals and hedging with derivatives, which managers can use to manage earnings volatility in oil and gas producing firms. They also check whether managers at the margin, will use hedging and accrual management as substitutes mechanisms for smoothing. Final sample of 236 firm-years after deletions and exclusions was obtained from Compustat annual files for the year 1993-1996 mainly focusing on oil and gas exploration and producing firms. The occurrence and extent of hedging was documented using annual report or 10-K disclosures of year-end commodity derivative position. Results show a sequential process wherein managers initially make hedging decisions but then substitute between abnormal accruals and hedging with derivatives to smooth earnings at the margin but then in the fourth quarter, they trade-of between abnormal accruals and hedging with derivatives to manage volatility.

Frankel et al. (2002) examine the association between auditor's fees and earnings management and how the market reacts to the disclosure of auditor fees. Sample is collected from proxy statements available in SEC's EDGAR database with a filing date between February 5, 2001 and June 15, 2001. After omissions and deletions, the firms with fee data are matched with Compustat resulting in a final sample of 3074. Three complementary specifications of audit fees are developed. The first specification, recommended by SEC and prior research is the ratio of nonaudit fees to total fees (FEE RATIO). The second specification breaks the auditor fees into audit (RANKAUD) and nonaudit (RANKNON) both of which is measured as a percentile rank for each client. The third specification is measured as a percentile rank of total auditor fees for each client (RANKTOT). Results show that there is a positive association between nonaudit fees proxied by FEERATIO and RANKNON and the likelihood of reporting small earnings surprise, the magnitude of discretionary accruals and the magnitude of income increasing and income decreasing discretionary accruals. A negative association is found between earnings management indicators including small increases in earnings and audit fees proxied by RANKAUD. However, no association was found between total fees proxied by RANKTOT and earnings management indicators but a negative association was found between the disclosures of nonaudit fees and share prices.

Ashbaugh et al. (2003) conducts a study similar to (Frankel et al., 2002) using OLS regression model in order to investigate the sensitivity of FJN results to research design choices by examining the association between audit fees and measures of biased financial reporting using discretionary accruals and earnings benchmark model as proxies to infer if auditor independence is compromised. Two measures of discretionary accruals

are calculated for controlling for firm performance impact. One is the performance adjusted current discretionary accrual using an industry and performance matched portfolio (PADCA) and the other measure of discretionary current accrual includes a control for firm performance in the regression model used to estimate discretionary accrual (REDCA). After deletions and omissions, a final sample of 3170 firms was collected during November and December 2001 from U.S. registrants' 2000 proxy statements available on EDGAR or Global Access. Results show a positive association between fee ratio and absolute value of discretionary accruals consistent with FJN but when sample is partitioned by income-increasing and income-decreasing accruals, results show no association between positive discretionary accruals and fee ratio after controlling for firm performance for discretionary accruals which shows that the positive association in FJN could be due to income-decreasing accruals. Similarly, in the relationship between audit fees and two earnings benchmark tests: small earnings increases and meeting analyst forecasts; there is no association between fee ratio and the probability of firm reporting small earnings increases consistent with FJN and (Francis & Ke, 2001) and further, there is a negative association between total fees and the probability of firm reporting small earnings increases like FJN. However unlike FJN, there is no evidence of an association between either the fee ratio or total fees, and firms meeting analysts' forecast in the earnings benchmark tests. In summary, there is not much evidence to show that auditors violate their independence due to high fees ratios or clients paying high audit fees based on the use of accruals and benchmark tests as proxies for biased financial reporting.

Chung & Kallapur (2003) examine the association between the ratio of client's total fees and non audit fees divided by the audit firm's U.S revenues with that of the modified Jones model abnormal accruals as a measure of earnings, therefore audit quality at the audit firm and local office level to proxy for auditor incentives that compromise their independence in contrast to Frankel et al, 2002 who use the client nonaudit fees to total fees. Data for audit, IT and other fees are collected from proxy statements for the period filed between February 5 and June 30 2001 for 3965 firms. After matching with compustat data and after deletions and omissions, they are left with 1871 observations that belong to 54 industries with two digits SIC code for testing client importance at the audit firm level and 1778 observations for testing client importance at the local office level. Results show that the association between the absolute value of abnormal accruals and the client's importance measures is not significant after controlling for industry effects and abnormal accruals determinants thereby, testing the validity of Frankel et al, 2002 test.

Kim et al. (2003) examine whether the conflict or convergence of reporting incentives faced by corporate managers and external auditors influence the effectiveness of external auditing to prevent opportunistic earnings management especially when the preference of accrual choice by auditor's conflict with managers' preference. Two types of accruals, discretionary accruals and abnormal working capital accruals are used as a proxy for earnings management. Sample consisting of all firms is collected from the 1999 Compustat PC-Plus Active and Research files for the period 1983 – 98. In order to estimate the Jones 1991 model, firms with insufficient data are deleted. The final sample consists of 33,163 firm-year observations of which 4810 are non big 6 observations and

28,353 observations are Big 6 observations for the 15 year sample period 1984-1998. Results show that in the presence (absence) of reporting incentive conflicts between the manager and the auditor, Big 6 auditors are more (less) effective than non-Big 6 auditors.

Myers et al (2003) examine the association between auditor tenure and earnings quality proxied by accrual measures where the relationship of the auditor-client lasts for at least 5 years. Sample is collected from Compustat annual industrial and research files for the year 1998 to 2000 to estimate accruals. After omissions and eliminations including quick-turnover firms, the sample size is reduced to 42,302 firm-years. Results show that with extended auditor tenure under the voluntary rotation system, earnings quality is reduced thereby diminishing the magnitude of both the discretionary and current accruals. Further, results show that there is an association between less extreme income increasing accruals and longer auditor tenure wherein the activities of management to increase current period earnings through accruals is restricted by the auditors. Similarly, there is also an association between less extreme income decreasing accruals and longer auditor tenure wherein auditors restrict the creation of reserves to manage future earnings by management.

Larcker and Richardson (2004) examine the association between accrual measures as a proxy for earnings quality and fees paid for audit and non-audit services (proxy for auditor independence) to audit firms. Audit and non-audit fees were collected from Standard & Poor's consisting of 5103 firm-years (3424 firms) after omissions and deletions for the fiscal years 2000 and 2001. Estimation of total accruals was calculated using firm-years observations for years 1988 to 2001 from Compustat; the accrual model is based on the cross-sectional modified Jones model (DeFond & Subramanyam, 1998).

Similarly, corporate governance data was obtained from a variety of sources and ownership data by institutions and insiders is obtained from WorldScope. The data for institutional board characteristics is obtained from Institutional Shareholder Services (ISS). Results show that a positive association exists between unexpected accruals and auditor fees when the unexpected accruals is transformed using the absolute value and the measurement of fees is based on the ratio of non-audit fees to total fees for 8.5 % of the total sample. Results show a negative association between auditor independence and earnings quality using the four alternative measures. In summary, auditors having a higher financial interest or dependenccy on the audit client are less likely to allow abnormal accruals for firms.

Bedard et al (2004) examine if there an association between a firm's audit committee expertise (financial, governance & firm-specific), independence & governance activity and aggressive earnings management measured as abnormal accruals with cross sectional version of Jones model on a sample of 300 U.S. firms. Sample of financial data for a complete set of firms is 3451 observations after deletions and exclusions pertaining to 39 industries from Compustat with a December 31, 1996 year end and complete accruals data for the year 1996 after deletion of industries with less than 10 firms for calculation of abnormal accruals. Similarly, audit committee characteristics sample were hand collected from proxy statements for the year 1996. To detect earnings management, we select two sub samples (100 firms having highest income-increasing abnormal accruals, 100 firms having highest income decreasing abnormal accruals, that constitute AEM sub sample (aggressive earnings management) and another sub sample with 100 firms with lowest abnormal accruals that constitute LEM sub sample (low earnings

management) from the 3451 firms based on the size of their abnormal accruals. Results show that an audit committee having atleast one member with a financial and governance expertise is effective in reducing earnings management whereas the association between firm-specific expertise and earnings management is significant for income decreasing accruals only. Likewise, findings show that there is a likelihood of reduced earnings management when the audit committee is composed of 100 percent independent directors. Similarly, there is a likelihood of higher aggressive earnings management based on the association between independent audit committee members and the percentage of stock option exercised in the near future. Further, results show that aggressive earnings management is not associated with size and frequency of meetings but there is a negative association between the likelihood of aggressive earnings management and the audit committee activity (overseeing both the financial reporting and the audit process). Hence, the results further support the assertion of SOX that both financial expertise and independence is an important characteristic of an audit committee to oversee the activity of financial reporting and auditing process.

Reynolds et al. (2004) examine the association between auditors objectivity measured by discretionary accruals and audit and non audit fees. The sample includes 2507 companies with fee disclosure information for the period February 5, 2001 through May 25, 2001. Initial results from the base model similar to FJN model show that fee ratio is positively associated with magnitude of discretionary accruals, showing that the results are consistent with the findings of Frankel et al. 2002 results. However, when additional controls for high growth clients like initial public offers (IPO), industry and recent growth (Kothari et al., 2005) are included, there is no evidence to show that audit

& non audit fees are related to auditor objectivity. In summary, results are not consistent with SEC's contention that auditor independence is jeopardized by nonaudit service fees. Similarly, when earnings benchmark results of FJN are taken into consideration, (Francis & Ke, 2003) find that the results are due to inclusion of observations with large negative earnings surprises.

Kothari et al (2005) examine whether the estimation of discretionary accruals can be tested by a performance-matched firm's discretionary accrual approach in order to increase the reliability of inferences from earnings management's studies using the Jones or the modified-Jones model. Sample data of 123000 observations is collected for the period 1962 through 1999 from the COMPUSTAT Industrial Annual and Research files after excluding and deleting observations that cannot be performance matched or that lack data for calculating variables. Simulation results for 250 samples of 100 firms each are reported using performance matching based on a firm's matching and return on assets for the current year, ROA_t, and the past year, ROAt_1. Results show that performance is much better when the matching is based on ROA_t than matching on ROA_{t_1} as there are less misspecified tests when the matching is on $ROA_{t.}$ This is because the treatment firm's ROA_t that is matched with a control firm's ROA_t is affected by the performance-related error used for estimating the discretionary accrual of a treatment firm thereby enhancing the reliability of inferences from earnings management research.

Yang and Krishnan (2005) examine the association between audit committee characteristics and quarterly discretionary accruals (a measure for earnings management). Total Discretionary accruals and current discretionary accruals are computed using the cross-sectional (Jones, 1991) and (Teoh, Wong, & Rao, 1998) TWR model. Final sample

of 250 publicly traded firms for estimating Jones model (208 for TWR model) after exclusions and deletions is drawn from 10,386 US firms on the 1997 COMPUSTAT primary, Supplementary, and Tertiary (PST) and full coverage database for the period 1996-2000. In addition, sample for analyst forecast is collected from IBES; financial data is collected from Compustat database and audit committee and ownership data available in proxy statement is collected from SEC's EDGAR database for the period 1996. Results show no association between audit committee independence and or financial expertise and quarterly discretionary accruals. Further, there is a positive association between ownership of stock by independent and non independent audit committee directors and earnings management. Similarly, results show that the tenure of audit committee directors and the experience of audit committee directors as outside directors on other boards are associated with lower earnings management.

Cahan & Zhang (2006) examine whether more conservative accounting is required by Big 4 auditors for the clients of Arthur Andersen that they acquired using unadjusted and performance adjusted measures from the Jones (1991) model and Francis et al. (2005) model. Complete sample of data consisting of 368 Andersen firms and 1271 ongoing Big 4 clients of U.S.firms audited by Andersen in 2001 and by Big 4 in 2002 and similarly, firms audited by one of the Big 4 in 2001 and audited by the same Big 4 auditor in 2002 are obtained from Compustat database for December 31 year-end after deletions. Results show that the abnormal accruals are constrained by successor auditors of ex-Andersen clients in 2002. Univariate analyses show lower adjusted and unadjusted abnormal accruals and unadjusted accruals show negative changes for the clients of Andersen. The multivariate analyses show that the level of changes in abnormal

accruals are lower for the ex-Andersen clients for both adjusted and unadjusted abnormal accrual measures after controlling for 11 specific litigation risk factors, suggesting that Andersen audit was considered a source of litigation risk by auditors. However, results are strong for clients of Ernst & Young than that of other Big 4 auditors showing differences in conservatism. Overall, results of both univariate and multivariate analyses shows auditor conservatism.

Hypothesis Development

In this chapter, I examine the association between earnings management and the presence of female director in audit committees. Following ALM (2003), I measure earnings management using abnormal accruals and analyst forecast based measures. I control for the possible effects of firm performance in the estimation of discretionary accruals. My analyses include all non-financial firms in the S&P Small Cap 600 with a December 31, 2003 fiscal year end and available proxy data. I then briefly describe the method and data, followed by a discussion of results.

Audit committees have come to play a significant role especially in the wake of the corporate scandal. They have to take responsibility on the part of the external auditor and the management to ensure the quality of the financial statements and the company's internal controls. Prior studies by Klein (2002) show that there is a negative association between abnormal accruals and an audit committee comprised of directors who are independent. Similarly, Bedard et al. (2004) studies show that a negative association exists between a financial expert on the audit committee and aggressive earnings management.

Burgess & Tharenou (2002) state that there is a likelihood of reducing corporate failure due to the presence of women directors on well balanced corporate boards. Grosvold et al. (2007) state that increasing gender diversity on the board of companies would greatly benefit the companies, society as well their stake holders and customers. Likewise, there is a lot of prior research on gender differences in sociology and psychology that show that women are more risk averse, cautious and ethical than men. Most of the previous studies are focused more on independence and financial expertise rather than the facet of gender. Hence, we follow Ashbaugh et al (2003) to calculate ROA in Estimation Discretionary Accruals (REDCA) for controlling the association between firm performance and discretionary accruals using gender as the variable of interest.

Therefore, my hypothesis is as follows:

H3: There a negative association between earnings management and the presence of female director in the audit committee

Method

Discretionary Accrual Model

I control for the association between firm performance and discretionary accruals by calculating ROA in Estimation Discretionary Accruals (REDCA). REDCA includes a control variable for firm performance (lagged ROA) in the model used to estimate discretionary accruals.

As in ALM (2003), REDCA is calculated as follows; I include lagged ROA as a control variable and estimate the following regression:

$$CA = \gamma_1 (1/ LAG1ASSET) + \gamma_2 (\Delta REV) + \gamma_3 LAG1ROA + \varepsilon$$

where current accruals (CA) is net income before extraordinary items plus depreciation and amortization minus operating cash flows scaled by beginning of year total assets. *LAG1ASSET* is total assets at the beginning of the year, and *ΔREV* equals change in net sales from the prior year scaled by beginning total assets. The parameter estimates are then used to calculate expected current accruals with a performance control (ECAPC), and REDCA equals CA minus ECAPC. Thus, REDCA controls for firm-specific performance. I then test the association between female director and performance-adjusted discretionary accruals, REDCA, using the following OLS regression model:[4]

$$DCA\_PA = \beta_0 + \beta_1 BIG4 + \beta_2 L1ACCRUAL + \beta_3 LogMV + \beta_4 MRGR + \beta_5 FINCG + \beta_6 MB + \beta_7 LVRG + \beta_8 LTGN + \beta_9 LOSS + \beta_{10} CFO + \beta_{11} LOGMEET + \beta_{12} FEMD + \varepsilon$$

BIG4 = 1 if the sample firm is audited by Big 4 firms, and 0 otherwise.

L1ACCRUAL = last year's total current accruals (net income before extraordinary items plus depreciation and amortization minus operating cash flows) scaled by beginning of year total assets;

[4] I use the same variables as ALM (2003) except that institutional holdings data are unavailable and hence not considered. I refer interested readers to ALM (2003) for the rationale for including the variables in the model.

LogMV	=	Natural log of market value of firms as of December 31, 2003.
MRGR	=	1 if the sample firm has engaged in a merger or acquisition, and 0 otherwise.
FINCG	=	1 if the number of common shares outstanding or the long-term debt increased by atleast 10 percent, otherwise 0.
MB	=	Ratio of market value to book value as of year-end.
LVRG	=	Total assets less book value divided by total assets.
LTGN	=	1 if a firm is in any of the following sectors: pharmaceuticals (SIC codes 2833–2836), computers (3570–3577), electronics (3600–3674), retail (5200–5961), or software (7370); 0 otherwise.
LOSS	=	1 if a firm had a loss for 2003, otherwise 0.
CFO	=	Cash flow from operations scaled by beginning of year total assets.
LOGMEET	=	Natural log of the number of audit committee meetings.
FEMD	=	1 if audit committee has a female director, 0 otherwise.

Additional Tests

Earnings Benchmark Model

I also examine the associations between my gender variable and earnings benchmarks. Earnings benchmarks are defined as the likelihood of firms reporting small

earnings increases (INCREASE) or the likelihood of meeting or beating analyst earnings forecasts (SURPRISE). As in ALM (2003), I use the following logit regression model:

$$BENCHMARK = \omega_0 + \omega_1 LTGN + \omega_2 MB + \omega_3 lnMVE + \omega_4 LOSS + \omega_5 REDCA + \omega_6 FEMD + \varepsilon$$

where:

BENCHMARK is either *INCREASE* or *SURPRISE*;

INCREASE = 1 when the difference between a firm's 2003 and 2002 net income, scaled by beginning of year *MV*, falls in the interval (0.00, 0.05), and 0 otherwise;

SURPRISE = 1 when a firm meets or beats by 2 cent the mean consensus analysts forecast, as reported for the current fiscal year by I/B/E/S, and 0 otherwise.

INCREASE and *SURPRISE* are, as with other variables, defined as in ALM (2003). The only difference is that due to data limitation, I use *I/B/E/S* forecast data to replace First Call forecast data. All other variables are defined as in regression model 3.

Data

The sample includes all non-financial firms in the *S&P Small Cap 600* with a December 31, 2003 fiscal year, available proxy data and financial data from *Compustat* database. I exclude firms from the financial sector. I delete all firms from industries (based on two digit SIC code) where less than 20 firms are present. Finally, after omitting

firms with missing data, the initial numbers of available observations for the adjusted discretionary accruals tests are 254 in 2003.

For the earnings benchmarks tests, I have 254 firms for the *INCREASE* test in 2003. The *SURPRISE* test requires analyst forecast data; after matching with *IBES* database, I have 117 firms in 2003. I winsorize the continuous variables at the values for the 1st and 99th percentiles for the rest of my analyses.

Table 8 provides descriptive data about the sample. The mean (median) values of log market value of equity are 20.17 and 20.25 respectively while the mean and median value of *REDCA* and *LIACCRUAL* values are -0.07 (-0.01) and -0.02 (-0.02). The Big 4 serve as auditors for 90 percent of the sample. The mean values for *LEVERAGE, MB,* and *FINANCING* in my sample are 0.44, 2.52 & 0.22 respectively.

Table 9 presents the correlation matrix.

Results

Table 10 presents the results of regression, with *REDCA* as the dependent variables. Only control variables LOGMEET and CFO are significant.

Considering the gender variable, the coefficient for *FEMD* is positive but not significant in the *REDCA* regression. The coefficient of *LOGMEET* is positive and significant ($p < .10$, one-tailed). Thus, I find no evidence to show that the presence of female director on the audit committee constrains earnings management.

Table 11 presents the results from the *INCREASE* and *SURPRISE* logistic regressions. None of the gender variable (FEMD) is significant in either of the two regressions.

Additional Analyses

I separately analyze the results and find that FEMD is not significant in the REDCA regression. In both of the earnings benchmark regressions, the gender variable is not significant for 2003.

I partition the sample based on median size and re-perform all tests separately. I use one measures of size for such analyses: market value of equity. In each of the six benchmark regressions (two dependent variables [*INCREASE* and *SURPRISE*], two size measures [market value of equity], two partitions [above and below median]), the results are substantively similar to those reported in Table 10.

In the earnings benchmark tests, the *INCREASE* or *SURPRISE* variables indicate whether a firm meets or barely exceeds prior year's income or analyst expectations, respectively. The dependent variable for all firms which do not fall in the small zone just beyond the target are coded as 0 in both the tests. Some may state that such a sample is not suitable, and that the presumption underlying the test is that unmanaged earnings should be approximately symmetric around a benchmark. Hence, I exclude firms falling outside the narrow window of "just barely not meeting the benchmark" to "just barely meeting the benchmark" from the analysis. None of the gender variable is significant in any of the earnings benchmark tests.

VI. DISCUSSION

The US Securities and Exchange Commissission (SEC 1999a, 1999b, 2003a, 2003b) has expressed concerns about the composition and activities of audit committees. Legislators in several countries have focused their attention on the absence of female directors on corporate boards (e.g., Waters 2004). The *Sarbanes-Oxley Act* (SOX 2002) has specific requirements related to the composition of audit committees and the interaction between audit committees and external auditors. Prior studies have focused more on the financial expertise and independence of audit committees but there is not much research related to the presence of female directors on the audit committee. Hence, I test the association between the presence of female directors on the audit committee and various aspects of audit committee performance.

Essay I: Audit Committee Diligence

In Chapter III, I use all non-financial firms in the S&P Small Cap 600 with a December 31, 2003 fiscal year end and available proxy data to test the association between audit committee meeting frequency (proxy for audit committee diligence) and the presence of female director on the audit committee. I find significant evidence to show that the presence of at least one female director on the audit committee makes the audit committee more diligent (more frequency of meetings) than all male audit committees. Overall, my tests show a positive association between audit committee diligence and presence of female director on the audit committee.

The first limitation is that the number of meetings is only a rough proxy for the diligence of audit committees. We do not have information about the length of the meetings, or about the nature of the interaction (a) among the committee members, or (b) between the committee and other participants, such as management, internal auditors, and external auditors. In theory, it is possible for an audit committee to have fewer meetings but be more diligent, ask more informed questions and have more productive meetings. Second, it is an open question whether the observed pattern of differences would hold in countries other than the U.S.A. Each of the limitations noted above also represents possible avenues for future research.

Essay II: Audit Fees

The role of the audit committee is to provide oversight over the financial reporting process and thus ensure high quality financial reporting. Prior studies show that the presence of female director on the board has led to good outcomes. Hence, I examine if the presence of female director on the audit committee increases audit fees due to the demand for increased audit scope and coverage.

In chapter IV, I examine the association between audit fees and the presence of female directors in the audit committee. I find that there is no significant association between audit fees and the presence of female director on the audit committee. The coefficient for gender variable (FEMD) is positive but not significant. Overall, my results show no significant association between audit fee and the presence of female director on the audit committee.

A limitation of the analysis in Chapter IV is that the data are for only one year (2003). Future research can examine larger samples or data from multiple years.

Essay III: Earnings Management

In the wake of accounting scandals, audit committees have come to play a very significant role in ensuring the quality and integrity of financial statements. Prior studies show the presence of female directors on the board/committees reduces corporate failures and also benefits the interests of the shareholders. (Burgess & Tharenou 2002; Grosvold et al. 2007). Hence, I test to see if the presence of female directors on the audit committee constrains earnings management.

In chapter V, I investigate the association between earnings management and the presence of female director on the audit committee. Results show that the coefficient for gender variable (FEMD) is positive but is not significant. Hence, my analysis shows no evidence of a positive association between the presence of female directors on the audit committee and earnings management. I perform additional tests to examine the association between the presence of female director on the audit committee and earnings benchmark test by running logit regression analyses. I find no significant association between the presence of female director on the audit committee and the likelihood of a firm beating analysts' forecasts.

Summary

In summary, it appears that the presence of a female on the audit committee leads to a significant increase in the number of audit committee meetings; however, the

presence of a female on the audit committee does not lead to significant increases in audit fees or significant improvements in financial reporting quality. Hence, we can interpret the results as follows: having a female on the audit committee is associated with better form, if not necessarily better substance, when it comes to audit committee performance.

However, it is likely that in matters related to audit committees form itself may be important. Investors have few reliable signals about the performance of audit committees, and the only publicly disclosed measure of audit committee activity is the number of audit committee meetings. Hence, it is possible that financial statement users of companies that have more frequent audit committee meetings would view the financial statements of such companies in a more favorable manner; while this is an empirical question for future research, to the extent such perceptions exist, the addition of female directors to audit committees can indirectly lead to enhanced user confidence in financial statements.

Table 1
Sample Description Process

Sample Selection

	2003
Firms from the *S&P SmallCap 600* index	600
Less: Fiscal year end other than December 31	- 260
Less: SIC between 6000 and 6999	-64
Less: Missing Data due to lack of proxy filings	-22
Total	254

Table 2
Descriptive Statistics: Meetings Sample

Variable	Mean	S.D.	25th percentile	Median	75th percentile
LogMV	20.17	0.63	19.77	20.25	20.60
OFDIRW	11.73	11.19	4.90	8.15	14.90
OTBLKW	23.79	14.30	12.40	24.40	33.20
DA	0.44	0.21	0.27	0.45	0.59
LOSS	0.19	0.39	0.00	0.00	0.00
MB	2.52	1.37	1.57	2.06	3.05
LTGN	0.19	0.40	0.00	0.00	0.00
FINCG	0.22	0.42	0.00	0.00	0.00
LnNMEM	1.24	0.20	1.10	1.10	1.39
AUDACXP	0.67	0.68	0.00	1.00	1.00
NACCXP	0.79	0.96	0.00	1.00	1.00
SEPCHR	0.40	0.49	0.00	0.00	1.00
LnBDSIZE	2.06	0.22	1.95	2.08	2.20
BDIND	69.09	14.15	60.00	71.40	80.00
LnBDMTG	1.85	0.35	1.61	1.79	2.08
FEMD	0.21	0.41	0.00	0.00	0.00

Notes:

1. The sample includes 254 observations from non-financial firms with a December 31 fiscal year end in the *S&P Small Cap 600* index and Compustat databases.
2. Data about audit committees were hand collected from proxy statements filed with SEC
3. Variables are defined as follows:

LogMV = Natural log of market value of firms as of December 31, 2003.
OFDIRW = Percent of shares held by officers and directors.
OTBLKW = Percent of shares held by outside block-holders.
DA = Total debt divided by total assets at year-end.
LOSS = 1 if a firm had a loss for 2003, otherwise 0.
MB = Ratio of market value to book value as of year-end.
LTGN = 1 if a firm is in any of the following sectors: pharmaceuticals (SIC codes 2833–2836), computers (3570–3577), electronics (3600–3674), retail (5200–5961), or software (7370); 0 otherwise.
FINCG = 1 if the number of common shares outstanding or the long-term debt increased by atleast 10 percent, otherwise 0.
LnNMEM = Natural log of the number of audit committee members
AUDACXP = Proportion of directors who are accounting experts (i.e., have experience as a ‘‘public accountant or auditor or principal financial officer, controller, or principal accounting officer”).
NACCXP = Proportion of directors who are designated ‘‘audit committee financial experts’’ but are not accounting experts (as defined above).

SEPCHR	=	1 if someone other than the CEO is the Chairperson of the board.
LnBDSIZE	=	Natural log of the audit committee members in 2003.
BDIND	=	Proportion of independent (not insider or gray) directors on the board
LnBDMTG	=	Natural log of the number of board meetings in 2003.
FEMD	=	1 if audit committee has a female director, 0 otherwise.

Table 3
Descriptive Data on Number of Audit Committee Meetings in 2003

Number of meetings	Number of Companies (%)
Less than 3	4 (1.6%)
3	3 (1.2%)
4	35 (13.8%)
5	44 (17.3%)
6	27 (10.6%)
7	35 (13.8%)
8	36 (14.2%)
9	33 (13.0%)
10-12	29 (11.4%)
>12	8 (3.1%)

Table 4
Audit Committee meetings with and without a Female Director

Audit Committee Meetings	FEMD = 0 (*n*=200 firms)	FEMD = 1 (*n*=54 firms)
Less than 3	4 (2.0%)	0 (0%)
3	3 (1.5%)	0 (0%)
4	30 (15.0%)	5 (9.26%)
5	38 (19.0%)	6 (11.11%)
6	20 (10.0%)	7 (12.96%)
7	30 (15.0%)	5 (9.26%)
8	27 (13.5%)	9 (16.67%)
9	24 (12.0%)	9 (16.67%)
10-12	21 (10.5%)	8 (14.81%)
> 12	3 (1.5%)	5 (9.26%)

Notes:

1. The sample includes 254 observations from non-financial firms with a December 31 fiscal year end in the *S&P Small Cap 600* index and Compustat databases.
2. Data about audit committees were hand collected from proxy statements filed with SEC.
3. See Table 2 for definition of variables.

Table 5
Audit Meetings Regression Results

Variable	Coefficient	T-stat.	p-value
Intercept	- 0.273	-0.332	0.740
LogMV	0.051	1.252	0.212
OFDIRW	-0.004	-1.680	0.094
OTBLKW	0.004	2.611	0.010
DA	-0.068	-0.538	0.591
LOSS	-0.043	-0.721	0.471
MB	-0.024	-1.189	0.236
LTGN	0.092	1.600	0.111
FINCG	0.031	0.563	0.574
LogNMEM	0.275	1.991	0.048
AUDACXP	0.232	1.891	0.060
NACCXP	0.056	0.609	0.543
SEPCHR	0.062	1.315	0.190
LogBDSIZE	0.085	0.690	0.491
BDIND	0.003	1.788	0.075
LogBDMTG	0.161	2.366	0.019
FEMD	0.096	1.725	0.086

N = 248;
F Stat. = 3.65;
$_{P}$ < .001;
Adj.R^2 = 0.15

Notes: This table presents the results from regression with the natural logarithm of audit meetings as the dependent variable. The sample includes all non-financial firms in the S&P Small Cap 600 with a December 31, 2003 fiscal year end and available proxy data. See Table 2 for definition of variables.

Table 6
Descriptive Statistics: Sample for Audit Fee

Variable	Mean	S.D.	25th percentile	Median	75th percentile
LAFEE	12.96	0.73	12.36	12.95	13.50
LTA	20.01	0.86	19.39	20.01	20.57
RECINV	0.25	0.17	0.11	0.22	0.35
SQSEG	1.41	0.47	1.00	1.00	0.73
FORGN	0.57	0.50	0.00	1.00	1.00
DA	0.44	0.21	0.27	0.45	0.59
LIQ	3.09	2.65	1.44	2.35	3.68
ROA	0.08	0.11	0.04	0.08	0.11
NMEM	3.53	0.76	3.00	3.00	4.00
AUDACXP	0.20	0.21	0.00	0.25	0.33
FEMD	0.21	0.41	0.00	0.00	0.00

Notes:

1. The sample includes 254 observations from non-financial firms with a December 31 fiscal year end in the *S&P Small Cap 600* index and Compustat databases.
2. Data about audit committees were hand collected from proxy statements filed with SEC
3. Variables are defined as follows:

LAFEE = Natural log of total audit fee.
LTA = Natural log of total assets at year end.
RECINV = Proportion of total assets in receivables and inventories.
SQSEG = Square-root of number of business segments reported on Compustat.
FORGN = 1 if foreign segments reported, else 0.
DA = Total debt divided by total assets at year-end.
LIQ = Current ratio.
ROA = Return on assets.
NMEM = Number of audit committee members.
AUDACXP = Proportion of directors who are accounting experts (i.e., have experience as a ‘‘public accountant or auditor or principal financial officer, controller, or principal accounting officer”).
FEMD = 1 if audit committee has a female director, 0 otherwise.

Table 7
Audit Fee Regression Results

Variable	Coefficient	T-stat.	p-value
Intercept	5.405	5.240	0.000
LTA	0.342	6.234	0. 000
RECINV	0.634	2.924	0.004
SQSEG	0.033	0.418	0.676
FORGN	0.454	5.932	0.000
DA	0.554	2.451	0.015
LIQ	0.010	0.743	0.458
ROA	-0.821	-2.533	0.012
NMEM	0.009	0.174	0.862
AUDACXP	-0.052	-0.300	0.764
FEMD	0.079	0.859	0.391

N = 254;
F Stat. = 17.07;
P < .001;
Adj.R^2 = 0.39

Notes: This table presents the results from regression with the natural logarithm of audit fees as the dependent variable. The sample includes all non-financial firms in the S&P Small Cap 600 with a December 31, 2003 fiscal year end and available proxy data. See Table 6 for definition of variables.

Table 8
Descriptive Statistics: Earnings Management Sample

Variable	Mean	S.D.	25th percentile	Median	75th percentile
REDCA	-0.07	0.36	-0.10	-0.01	0.04
B4	0.96	0.19	1.00	1.00	1.00
L1ACCRUAL	-0.02	0.05	-0.05	-0.02	0.01
LogMV	20.17	0.63	19.77	20.25	20.60
MRGR	0.24	0.43	0.00	0.00	0.00
FINCG	0.22	0.42	0.00	0.00	0.00
MB	2.52	1.37	1.57	2.06	3.05
LVRG	0.44	0.20	0.27	0.45	0.60
LTGN	0.19	0.40	0.00	0.00	0.00
LOSS	0.19	0.39	0.00	0.00	0.00
CFO	0.10	0.07	0.05	0.09	0.13
FEMD	0.21	0.41	0.00	0.00	0.00
LogMEET	1.89	0.37	1.61	1.95	2.20

Notes:

1. The sample includes 254 observations from non-financial firms with a December 31 fiscal year end in the *S&P Small Cap 600* index and Compustat databases
2. Data about audit committees were hand collected from proxy statements filed with SEC
3. Variables are defined as follows:

REDCA = ROA in Estimation Discretionary Accruals.
Big4 = 1 if the sample firm is audited by Big 4 firms, and 0 otherwise.
L1ACCRUAL = last year's total current accruals (net income before extraordinary items plus depreciation and amortization minus operating cash flows) scaled by beginning of year total assets;
LogMV = Natural log of market value of firms as of December 31, 2003.
MRGR = 1 if the sample firm has engaged in a merger or acquisition, and 0 otherwise.
FINCG = 1 if the number of common shares outstanding or the long-term debt increased by atleast 10 percent, otherwise 0.
MB = Ratio of market value to book value as of year-end.
LVRG = Total assets less book value divided by total assets.
LTGN = 1 if a firm is in any of the following sectors: pharmaceuticals (SIC codes 2833–2836), computers (3570–3577), electronics (3600–3674), retail (5200–5961), or software (7370); 0 otherwise.
LOSS = 1 if a firm had a loss for 2003, otherwise 0.
CFO = Cash flow from operations scaled by beginning of year total assets.
FEMD = 1 if audit committee has a female director, 0 otherwise.
LOGMEET = Natural log of the number of audit committee members.

Table 9
Correlation Matrix: Earnings Management Sample

	B4	L1Accrual	LogMV	MRGR	FINCG	MB	LVRG	LTGN	Loss	CFO	FEMD	LogMEET
REDCA	-0.12	-0.01	-0.05	0.01	-0.03	-0.04	-0.04	0.08	0.07	-0.25	-0.01	0.10
	(0.05)	(0.82)	(0.44)	(0.91)	(0.63)	(0.50)	(0.51)	(0.18)	(0.26)	(0.00)	(0.91)	(0.10)
B4		-0.02	0.17	0.01	-0.05	0.09	0.18	-0.23	0.04	0.06	0.05	0.03
		(0.70)	(0.01)	(0.90)	(0.43)	(0.16)	(0.00)	(0.00)	(0.56)	(0.35)	(0.45)	(0.6)
L1Accrual			-0.05	-0.02	0.06	-0.13	-0.08	-0.14	-0.12	-0.07	0.05	0.00
			(0.42)	(0.75)	(0.36)	(0.03)	(0.21)	(0.03)	(0.07)	(0.26)	(0.39)	(0.96)
LogMV				0.04	0.07	0.32	0.12	-0.05	-0.26	0.23	0.04	0.06
				(0.48)	(0.27)	(0.00)	(0.05)	(0.41)	(0.00)	(0.00)	(0.50)	(0.37)
MRGR					-0.30	-0.04	0.05	0.01	-0.10	0.07	-0.16	0.05
					(0.00)	(0.54)	(0.42)	(0.93)	(0.11)	(0.28)	(0.01)	(0.39)
FINCG						0.15	0.10	-0.02	0.06	-0.04	0.02	0.01
						(0.02)	(0.10)	(0.71)	(0.34)	(0.53)	(0.75)	(0.89)
MB							-0.12	-0.01	-0.01	0.32	-0.09	-0.08
							(0.07)	(0.82)	(0.92)	(0.00)	(0.13)	(0.22)
LVRG								-0.16	0.13	-0.23	0.10	0.10
								(0.01)	(0.04)	(0.00)	(0.11)	(0.13)
LTGN									-0.03	0.01	0.01	0.11
									(0.66)	(0.92)	(0.82)	(0.09)
Loss										-0.43	0.00	-0.03
										(0.00)	(1.00)	(0.64)
CFO											0.02	-0.03
											(0.79)	(0.61)
FEMD												0.19
												(0.00)

Notes:

1. This table presents the Pearson correlation matrix
2. Correlation is significant at the 0.01 level (2-tailed)
3. Correlation is significant at the 0.05 level (2-tailed)
4. Variables are defined as follows as in Table 2

Table 10
Discretionary Accrual Regression Results

REDCA

Variable	Coefficient	T-stat.	p-value
Intercept	- 0.089	-0.114	0.909
BIG4	-0.181	-1.417	0.158
L1ACCRUAL	-0.228	-0.513	0.608
LogMV	0.009	0.229	0.819
MRGR	0.010	0.183	0.855
FINCG	-0.037	-0.643	0.521
MB	0.015	0.798	0.426
LVRG	-0.154	-1.275	0.204
LTGN	0.033	0.549	0.583
LOSS	-0.033	-0.486	0.627
CFO	-1.604	-4.085	0.000
FEMD	0.001	0.011	0.991
LOGMEET	0.101	1.626	0.105

N = 253;
F Stat. = 2.24;
P < .006;
Adj.R^2 = 0.011

Notes:
1. This table presents the results from regression with REDCA as the dependent variable.
2. The sample includes all non-financial firms in the S&P Small Cap 600 with a December 31, 2003 fiscal year end and available proxy data.
3. Variables are defined as follows:

Big4	=	1 if the sample firm is audited by Big 4 firms, and 0 otherwise.
L1ACCRUAL	=	last year's total current accruals (net income before extraordinary items plus depreciation and amortization minus operating cash flows) scaled by beginning of year total assets;
LogMV	=	Natural log of market value of firms as of December 31, 2003.
MRGR	=	1 if the sample firm has engaged in a merger or acquisition, and 0 otherwise.
FINCG	=	1 if the number of common shares outstanding or the long-term debt increased by atleast 10 percent, otherwise 0.
MB	=	Ratio of market value to book value as of year-end.
LVRG	=	Total assets less book value divided by total assets.
LTGN	=	1 if a firm is in any of the following sectors: pharmaceuticals (SIC codes 2833–2836), computers (3570–3577), electronics (3600–3674), retail (5200–5961), or software (7370); 0 otherwise.
LOSS	=	1 if a firm had a loss for 2003, otherwise 0.
CFO	=	Cash flow from operations scaled by beginning of year total assets.
FEMD	=	1 if audit committee has a female director, 0 otherwise.
LOGMEET	=	Natural log of the number of audit committee meetings.

Table 11
Meetings Earnings Benchmarks:
Small Earnings Increase and Earnings Surprise Regressions

	INCREASE regression (n=254)	SUPRISE regression (n=117)
Intercept	4.004	-7.278
	(0.58)	(0.43)
FEMD	0.474	-0.242
	(0.33)	(0.66)
LTGN	0.313	1.047
	(0.54)	(0.06)
MB	-0.049	0.372
	(0.79)	(0.07)
LogMV	-0.309	0.257
	(0.40)	(0.58)
LOSS	-0.644	0.389
	(0.33)	(0.57)
REDCA	0.020	-0.045
	(0.97)	(0.95)
Pseudo R^2	0.01	.06
	0.03	.09

Notes:

1. For the *INCREASE* regression, the sample includes all non-financial firms in the *S&P Small Cap 600* with a December 31, 2003 fiscal year, available proxy data and *Compustat* databases and beginning price data for fiscal 2003. For the *SURPRISE* regression, the sample includes all non-financial firms in the *S&P Small Cap 600* with a December 31, 2003 fiscal year, available proxy data*, Compustat* and *I/B/E/S* databases for fiscal 2003.

2. Variables are defined as follows:

INCREASE = 1 when the difference between a firm's current and last year net income, scaled by beginning of year *MV*, falls in the interval (0.00, 0.05), and 0 otherwise;
SURPRISE = 1 when a firm meets or beats by 2 cent the mean consensus analysts forecast, as reported by IBES, for the current fiscal year, and 0 otherwise.

Other variables are defined as in Table 2.

3. *p*-values (two-tailed) are given in parentheses.

Table 12
Chi-Square Test of Earnings Surprise

Surprise: just meet or beat 2 cent	Female	No Female	Total
Yes	6	24	30
(%)	21%	27%	
No	22	65	87
(%)	79%	73%	
Total	28	89	117
Chi-Square test p-value			(-0.628)

Notes:

1. This table presents the chi-square test results from observations with available data in the S&P Small Cap 600 with a December 31, 2003 fiscal year end, available proxy data and I/B/E/S databases for fiscal year 2003.
2. The variables are defined as in Table 2.
3. p-values (two-tailed) are given in parentheses.

Table 13
Chi-Square Test of Earnings Increase

Earnings Increase by 5p	Female	No Female	Total
Yes	7	17	24
(%)	13%	9%	
No	47	183	230
(%)	87%	92%	
Total	54	200	254
Chi-Square test p-value			(-0.305)

Notes:

1. This table presents the chi-square test results from observations with available data in the S&P Small Cap 600 with a December 31, 2003 fiscal year end, available proxy data and Compustat databases and beginning price data for fiscal 2003
2. The variables are defined as in Table 2.
3. p-values (two-tailed) are given in parentheses.

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