

ABSTRACT

Title of Dissertation: THE DEVIL MADE ME DO IT: MANAGERIAL &
STRATEGIC FACTORS LEADING TO ACCOUNTING
FRAUD

Carmelita Janene Troy, Doctor of Philosophy, 2003

Dissertation Directed by: Professor Lawrence A. Gordon, Department of
Accounting and Information Assurance

Professor Kenneth G. Smith, Department of Management
and Organization

Drawing from management and strategy literature, I examine the extent to which managerial and strategic factors are associated with financial statement fraud. Based on a matched pair sample, using a logit regression model, I find that firms that have engaged in fraudulent accounting activities have younger CEOs who have more of their compensation based on stock options than their counterparts. While I expected to find that CEOs of firms involved in accounting fraud would be more likely to have MBA degrees, in fact I found that those CEOs are less likely to have an MBA. I also find that firms engaging in fraudulent accounting activities tend to pursue more risky acquisition strategies than firms not engaging in accounting fraud. My results show that the lack of external audit oversight is associated with financial statement fraud.

An analysis of the four years, leading up to and including the year the accounting fraud started shows that three years prior to the start of the accounting violation, there are few significant differences between the violator and the non-violator match firms along a series of financial, managerial, governance and strategy variables. In the next three years, culminating in the year when the violations began, significant differences develop between the violators and matches along the managerial, governance and strategy variables, while this trend does not appear along the financial variables.

These results advance our understanding of the role executives play in accounting fraud, and suggest that managerial, governance and strategic arrangements must be considered in order to provide safeguards against such fraud.

“THE DEVIL MADE ME DO IT”

MANAGERIAL & STRATEGIC FACTORS LEADING TO ACCOUNTING FRAUD

by

Carmelita Janene Troy

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2003

Advisory Committee:

Professor Lawrence A. Gordon, Co-Chair
Professor Kenneth G. Smith, Co-Chair
Professor Katherine Klein
Professor Michael Peters
Professor Wesley Sine

UMI Number: 3094546

Copyright 2003 by
Troy, Carmelita Janene

All rights reserved.

UMI[®]

UMI Microform 3094546

Copyright 2003 by ProQuest Information and Learning Company.

All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

©Copyright by

Carmelita Janene Troy

2003

ACKNOWLEDGMENTS

My parents, Owen & Ann Troy,
who provided encouragement and support throughout my PhD Program.

The following individuals have provided assistance
or guidance during the dissertation process:

1. The Staff of the Public Reference Room at the Securities and Exchange Commission, Washington DC, for making available to me the microfilm of the many proxy statements and 10-K reports that were not available online.
2. Professors Kenneth G Smith and Lawrence A Gordon, my dissertation committee co-chairs.

TABLE OF CONTENTS

List of Tables.....	iv
List of Figures.....	v
Chapter I. Introduction.....	1
Chapter II. Literature Review & Hypotheses Development	
Literature Review.....	7
Hypotheses Development	16
Managerial Factors.....	17
CEO Age.....	17
CEO Education (MBA).....	19
Governance Factors	21
Audit Committee of the Board of Directors	22
CEO Stock-based Compensation.....	26
Acquisition Strategy.....	29
Control Variables.....	30
Financial Condition.....	31
Change in Stock Price.....	32
Summary of the Hypotheses	32
Chapter III. Methodology	
Sample Selection.....	33
Data Sources	37
Research Model	38
Discussion of the Variables	40
Chapter IV. Results	
The T-test and Chi-Squared Test Results	43
The Results of the Logit Model	44
Chapter V. Post Hoc Analysis	
Supplemental Analysis.....	47
Historical Analysis.....	47
Financial Condition Variables	48
Managerial Variables.....	51
Governance Variables.....	53
Strategy Variable	55
Discussion of the Historical Analysis	56
In-conclusion.....	57
Analysis of CFO Data.....	58
A proposed Cycle of Events – Acquisitions	59
Chapter VI. Discussion and Conclusions	61
References	85

LIST OF TABLES

1. Sample Selection of 71 Firms with Violations Starting in 1992 or Later and Subject to Enforcement Action by the SEC	68
2. Two-digit SIC Classification of 71 Firms Violating GAAP and Subject to SEC Enforcement Action Between 1992 and 2001	69
3. Results of Paired-Samples Testing	70
4. Descriptive Statistics and Correlations	72
5. T-tests and Chi-squared Tests of Differences in the Independent Variables	73
6. Results of the Logit Model	75
7. T-Tests for Differences in Means of Variables of Interest	76
8. Results of CFO Analysis.....	78

LIST OF FIGURES

1.	Diagram of GAAP Violation.....	79
2.	Comparison of the Samples on Altman's Z-Score.....	80
3.	Comparison of the Samples on Total Cash Flows	80
4.	Comparison of the Samples on CEO Age	81
5.	Comparison of the Samples on CEO Tenure with the Firm.....	81
6.	Comparison of the Samples on CEO Ownership Percentage.....	82
7.	Comparison of the Samples on Total Value of CEO Options Scaled by Total Cash Compensation.....	82
8.	Comparison of the Samples on Acquisitions	83
9.	A Proposed Cycle of Events Preceding Accounting Violations	84

Chapter I. Introduction

“Can anything sink a stock price faster than news of accounting problems?”

The success of capital markets in a market economy relies on the accuracy and reliability of the financial statements reported by publicly traded companies. Fraudulent accounting,¹ where the financial reports are not in compliance with generally accepted accounting principles (GAAP) and therefore are not a fair and faithful representation of the true financial state of a company, undermines the credibility of the financial reporting system and, thus, capital markets. Indeed, the effects of financial statement fraud can be devastating. For example, investors in Tyco lost \$100 billion in market value (a sum that exceeds Enron’s total loss) as a result of disclosures that CEO Kozlowski had manipulated earnings. But prior to the disclosure, Kozlowski quietly sold \$500 million worth of his own Tyco stock to avoid personal loss (Bryne, 2002).

While high profile cases of fraudulent financial reporting, such as Tyco, Enron and WorldCom, have recently been brought to the attention of the general public, the problem of financial statement fraud is not new. Feroz et al (1991, p. 108) report that the Securities and Exchange Commission (SEC) investigation of alleged financial statement reporting violations began soon after the SEC was established in the 1930s.

¹¹ Throughout this paper I have used the terms “fraudulent accounting,” “accounting fraud,” “financial statement fraud” and “GAAP violations” interchangeably.

The Committee of Sponsoring Organizations of the Treadway Commission (COSO) undertook a study of firms subject to SEC Accounting and Auditing Enforcement Releases (AAERs) to understand the key characteristics of firms subject to enforcement action for accounting fraud. This study, published in 1999, analyzed AAERs issued between 1987 and 1997 and observed that accounting fraud was associated with financial distress and a lack of investor oversight. These observations are consistent with findings in the academic literature on accounting fraud. However, the COSO study also showed that, in most cases of fraud, the chief executive officer of the firm was actively involved in perpetrating the fraud. This observation is consistent with Daboub, et al (1995), who report that corporate illegal activities, in general, can be directly tied to the actions (or inactions) of top management.

The research on accounting fraud has focused primarily on financial and board oversight factors. For example, Dechow, et al (1996) found that fraud was associated with the goal of securing low-cost external financing. Beneish (1999a) linked accounting fraud to the benefits to be derived from insider trading. With regard to governance, Beasley (1996), Beasley, et al (2000) and Dechow et al (1996) focused on the independence of the board of directors and found that lower proportions of outside or independent directors on the board of directors were positively linked with accounting fraud.

The literature on accounting fraud has not considered the relationships between management and accounting fraud. Regarding corporate illegal activity in

general, Daboub et al (1995) argue that an agreement is “emerging that corporate wrongdoing is more often the result of actions or inactions, deliberate or inadvertent, by the top managers of the organization.” In other words, accounting fraud, a form of corporate wrongdoing, is a deliberate choice or decision to violate the law and this decision-making is often taking place at the uppermost echelon of corporate management. While Daboub et al (1995) allow that the wrongdoing may be “inadvertent,” in the words of the SEC, the top manager(s) are often “reckless in not knowing” of the fraudulent activity occurring within the firm. I propose that GAAP violations result from opportunistic behavior and that characteristics of the top manager, in conjunction with other factors, can be used to determine those firms that are more likely to violate GAAP.

My goal is to develop and empirically test a more comprehensive model of accounting fraud that includes 1) managerial, 2) governance, 3) financial, and 4) strategic factors. My desire was to build a model that integrated prior research in accounting and finance with literature in strategy and organizational theory, such that mathematically speaking, **GAAP Violation = f (managerial factors, governance structure, firm strategy, financial condition)**. Thus, I draw from the management, strategy and organizational theory literature, in addition to the economics-based literature, to provide a broader explanation of accounting fraud using managerial and strategic variables. The ultimate goal in developing a more comprehensive and complete understanding of accounting fraud is to contribute to

the organizational and managerial literature and perhaps to propose a set of organizational safeguards.

To select the managerial factors I draw upon upper echelon theory (UET). UET suggests that managerial demographics can be used to predict strategic choices, which would include the choice to violate GAAP, since executive backgrounds are reflected in their decision-making (Hambrick and Mason, 1984, p. 197). In particular, I focus on the demographic and background characteristics, such as age, education and experience, which UET suggests are explanatory variables.

I also examine the functions of the governance structure using an agency theory basis. According to agency theory, the use of monitoring and/or results-based compensation can be used to govern the agent (manager). My analysis provides evidence as to the effectiveness (or lack thereof) of monitoring and compensation in the governing process. I show that a strategy of rapid growth by acquisitions is often associated with accounting fraud. Finally, given the findings in the prior literature, I have controlled for the effects of financial condition in my analysis.

The research design comprises an investigation of firms that initiated GAAP violations and were subject to SEC enforcement action between 1992 and 2001. The source for these violator firms is SEC AAERs. The research methodology relies on a matched-pair design, where each violator firm, which was subject to SEC enforcement action, is matched with a similar firm, not subject to enforcement action by the SEC. This match was based on industry, size, age and risk. All data was

collected from secondary, publicly available sources, including Research Insight, company DEF-14A (proxy) statements and company 10-K reports, *Dun and Bradstreet's Reference Book of Corporate Managements*, Thomson Financial's SDC Platinum Database and the Center for Research and Security Prices (CRSP) database.

The research design uses a logit multiple regression analysis. Accordingly, the model of accounting fraud controls for the effects of the other variables in the study. I also present a comparison (t-tests) of the violator sample and the matched sample regarding each of the factors at the time the violations began, and also in each of the three years prior to the start of GAAP violation, in order to provide a historical description of the events and conditions that culminated in a GAAP violation.

The investigation of decision-making relating to accounting violations is of interest to scholars because it can expand our understanding of the causes of GAAP violations. Current literature focuses on insider trading and external financing as the causes of accounting violations (Beneish, 1999; Dechow et al, 1996). The introduction of theories of management and strategy into the study of accounting fraud helps us understand the broader processes that culminate in accounting fraud. The results regarding audit committees are of additional interest, not only to scholars but regulators and investors as well, to understand if recent legislative requirements can achieve their intended results.

The paper proceeds as follows. Chapter II presents the literature review and develops the hypotheses under consideration. Chapter III describes the methodology of this research. Chapter IV presents the results. In Chapter V I make some post-hoc analyses and in Chapter VI discuss the results and possible implications.

Chapter II. Literature Review and Hypotheses Development

A. Literature Review

Generally accepted accounting principles are, to a certain degree, flexible and allow for judgment to be exercised in accounting for business transactions. It is well known and has long been documented that firms manage earnings in order to report financial transactions in the most favorable light. The early research identified this activity as “income smoothing.” Beidleman (1973, p. 653) reports that as early as 1964, and perhaps earlier, income smoothing was “advocated as an appropriate objective for business firms.” This smoothing was a process of deliberately minimizing the “abnormal variations” in earnings so as to maintain “some level of earnings that is currently considered to be normal for a firm.” But it was recommended that smoothing should be limited to “the extent allowed under sound accounting and management principles.” Beidleman (1973) concluded that there was evidence that a majority of, but not all, firms showed signs of income smoothing and he advised users of financial reports to determine the extent of smoothing in order to properly value the firm’s reported income.

Income smoothing continued to receive considerable attention in the academic press into the 1970s and 1980s. Beidleman (1973, p. 654) wrote that a stable earnings stream is more highly valued by stakeholders of a firm and that greater earnings variability has an “adverse effect on the value of a firm’s shares.” This explains why firms appear to go to such lengths to stabilize or smooth earnings over

time and avoid those pesky, unexpected earnings surprises. However, there was much “bad” that was perceived to be associated with income smoothing. For example, Ronen and Sadan (1981) state that the “press...views the smoothing phenomenon as revelations of ‘cheating,’ of ‘misleading,’ and of other ‘immoral’ deeds on the part of managers of corporations.” Ma’s (1988) study of bank loan loss reserves seems to provide some support to the negative connotations associated with income smoothing. According to Ma (1988), SEC regulations require commercial banks to disclose “the quality of loan portfolios as well as to set up appropriate loan loss reserve accounts.” However, Ma (1988, p. 495) concluded that the provisions for loan losses are used to smooth earnings and do not “fully serve the original intention of reflecting the actual quality of banks’ loan portfolios.”

Lambert (1984) and Healy (1985) provide evidence that the structure of compensation packages may indirectly motivate managers to smooth income. Lambert’s (1984) conclusions were motivated by agency theory and moral hazard issues, which conclude that the somewhat lazy managers would have less incentive to continue generating real income in a period when income appears to be unusually high and will avail themselves of non-monetary perks and “take it easy” for the remainder of the year. As a result, the total earnings for the year would be dampened. Healy’s (1985) approach was somewhat different, but came to more or less similar conclusions. When the compensation plan for the manager includes a bonus based on accounting earnings, but the bonus is capped at some level, then the managers have the incentive to smooth the income by postponing income that

exceeds the cap into a future period when the managers can increase their bonuses. In both cases, Healy (1985) and Lambert (1984), the result is to smooth income in the current year.

More recently the terms “earnings management” or “earnings manipulation” have been used to describe “income smoothing.” Bartov’s (1993) article, *The Timing of Asset Sales and Earnings Manipulation*, discusses evidence regarding whether managers carefully choose the period in which to actually sell a long-lived asset in order to “manipulate” or smooth earnings. Holthausen et al’s (1995, p. 29) article, *Annual Bonus Schemes and the Manipulation of Earnings*, addresses evidence regarding the extent to which managers modulate earnings in order to “maximize the present value of bonus plan payments.” Like Healy (1984), Holthausen et al (1993) conclude that there is greater evidence that earnings are modified downward when the CEO is at his upper limit of bonus than when he does not qualify for a bonus or is in some middle ground. More recently Burgstahler and Dichev (1997) showed, in a rather unsophisticated but very clear way, (along the lines of “a picture is worth 1,000 words”), general evidence that firms manage earnings, specifically in order to avoid reporting slightly negative net income or to avoid reporting an earnings decreases.

While the management of earnings has been extensively researched, the conclusions of that research are limited because of the uncertainty regarding what is the amount of unmanaged earnings. Since the amount of unmanaged earnings is not or cannot be defined, the level of earnings management is difficult to determine.

However, the focus of my research is not on the extent of earnings management, but rather on those instances when earnings were managed or manipulated to the point that GAAP was violated. Violation of GAAP or accounting fraud results in financial statements that often are more a work of fiction than a true story of the financial condition of the company.

GAAP violations tend to involve the overstatement of revenues, understatement of expenses, or overstatement of assets, often in some combination that affects both the income statement and the balance sheet. According to the COSO (1999) study, over half the frauds involved the overstatement of income and about half involved overstatement of assets. Feroz et al (1991) report that premature revenue recognition and overstatement of assets accounted for about 70% of the SEC enforcement actions in their study. Dechow et al (1996) report that in their study, 72.8% of the violations involved the overstatement of income, primarily by either overstating revenues or understating expenses. Beasley et al (2000) report that revenue-recognition problems were the issue in the GAAP violation for 76% of the firms in their technology sample and 41% of the firms in their financial services sample.

The types of violations are various and are often very simple schemes. For example, in one case, the SEC reported that the financial statements of a particular company “created the illusion that each quarter the company...met or exceed[ed] projections” and overstated pre-tax profits by \$12 million in 1994, \$21.5 million in

1995 and \$11.5 million in 1996.² In another case, the firm reportedly had created falsified documents to “create the appearance that certain goods had been shipped to customers when...[in most cases] the goods had not been...manufactured.”³ In a number of other cases the SEC reported that firms held “books open at quarter-end and year-end periods, recognizing false revenue” etc. In a case of overstating assets, the SEC alleged that the firm had assigned “a \$40 million value to phony Russian certificates of deposit (57% of assets).”⁴ In a more extreme case, executives of a firm had lied to investors about certain assets, including the reporting of dirt stored in a warehouse as gold in the financial statements!⁵

The study of GAAP violation and accounting fraud is important because of the recent increase in the instances of earnings manipulation pursued by the Securities and Exchange Commission (SEC) and the greater publicity of the cases of GAAP violations and stakeholder deceptions that have been discussed in the popular press. GAAP violations are becoming a greater menace in society, the effects of which have been well publicized in the recent cases of Enron, Tyco and Adelphia Communications cases, to name just a few. In April 2000, MicroStrategy made headlines when it was disclosed that the company would restate earnings for 1997, 1998 and 1999 from previously reported profits to losses. Similar to an example mentioned earlier, MicroStrategy reported revenue prematurely, a practice which is

² From AAER #1144.

³ From AAER #750.

⁴ From AAER #863.

⁵ From AAER #1316.

not in conformity with GAAP. *The Wall Street Journal* reported that MicroStrategy immediately recorded “\$27 million from two contracts as quarterly revenues, even though the contracts were announced several days after the respective quarters ended.” In the much publicized and investigated case of Enron, reportedly the seventh largest corporation in the country, the company acknowledged that it had overstated earnings since 1997 to the tune of \$600 million.⁶ Pre-Enron, Arthur Levitt, former SEC Chairman, put it this way: “Managing [earnings] may be giving way to manipulation; integrity may be losing out to illusion.”⁷

Sanctions imposed by the SEC for violating GAAP depend on the type and extent of the violation. Feroz et al (1991, p. 108) state that executives generally consent to “an injunction that prohibits future violations of the securities laws” since they often neither deny nor admit to wrongdoing. However, more severe consequences do occur. Executives have been prohibited by the SEC from holding executive office in any publicly traded company for several years or, in a few cases, were prohibited from ever holding office again. Imprisonment of corporate officials has occurred, but according to COSO (1999), there are relatively few individuals that actually served prison sentences.

In addition to SEC administered sanctions, there are consequences imposed by the market and by investors on the firm and on the individuals within the firm

⁶ <http://www.msnbc.com/news/664274.asp> November 24, 2001

⁷ From a speech by Arthur Levitt entitled “The Numbers Game” presented on 28 September 1998 at the NYU Center for Law and Business.

that were allegedly involved in committing the fraud. Significant declines in stock price almost always follow disclosure of accounting irregularities (Feroz et al, 1991; Dechow et al, 1996), class action suits against individual senior executives and forced resignations (COSO, 1999; Feroz et al, 1991) are also common.

There has been a steady, though limited, stream of research that specifically addresses violation of GAAP. This research has addressed the motivations for violation and consequences to firms where the violations have been made public (Feroz et al, 1991; Dechow et al, 1996; Summers and Sweeney, 1998; and Beneish, 1999a), the influence of corporate governance has had on accounting fraud (see Beasley, 1996, Beasley et al, 2000, Dechow et al, 1996, McMullen, 1996), the detection of GAAP violation (Beneish, 1997 and 1999 and Beasley et al, 2000) and auditor litigation in connection with accounting fraud (Bonner et al, 1998).

Dechow et al (1996), in their study of firms that were the subject of SEC Enforcement Actions between April 1982 and December 1992, found that the motivation for accounting fraud was to obtain benefits for their firm. The “desire to attract external financing at low cost” and to avoid violating debt covenant restrictions was driving much of the earnings manipulation, according to Dechow et al (1996). Refuting Dechow et al’s (1996) claims, Beneish (1999b) reports that after controlling for firm age, growth, ownership structure and managerial discretion over accruals, variables that proxy for external financing and debt covenants are no longer significant (p. 434). Beneish (1999b, p. 454) instead finds that insider trading or “that managers’ desire to sell their equity contingent wealth at higher

prices is a motivation for earnings overstatement.” In other words, managers violated GAAP in order to receive the private and personal benefits of selling their stock or exercising their stock appreciation rights at inflated prices. In a similar vein, Summers and Sweeney (1998) found that insider trading was significantly greater for GAAP violators than for the non-violator firms in their sample.

Beneish (1997, 1999a) attempted to determine whether it would be possible to detect violation of GAAP prior to its public disclosure using accounting data. In the earlier paper, Beneish (1997) compared samples of 43 GAAP violators with two large samples (1,764 and 1,349) of “Aggressive Accrualers.” He found that [1] an index of days sales in receivables, [2] total accruals to total assets, [3] abnormal returns for the previous year and [4] dummy variables representing positive accruals and declining cash sales were all significantly different for violator firms than for firms showing aggressive accruing practices. In the later paper, Beneish (1999a), by comparing certain ratios for a sample of 74 known violators and comparing them to the ratios of a sample 2,332 “nonmanipulator” firms, Beneish (1999a, p. 30) concludes that it is more probable that a firm is manipulating its earnings if there are “[1] unusual increases in receivables, [2] deteriorating gross margins, [3] decreasing asset quality, [4] sales growth, and [5] increasing accruals.” These types of ratios can be useful to auditors. Summers and Sweeney (1998) report that auditors may enhance their assessment of the audit risk of a client not only by including insider trading in their model of risk, but by also including an assessment of changes in

inventory and return on assets (ROA), since increases in both inventory and ROA were significantly greater for the GAAP violators than for the non-violators.

The current literature on accounting fraud does not fully address the factors that influence corporate leaders to violate GAAP. There are other factors besides financial and corporate governance that can explain why one firm violates GAAP, and another similar firm, in comparable circumstances, does not violate GAAP.

While the existing literature provides explanations based on financial condition and governance regarding why GAAP violation occurs, I believe that taking an approach from the strategic decision-making literature provides a more comprehensive model for understanding accounting fraud.

The managerial characteristics approach of the strategic decision-making literature contends that various characteristics of the manager/decision-maker influence decision-making (Hambrick and Mason, 1984; Hambrick and D'Aveni, 1992; D'Aveni, 1989; Weiner and Mahoney, 1981). Using demographic factors in business research is based on the linkage between demographics and abilities. The characteristics of the chief executive officer are of the most interest here since it is often the CEO that exerts the greatest influence in deciding which strategies will be pursued by the company and, as COSO (1999) reported, in most cases of GAAP violations, the CEO is directly involved.

Both the prior research on strategic decision-making and on bankruptcy and decline provide insights as to the factors that may be precursors to GAAP violation. The context of the decision making process includes the setting in which the decision

to violate GAAP was made and would include the extent to which the firm is in financial distress and the effectiveness of the board of directors, particularly the audit committee, in deterring unethical activities. Closely related, is another agency concern: the structure of the compensation package.

B. Hypotheses Development

As noted previously, my managerial and strategic model of accounting fraud focuses on four domains: managerial, governance, strategy, and financial. The rationale for these four domains is based on the following four points. First, COSO reports that in the majority (72%) of companies subject to SEC enforcement action, the CEO is directly associated with the fraudulent activities. Accordingly, I assert that certain CEO characteristics are linked with the violation of GAAP (D'Aveni, 1989; Daboub et al, 1995; Hambrick and D'Aveni, 1992; Hambrick and Mason, 1984; Weiner and Mahoney, 1981). Second, prior research emphasizes a lack of board oversight and control (Beasley 1996; Beasley et al, 2000; Dechow et al, 1996). Hence, I examine two governance factors: proportion of outsiders on the audit committee and stock options or contingent compensation. Third, I examine the effects of strategy on accounting fraud. This last concern focuses on whether the firm follows a growth by acquisition versus some other growth strategy (i.e., anecdotal evidence suggests that firms that grow primarily through acquisitions often run into trouble). Finally, as mentioned previously, Dechow et al (1996) reports that deteriorating financial condition, which can or does result in higher costs of debt

financing, is a motivation for GAAP violations. The COSO (1999) report also suggests that the financial condition of the firm may motivate financial statement fraud. This is because a firm may be doing poorly, and the leadership may be pressured to “improve the situation” or because the firm may be doing particularly well, and the executives may be pressured to “keep up the good work.” I control for the effects of financial condition, including changes in stock price, on the likelihood of committing accounting fraud. Figure 1 presents a hypothetical diagram of how these factors, financial, governance, strategic and managerial, may coalesce to result in a choice to commit accounting fraud or not. Each factor and hypothesis is discussed and presented below.

i. Managerial Factors

I examined two managerial factors that have been identified in decision-making (Hambrick and Mason, 1984) and corporate illegal activities literature (Daboub et al, 1995). These two factors are CEO age and type of education.

a. CEO Age

The association between executive age and risk-taking propensity is well recognized in the organization theory/strategy literature. Hambrick and Mason (1984) proposed that younger executives would undertake riskier strategies, perhaps alluding to the “follies of youth.” They contend that older executives are more conservative, have less mental agility, and have a greater commitment to status quo. Markóczy (1997) found that younger managers are greater risk-takers, and Brouthers

et al (2000, p. 867, 876) reported that younger managers are more “strategically aggressive” than the older managers during times of environmental turbulence. Child (1974) reports that older managers are less confident compared to their younger counterparts and that they are less likely to challenge rule structures within an organization. Wiersema and Bantel (1992) argued that financial and career security may lead older executives to avoid making risky choices.

The misreporting of earnings (i.e., engaging in accounting fraud) is risky. Indeed, the consequences of getting caught can be devastating to all parties involved. Dechow et al (1996) report that when a GAAP violation or SEC investigation is disclosed, the cost of credit goes up significantly. Plummeting stock price, evident whenever financial reporting problems are disclosed, is another consequence of the disclosure of accounting fraud, which negatively affects stockholder wealth. In order to avoid personal loss from plunging stock prices executives often illegally trade their shares prior to the disclosure of the accounting problems (Beneish, 1996). While the SEC may not always impose sanctions on all individuals in the company responsible for perpetrating the fraud, there are reputation costs that the market imposes on those executives who have been involved in or associated with accounting misrepresentations. Younger executives may be more willing to assume these reputation risks than older, more experienced CEOs.

Executive age has also been empirically connected to moral development (Daboub et al, 1995). For example, researchers have found negative relationships between age and machiavellian behaviors among marketers (Hunt and Chonko,

1984), and unethical behaviors by researchers (Kelley, Ferrell, and Skinner, 1990). Overall, because older executives will more likely take a conservative approach and have greater moral development, and because younger executives have been shown to be risk-takers, I expect that age will be negatively related to GAAP violation.

Hypothesis 1. Firms with younger CEOs will be more likely to engage in GAAP violation than firms with older CEOs.

b. CEO Education (MBA)

Chief executive officers are generally well educated. Most have completed college and have at least one graduate degree (Chandy, 1991; Palia, 2000). According to cognitive theory, education is positively related to cognitive abilities, and more highly educated executives are better able to generate novel and creative solutions to various problems (Bantel and Jackson, 1989). Hambrick and Mason (1984, p. 200) suggest that education can influence decision-making within organizations, and report that greater levels of CEO education, regardless of the type, have been associated with higher levels of innovation (see also, Grimm and Smith 1991). Hambrick and Mason (1984, p. 201) also propose that executives with professional business education (on both the undergraduate and MBA levels) are “more complex administratively” than those who lack such training. In a similar vein, Wiersema and Bantel (1992) report that the attainment of higher education is associated with advanced ability to process and integrate information into decision-making. The greater abilities to integrate information into decision-making could result in the executives scanning the environment to assess opportunities and threats

early on. In addition, Daboub et al (1995) suggest that higher levels of education are associated with greater moral development.

Of particular interest is graduate business education. According to Chandy (1991), the majority of CEOs who have completed graduate education studied business administration. Barker and Mueller (2002, p. 787) report that one criticism of MBA programs is that they “attract conservative, risk-averse students and teach analytic skills geared toward avoiding big mistakes or losses.” And despite what Daboub et al (1995, p. 155) refer to as “the common finding that level of education is positively associated with moral development,” there is evidence that an MBA education “may cause a *decline* in moral development.” In particular, Daboub (1995) suggest that MBA education “increases self-interested behavior” that can result in personal benefits at some other party’s expense. For example, Schipper (1989, p. 92) defines earnings management as “a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain.” This implies that GAAP violation, an extreme form of earnings management, is self-interested and less moral behavior. Consequently, I expect those firms violating GAAP are more likely to have a CEO with an MBA education than those firms not violating GAAP.

Hypothesis 2. Firms with CEOs that hold MBA degrees will be more likely to violate GAAP than firms whose CEOs are without MBA degrees.

ii. Governance Factors

Prior research in accounting and finance has focused on the role of governance and especially board of directors' oversight in investigating accounting fraud (Beasley, 1996; Klein, 2002). Moreover, the popular press has linked accounting fraud with executive compensation packages. Accordingly, I examine the extent to which outsiders on the audit committee and executive stock options are associated with accounting fraud.

Agency theory postulates that there is a separation or conflict between owners and managers and that the self-interests of the agent or manager may lead the manager to behave opportunistically at the expense of the owner/principal. Tosi et al (2000, p. 304) provide the following example of the agent's opportunistic behavior:

A CEO may move the company into an aggressive diversification program of mergers and acquisitions, with modest or perhaps even negative returns to stockholders, increasing firm size (with concomitant increases in CEO compensation) and reducing business risks (at the expense of lower returns). Thus, the principal may incur some losses (referred to as "agency costs") whenever the agent pursues objectives that are incongruent with those of the principal.

Agency theory suggests certain mechanisms, i.e., monitoring and/or contractual agreements, that can alleviate the conflicts of interest between the owner and the manager (Holmström, 1979). According to Jensen and Murphy (1990), a direct relationship between the wealth of the manager and the wealth of the owner/principal, will alleviate agent-principal problems. Zajac and Westphal (1994)

suggest that greater control over managers can be attained through increase use of contractual incentives and monitoring, particularly by the board of directors.

a. Audit Committee of the Board of Directors

Effective oversight can influence managers and executives to make those decisions that are consistent with good business practices and acceptable accounting principles. Kesner and Dalton (1986, p. 19) state “the board’s responsibility to monitor and control the actions of the CEO and other top officers is critical...This responsibility include[s] maintenance of managerial integrity.” The governance literature confirms that the structure of the board of directors, specifically in regards to its independence, can influence “managerial integrity,” in particular, the likelihood that the firm is committing fraud (Beasley, 1996; Beasley et al, 2000; Dechow et al, 1996).

The audit committee has the responsibility over the financial reporting of the company. Accordingly, I focus on the audit committee. The requirements by the SEC and the stock exchanges regarding the existence, composition and responsibilities of audit committees have evolved over time. By the late 1980s, audit committees were strongly recommended by the SEC, but the rules regarding audit committees varied for the different stock exchanges. At the one extreme, every listed company was required to have an audit committee made up of a majority of independent directors. At the other extreme, audit committees were recommended, but not required, with little reference to the independence of the audit committee.

Marsh and Powell (1989, p. 55) reported that by 1989 more than 80% of publicly-traded companies had audit committees.

An effective audit committee should take the necessary precautions (including the appointment and oversight of the auditor) to ensure that the financial reports are faithful representations of the corporation's financial status and are in conformity with GAAP. The empirical results on audit committees generally show that audit committees are effective. DeFond and Jiambalvo (1991) conclude that firms with audit committees have fewer accounting errors. McMullen (1996) and Dechow et al (1996) find that firms with audit committees are associated with fewer SEC enforcement actions. More recently, Beasley et al (2000) report that companies subject to SEC enforcement action for accounting fraud more frequently did not have an audit committee.

As a result of the increases in fraudulent accounting in the 1980s, the Report of the National Commission on Fraudulent Financial Reporting (1987) - the Treadway Commission Report - recommended that the board of directors establish an audit committee comprised entirely of independent directors (Bull, 1991). The 1999 *Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees* made 10 specific recommendations⁸ to

⁸ The recommendations are:

- Recommendation 1 - The exchanges adopt the definition of independence for audit committees as given above.
- Recommendation 2 - The audit committee consists of only independent members.
- Recommendation 3 - Audit committee to have at least three financially

improve audit committee effectiveness. In addition to the recommendation that audit committee members be independent directors, the report (p. 10) stated that independent members of the audit committee are to “have no relationship to the corporation that may interfere with the exercise of their independence from the management and the corporation.” As a result of the recommendations of the *Blue Ribbon Committee*, the New York Stock Exchange, the American Stock Exchange and the NASDAQ have approved and adopted new or updated rules and regulations requiring audit committees for all companies listed on the exchanges. These rules, with a few exceptions, required that members of the audit committee must be independent directors.

In 2002 Congress passed the *Sarbanes-Oxley Act*, which was in direct response to the financial reporting failures of such companies as Enron and

literate members.

Recommendation 4 - Audit committee to adopt a formal written charter.

Recommendation 5 - Disclosure in the proxy statement of whether or not a charter has been adopted.

Recommendation 6 - Listing rules for the exchanges to require audit committee charters specify that the auditors are ultimately responsible to the board of directors and audit committee.

Recommendation 7 - Audit committee to receive “formal written statement delineating all relationships between the auditor and the company” (p. 14).

Recommendation 8 - External auditor to discuss with the audit committee the auditor’s assessment of the quality of the accounting and the degree of aggressive or conservative accounting practiced by the firm.

Recommendation 9 - Disclosures on the 10-K annual report of the discussions between management, external auditors and audit committee.

Recommendation 10 - External auditors to conduct financial reviews prior to the filing of quarterly reports with the SEC.

WorldCom. With respect to audit committees, the *Sarbanes-Oxley Act of 2002* requires that each member of the audit committee “shall be” an independent member of the board of directors. “‘Independent’ is defined as not receiving, other than for service on the board, any consulting, advisory or other compensatory fee from the [company], and as not being an affiliated person of the [company], or any subsidiary thereof.”⁹

While both the *Blue Ribbon Committee’s Recommendations* and the requirements of the *Sarbanes-Oxley Act* take effect subsequent to the years under study in my research, the importance that they both place on the independence of the audit committee indicates that legislators and regulating bodies see the need for increased independence in order to prevent financial statement scandals and erosion of investor confidence. The academic literature regarding the effects of independence of the audit committee is limited. Beasley et al (2000) found that when firms subject to SEC enforcement action did have an audit committee, it was less independent than was the case for the no-fraud firms studied.

Accordingly, I expect to find that greater independence of the audit committee will be associated with greater monitoring and less likelihood that the firm is involved in fraudulent financial reporting.

⁹ Summary of the *Sarbanes-Oxley Act of 2002*.

http://www.aicpa.org/info/sarbanes_oxley_summary.htm

Hypothesis 3. Organizations with more independent audit committees will be less likely to violate GAAP than organizations with less independent audit committees.

b. CEO Stock-based Compensation

In theory, a carefully designed executive compensation plan can alleviate many principal-agent problems. For example, Holmström (1979) theorized that by compensating the agent or manager based on the outcome of his/her efforts, the principal (owners) could induce the agent to take those actions that were likely to result in the outcomes desired by the principal. Abdel-khalik (2002, p. 2-3) states that “one of the most direct ways of reducing the conflict of interest in a corporate setting is to offer managers incentive plans designed to motivate them to take actions consistent with maximizing the value of shareholders’ wealth.”

A direct means of aligning the interests of the agent/manager with the principal is through stock-based compensation. Stock-based compensation is important because, as Jensen and Meckling (1976) maintain, if a manager’s wealth is not tied to firm value and shareholder wealth, the manager will either consume excessive perquisites or not expend the efforts desired by the owners. This theory is based on the assumptions that there is a direct relationship between executive decision-making and the related actions and performance measures and that, in the case of stock-based compensation, the markets are efficient and that stock prices are a true reflection of corporate earning power (Abdel-khalik, 2002). Thus, stock options should provide a manager the incentive to make business decisions that will

maximize shareholder wealth over the longer term, since the executive would simultaneously maximize his or her own personal wealth.

However, in the words of Tosi et al (2000, p. 305), “the findings of studies on executive pay as a control mechanism are remarkably inconsistent not only with the theory but with each other.” Jensen and Murphy (1990, p. 227) report that for each \$1,000 increase in firm value the compensation of the CEO increases by \$3.25 and they conclude that their “results are inconsistent with the implications of formal agency models of optimal contracting.” Finkelstein and Boyd (1998) report correlations between -0.03 and 0.13 between return on equity and CEO compensation.

Despite the mixed evidence regarding the effectiveness of stock options in aligning agent interests, use of stock options has increased across the board. About 85% of all executives in the United States receive stock option compensation and the value of these options is one to three times the salary of the executives (Chingos and Engel, 1998). The trend has been for stock options to make up larger and larger percentages of total CEO compensation. *The Economist* (1999) reports that in 1998 stock options accounted for over half, 53.3%, of total compensation of top executives. Just 4 years earlier, *The Economist* (1999) reported, options accounted for just over one-quarter, 26%, of total compensation and only 2% of total compensation in the 1980s.

Lambert and Larcker (1987, p. 86) report that high-growth firms use incentive plans that are more heavily weighted towards market-based incentives,

such as stock options. Beneish (1999b) found that firms violating GAAP had significantly higher growth rates than the firms in the non-violator sample and he suggests that there is a higher probability that earnings are being manipulated when a company is experiencing unusually high-growth rates. In other words, compensation packages that were designed to align the interests of the manager with the interest of the owner, may provide incentive, not for the manager to work harder to produce results, but for the manager to manipulate the reported income in order to sustain the appearance of high growth rates, which in turn maximizes his personal wealth through higher stock prices, in the short-term at least.

St-Onge et al (2001) report finding that while options are initially granted to alleviate agency issues, they are also used to recruit and retain executives and to facilitate the payment of high levels of executive compensation required in the labor market for executive talent. If options are granted in order to bring executive compensation to a high level, and option value is contingent upon stock price, and stock price has a direct correlation with income reported in the financial statements, then it may be expected that higher levels of option-based or contingent compensation are associated with greater incidence of fraud in an attempt to maximize short term executive wealth, since options or contingent compensation does not always align interests of managers and owners.

Hypothesis 4. CEOs that have been compensated with greater proportions of stock options will be more likely to violate GAAP than CEOs with lesser proportions of stock options.

iii. Acquisition Strategy

An acquisition strategy may be defined as applying a new business model through the process of acquisition (Mascarenhas et al, 2002). Typically, the new business model will involve some new method for improved production or efficiency, in this case, through acquiring other businesses. The popular press has suggested that many violator firms were engaged in high-growth acquisition strategies. For example, Zweig (2002), in *Time*, suggests that investors should avoid firms that follow risky acquisition strategies:

Great companies grow mainly from within, while those that gobble up lots of other companies almost always end up with a nasty bout of nausea. Tyco is only the latest case; earlier came Conesco and others all the way back to the notorious LTV in the 1960s.

Although theory suggests certain benefits from following an acquisition strategy, empirical evidence shows that acquisitions frequently are not beneficial to residual owners (Bradley et al, 1988; Roll, 1986), perhaps especially over the long term. For example, between the 1960s and the 1980s, one-third or more of all acquisitions made were later divested (Kaplan and Weisbach, 1992; Ravenscraft and Scherer, 1987). Overall, the anecdotal evidence is that an acquisition strategy can be bad for investors.

Growth through acquisitions also increases the complexity of a firm both in terms of the number of business segments and increasing the different types of businesses the company is in. A conglomerate would be considered more complex than a company with one or two related lines of business. As organizations become more complex, managing and monitoring become more complex. Perrow (1967)

reported that when organizations become more complex they also become more unknowable and ambiguous. Managers can opportunistically take advantage of the structure of the more complex organization to avoid close or effective monitoring by external parties.

Further, Daboub et al (1995) suggest that a strategy expansion through acquisitions may increase the probability that a firm is involved in illegal activity, because the systems of control may not be particularly effective in such organizations. They also suggest illegal activities may be hidden within one segment of a large organization that consists of several acquired or unrelated business divisions; for example, when incentive systems are based on or emphasize division profitability, it is more likely for illegal activity to occur. Given this evidence, I expect to find a positive association between the level of acquisitions and the violation of GAAP.

Hypothesis 5. Organizations that have followed acquisition strategies are more likely to violate GAAP than organizations that followed other strategies.

iv. Control Variables

Based on the existing literature, I have controlled for the effects of financial condition and change in stock price in the logit model.

a. Financial Condition

Prior research has examined the role of financial health and alternative financial conditions on accounting fraud. Prior literature has reported financial condition to be a motivating factor in the incidence of accounting fraud. Green and Calderon (1998), for example, report that improving or maintaining the appearance of the financial condition is the primary motivating factor for financial statement fraud in companies subject to SEC enforcement action between 1984 and 1992. According to the *National Commission on Fraudulent Financial Reporting* (1987, p. 159) “fraudulent financial reporting has traditionally been associated with companies experiencing financial difficulties.” The literature also documents worsening of financial condition or financial distress as preceding bankruptcy (Hambrick and D’Aveni, 1988; Weitzel and Jonsson, 1989). While not all firms that are involved in financial statement fraud end up bankrupt, COSO (1999) reported that over half of the companies in their study filed for bankruptcy or underwent a change in ownership as a result of the discovery of the fraud. Therefore, financial statement fraud may be a part of the process that ultimately ends in bankruptcy. Weitzel and Jonsson (1989, p. 103) report that in the “faulty action stage” preceding bankruptcy, there is a tendency “to favor quick or expedient solutions [such as overstatement of revenues and net income] rather than creative [solutions].”

I focus on cash flow as a measure of financial condition. Cash flows are important since continued negative cash flows must eventually lead to failure. Given that the violator companies in this study have violated GAAP, often by overstating

net income, it is appropriate to select a measure that is less likely to have been manipulated. Cash flows is such a measure.

b. Change in Stock Price

The effects on stock price subsequent to the disclosure of financial statement fraud are well documented in the literature (Dechow et al, 1996; Feroz et al, 1991; Magrath and Weld, 2002; Nourayi, 1994;). But declines in stock price may precede financial statement fraud and financial statement fraud may occur as one method to sustain or bolster stock price and prevent further declines. Feroz et al (1991) report that in the year preceding the fraudulent misreporting, violators had negative cumulative abnormal returns (CARs) averaging 5.7%. Feroz et al (1991) argued that negative changes in stock price would precede financial statement fraud. Accordingly, I control for changes in stock price.

C. Summary of Hypotheses

In summary, I hypothesize that firms that violate GAAP [1] have younger managers who [2] are more likely to have MBA education; [3] are less likely to have independent audit committees and [4] have a greater proportion of CEO pay contingent on stock price; and [5] are more likely to pursue a strategy of growth by acquisitions. In my analysis I control for the effects of financial condition.

Chapter III. The Methodology

A. Sample Selection

The sample is limited to publicly traded companies because the study requires information that is only available in the proxy statements and annual reports filed with the SEC. The sample of violator firms is obtained from Accounting and Auditing Enforcement Releases (AAERs) issued by the Securities and Exchange Commission between January 1992 and December 2001. The SEC issues AAERS for alleged securities violations that are not limited to fraudulent accounting. The prior literature has defined a GAAP violation as the selection of a financial reporting choice that is not valid or as having violated the requirements of the Security Exchange Act of 1934 as they pertain to financial reporting (Beneish, 1997, 1999). Like Dechow et al (1996) and Beasley et al (2000), I have focused on those AAERs that involved a charge of violating Rule 10(b)-5 or Section 13(a) of the 1934 Act. The 1934 Act requires firms registered with the SEC to file annual and quarterly reports for the proper protection of investors. However, the SEC does not establish accounting rules. Rather the SEC has designated the Financial Accounting Standards Board (FASB) to establish the accounting rules (GAAP) that govern the preparation of financial reports filed with the SEC. And it is to these rules that the SEC refers when it investigates a firm for accounting violations.

The final sample included 71 firms. Table 1 delineates how the final sample size was derived. The violations of interest for this paper are those that occurred

beginning in January 1992 through to December 2000.¹⁰ To find those companies subject to SEC enforcement action for violations beginning in 1992 or later, I analyzed all SEC enforcement actions issued from January 1992 to December 2001. Enforcement actions are numbered sequentially, and the SEC issued AAERs numbered 349 to 1483 during the period January 1992 to December 2001. Thus, there are 1,135 enforcement releases from which the sample was taken. Of the 1,135 releases to account for, there were 594 enforcement releases (52.3% of the total) that were not included in the final sample, because they [1] pertained to violations that began prior to 1992 (529 releases); [2] included enforcement release numbers were labeled as “number intentionally omitted” (11 releases); [3] were issued solely for auditing violations or foreign corrupt practices act violations (40 releases); or [4] contained no information regarding the period of time when the violation of GAAP occurred (12 releases).

In addition, two [2] releases were not included in the sample since they were not enforcement actions against a particular company. One was

an agreement between the United States and the Kingdom of the Netherlands on mutual administrative assistance in the exchange of information in securities matters and the establishment of a framework for consultations between the United States Securities and Exchange Commission and the Ministry of Finance of the Netherlands.¹¹

¹⁰ There were no enforcement actions released in 2001 or earlier that related to violations commencing after 1999, where the firm was also listed on Research Insight or had sufficient data availability on Research Insight.

¹¹ From Accounting and Auditing Enforcement, Release No. 394.

And the other release, dated 23 October 2001, was a "...Commission Statement on the Relationship of Cooperation to Agency Enforcement Decisions" which was signed by former SEC Chairman Harvey Pitt and two other commissioners. This commission statement, issued prior to the disclosure of the Enron fiasco, outlined the approaches that would be taken under the new Bush administration, with the hope that it would "encourage self-policing efforts and...promote more self-reporting, remediation and cooperation with the Commission staff."¹²

Of the 541 releases that pertained to violations starting in 1992 or later, 349 (64.5% of the releases for alleged violations subsequent to 1992) were multiple releases issued to the same firm in connection with the same violation. This left 192 potential firms in the sample. Of these 192 potential firms, there were 52 firms that were not listed on Research Insight. An additional 69 firms had insufficient data available on Research Insight or in SEC filed reports, such as proxy statements or annual reports. For example, often data was only available for one year or less prior to the start of the GAAP violation, in many cases because the enforcement action was brought in connection with financial statements filed in the initial registration of the firm with the SEC when the company initially went public. As a

¹² From Accounting and Auditing Enforcement Release No. 1470, dated 23 October 2001. It is worth noting that subsequent to Enron and as a result of the *Sarbanes-Oxley Act* (2002), rather than relying on "self-policing" regulatory policing has increased through the establishment of the Accounting Oversight Board.

result, the final sample of violator firms includes 71 firms, which represents the population given my selection criteria.

A central part of the research design was to identify a matched firm (i.e., a control firm), not subject to SEC enforcement action, for each violator in the sample. The matched company is to be a firm that closely resembles the violator firm three years prior to the year the GAAP violation began. Following Dechow et al (1996) and Beasley (1996) the matched sample of firms was selected using the following criteria, in the order listed:

- 1) Industry match, based on 3 or 4 digit SIC industry code. Two-digit SIC code matching was used to match eight (8) firms, because there were very few firms in the violator's 3-digit SIC codes.
- 2) Size match, based on total assets and sales.
- 3) Risk match based on betas reported by Research Insight.¹³
- 4) Age match, where age represents the number of years that the firm has been publicly traded.

Due to resource limitations, it is not realistic to expect that those firms subject to SEC enforcement action represent the entire population of GAAP violators. Nor is it realistic to infer that the absence of enforcement action is prima facie evidence that a firm is not or has not violated GAAP. However, to minimize the possibility that undetected violators or violators that have not be subject to SEC enforcement action have been included in the matched sample, I conducted a search

¹³ There are a total of 142 firms in the sample, violators and matches. Betas were available for 36 violator and matched pairs three years prior to the violation and for 31 violator and matched pairs one year prior.

of press articles on LEXIS-NEXIS and Business & Company Resource Center¹⁴ for any reports of alleged unacceptable accounting practices in the sample of non-violator firms. As of June 2002, there were no reports of alleged accounting violations for any of the companies in the final sample of matched firms.

Table 2 shows the two-digit industry classification for the violator sample. The firms studied come from 30 different industries, as measured by two-digit SIC codes, and therefore represent a broad cross-section of the business environment. Table 3, Panel A, shows the results of comparing the GAAP violators to the matched companies three years prior to the start of the violations. To confirm that the matched firms remained similar to the violator firms, I also compared them one year prior to the start of the violation. These results are shown in Table 3, Panel B. These tables show that the samples are not significantly different from each other in terms of size, age and risk (where beta is available for the firm).¹⁵

B. Data Sources

All data were collected from the following publicly available sources: [1] *Research Insight* (formerly, *Compustat*); [2] SEC filings – company DEF-14A (proxy statements), company 10-K reports; [3] *Dun and Bradstreet Reference Book of Corporate Managements*; [4] Thomson Financial's *SDC Platinum Database* and [5] the Center for Research and Security Prices (CRSP) database.

¹⁴ http://galenet.galegroup.com/servlet/BCRC?locID=umd_um (Available through the University of Maryland Libraries web page).

¹⁵ A more extensive comparison of the two samples is provided in Chapter V.

C. Research Model

To test my hypotheses I used simple t-tests, chi-squared tests and a logistic regression model. The logit model tested the hypothesized relationships between the independent variables of interest, defined below, and dependent variable: the occurrences of accounting fraud. Logistic regression, which controls for the effects of the other independent variables, provides a more conservative test than t-tests or chi-squared tests.

A logistic regression is a useful model for this study because of the dichotomous nature of the dependent variable and, as reported by Barrow and Horvitz (1993) “the coefficients generated by the logit model are not affected by unequal sampling rates.” This is important because my sample has equal numbers of violator and matched firms. Even though the number of violators subject to SEC Enforcement Action for GAAP violation(s) is small in relation to the total number of publicly traded firms, according to Barrow and Horvitz (1993) this will not affect the results.

According to Press and Wilson (1978, p. 699) the logit model is generally expressed as the probability of some event occurring, conditional on a vector of explanatory variables. The model attempts to encapsulate those significant measurable variables affecting GAAP violation. Press and Wilson (1978) report that a logit model “can be used for classifying an object into one of two populations” – in this case, GAAP violators and non-violators. Barrow and Horvitz (1993) report functional form of this logit model as:

$$\Pr(Y_i = 1) = P_i = \left[\frac{1}{(1 + e^{-x_i})} \right] \quad i = 1, \dots, N \quad (1)$$

where

$$x_i = \alpha + \sum_{j=1}^8 \beta_j x_{ij} \quad (2)$$

“is the logit transformation and is a linear combination of the independent variables and a set of coefficients $\beta_j = (\beta_1, \beta_2, \beta_3, \dots, \beta_m)$ that can be estimated.” N is the number of observations and x represents the value of the j th variable for the i th firm. Y_i is the dependent variable, where $Y_i = 1$ for violator firms subject to SEC Enforcement Action and $Y_i = 0$ for the matched non-violator firms.

The logit model used is:

$$\begin{aligned} FRAUD_i = & \alpha + \beta_1 CEOAGE_i + \beta_2 CEOMBA_i + \beta_3 \%OUTSIDE_i + \beta_4 CEOOpts_i \\ & + \beta_5 ACQ_i + \beta_6 OCF_i + \beta_7 \% \Delta STOCKPR_i + \varepsilon \end{aligned}$$

where

i = firm 1 through 142

FRAUD = a dichotomous variable with a value of one when a firm has violated GAAP (i.e., a violator firm) and was subject to SEC enforcement action and zero otherwise (i.e., a matched firm).

CEOAGE = age of the CEO.

CEOMBA = a dichotomous variable with a value of one if the CEO was reported having an MBA and zero otherwise.

%OUTSIDE = the percentage of independent directors on the audit committee.

CEOOpts = the value of the total options held by the CEO that were outstanding at the beginning of the fiscal year when the violation started, scaled by CEO total cash compensation.

ACQ = the number of acquisitions the firm had in the three years prior to the start of the GAAP violation.

- OCF = operating cash flow in the year prior to the start of the GAAP violation
- $\% \Delta \text{STOCKPR}$ = percentage change in stock price from the end of the fiscal year two years prior to the end of the fiscal year just prior to the start of the GAAP violation.
- ε = the residual.

D. Discussion of the Variables

The variables are measured as described above. The measurement of several of the independent variables, *Percentage of Outside Directors (%OUTSIDE)*, *CEO Stock Options (CEOOpts)* and *Acquisitions (ACQ)* warrants further discussion.

First, what is an outside director? Members of the Board of Directors for any company generally fall into three categories. First, there are “inside” directors. Second, there are “outside” or “independent” directors. Third, there are those directors that are neither independent nor are they employees and have been described as “affiliated” or “gray” directors. Insiders have been defined as those directors who are currently employees or have recently been employees of the firm. Affiliated directors generally have some business with the company or other affiliation, such as a family relationship with executives of the company, which prevents those directors from being “independent in appearance.” Independent directors, as described in the *Blue Ribbon Committee’s Recommendations* (page 10), “have no relationship to the corporation that may interfere with the exercise of their independence from management and the corporation.” Generally, outside directors would have no connection to the company except that they are on the board of

directors and possibly own shares of the company's stock.

In this research I define "independent" directors as those directors that did not have any reported employee or any familial relationship to the company, nor were they reported as having any significant business relationship with the company. In a few cases, there were directors on the audit committee, for example, who were reported as providing legal services or conducting other business with the company. These directors were not, in this study, considered to be independent directors.

The second variable warranting further discussion is the measure used for valuing executive stock options. I have used the values reported in the proxy statements as, using standard terminology, the "value of unexercised in-the-money options at fiscal year end" for both exercisable and unexercisable options. These amounts are calculated "by subtracting the exercise price per share from the last reported market price at [fiscal year-end] and multiplying the result by the number of shares subject to the option." These values are available for all firms, in all years that had options outstanding for executive officers.

There are at least two distinct advantages to using the reported total value of options. First, it is a measure of the value of total stock options outstanding at the fiscal year end, including options granted in previous years that were unexercised. Other values that may have been reported, such as the Black-Scholes value, were generally reported for only the options that were granted to executives during the fiscal year and not the value for all outstanding options and would, therefore, provide a value for only a portion of the stock options held. Secondly, the values I

use are not subject to certain assumptions regarding rates of return, such as are required when valuing options using the Black-Scholes or other similar models. In addition, Black-Scholes or some other similar value was reported by firms starting around 1995 and, therefore, was not available for all firms in the study.

Finally of interest is the measure used for acquisitions. I have followed Sanders (2001, p. 482) who also used the number of acquisitions because “first, most transactions...are reported without a value disclosed...; thus, using transaction value as the [in]dependent variable requires that most acquisitions...be ignored.” Additionally, including only those transactions where values are reported would limit the study towards high dollar-value acquisitions. Finally, using the number of acquisitions rather than the value of the acquisitions is consistent with the prior literature (see for example, Davis et al, 1994; Hitt et al, 1996; Sanders, 2001).

Chapter IV. Results

The results are presented in the following two sections: [1] the results of the t-tests and chi-squared tests and [2] the results of the logit model. The descriptive statistics and correlations for the variables under study are presented in Table 4.

A. The T-Test and Chi-Squared Test Results

The t-tests provide a statistical comparison of the violator firms and matched firms on the variables of interest. The results of the t-tests and chi-squared tests are shown in Table 5. The t-tests provide support for most of my hypotheses.

The first two hypotheses address the managerial factors, age and MBA education of the CEO. The t-tests provide support for Hypothesis 1, that CEOs of violator firms are younger than the CEOs of the matched firms. The average age of the CEOs of violator firms is 51.69 years, while the average age of the matched firm CEOs is 54.64 years. The violator CEOs are on average 2.94 years younger than the CEOs of the matched firms (t-test = -2.089; $p < 0.05$). Hypothesis 2 addresses the likelihood that CEOs of firms that violate GAAP have a specific type of education, MBA degrees. A chi-squared test of the paired differences between proportion of violator firms with CEOs holding MBAs and the proportion of non-violator firms with CEOs holding MBAs is used. It is worth noting that on average only 14.1% of all CEOs were reported as having MBA degrees. But there is no significant difference between the two samples with respect to MBA education (chi-

squared = 2.095; p -value > 0.10). Therefore, the t-tests do not support Hypothesis 2.

Hypotheses 3 and 4 address the governance factors of independent audit committees and CEO stock option compensation. With respect to Hypothesis 3, audit committee independence, the t-tests show that there is no significant difference between the violator and matched firms (t-test = -0.823; p > 0.10). The t-tests do not support Hypothesis 3. The t-tests support Hypothesis 4, that the greater the value of total CEO stock options, as a percentage of CEO total cash compensation, the greater the likelihood that GAAP violation will occur (t-test = 2.453; p < 0.01).

With regard to hypothesis 5, the t-tests show that fraud firms are significantly more actively involved in acquisitions than are their matched counterparts (t-test = 2.374, p < 0.01). On average the fraud firms made two acquisitions in the three years leading up to the violations, while the no-fraud firms, on average, had less than one acquisition.

Overall, the t-tests support three of the five hypotheses (CEO Age, Acquisitions and CEO stock options). The t-tests do not support the hypotheses relating to CEO MBA and audit committee independence.

B. The Results of the Logit Model

The results of the logit model are reported in Table 6. The overall model provides good explanatory power for accounting fraud (chi-squared = 24.06, p -value = 0.001, R^2 = 0.133). As a predictor the model correctly classified 64.6%

of the firms into the correct category of violator or match firm. The results of the logit model, which controls for the effects of the other independent variables, support four of my five hypotheses.

Hypotheses 1 and 2 addressed the relationship between the managerial factors of CEO age and MBA education, and accounting fraud. Concerning the relationship between CEO age and accounting fraud, the logistic regression results marginally support the hypothesis ($p < 0.10$). The logit model reveals that CEOs with MBA education are less likely to be involved with accounting fraud ($p < 0.01$). This result does not support Hypothesis 2. The logit results, which control for the effects of the other independent variables, report that CEOs with MBAs are less likely to violate GAAP. This finding is directly opposite to my hypothesis and is discussed further in Chapter VI.

Hypotheses 3 and 4 address corporate governance. The logit results, in which the effects of the other independent variables are controlled for, support Hypothesis 3, that firms with more independent audit committees are less likely to violate GAAP ($p < 0.05$). The logit results also support the Hypothesis 4, that CEOs of violator firms have stock options with significantly greater value, as a percent of their total cash compensation, than firms not violating GAAP ($p < 0.05$). As mentioned in the discussion of the measures of the variables, another possible measure for valuing stock options was the Black-Scholes value reported by many, but not all, of the firms in the later years of the study (generally from 1995 on). The

results of the logit model, not shown here, that uses the Black-Scholes value scaled by cash compensation, are virtually identical to the results reported here.

Finally, the logit results also support hypothesis 5, that firms following an acquisition strategy are more likely to violate GAAP ($p > 0.01$).

Overall, the logistic regression model shows that four hypotheses are supported at a significant level and one hypothesis is not supported. One hypothesis (CEO age) is marginally significant at $p < 0.10$, two hypotheses (independence of audit committees and CEO options) are significant at $p < 0.05$, and one hypothesis (acquisitions) is significant at $p < 0.01$. Of particular interest is the finding regarding Hypothesis 2. Indeed, not only is there no support for the hypothesis that CEOs with MBA degrees will be more likely to violate GAAP, the results show that CEOs with MBA degrees are less likely to violate GAAP. This finding is significant at $p < 0.01$. As stated earlier, this finding will be discussed in detail in the discussion section.

It is noted that the results of the t-tests, chi-squared test show no significant difference between the samples with respect to audit committee independence and CEO MBA. Yet in the logit model the results are statistically significant for both variables. Given that the logit model controls for the effects of the other independent variables, then while audit committee independence is not statistically different in the t-tests, in the context of other managerial, strategy, governance and financial variables, the effects of audit committee independence are different for the two groups. A similar argument can be made with respect to CEO MBA education.

Chapter V. Post Hoc Analysis

In the post-hoc analysis I [A] present supplemental analysis regarding (i) a historical comparison of the two groups and (ii) some results using Chief Financial Officer (CFO) data and [B] present a proposed cycle of events relating to acquisitions.

A. Supplemental Analysis

i. Historical Comparison of the Violator and Matched Firms

I conducted an historical analysis of the firms in order to understand the ways in which the firms in the two samples, (1) firms subject to SEC Enforcement Actions and (2) the matched firms, differed on key dimensions in the years leading up to and including the year the GAAP violation started and how these key dimensions varied over the years under study. T-tests and chi-squared tests were used to make the comparisons in the means of each dimension.

Table 7 shows the means and standard deviations of the variables for the violator and matched firms over the four-year period leading up to and including the year when the GAAP violation began in the treatment firms. Figures 2 to 8 provide a graphical representation of those variables that were significantly different between the two samples in at least one of the years under study.

a. Financial Condition Variables

In this analysis I use several different measures of financial conditions that have been used in the strategy, accounting and finance literature (see, for example, Hambrick and D'Aveni, 1988; D'Angelo et al, 1994 and Espahbodi et al, 2001). In particular I have focused on Altman's Z-Score, Net Working Capital scaled by net Sales, Operating Cash Flows, Total Cash Flows, Net Income and Profit Margin (Net Income/Sales). During the years leading up to and including the year when the GAAP violations started, in terms of financial variables, the violators and matches are not significantly different from each other (see Table 7). There are three instances when there are significant differences between the two groups (violators and matches), which will be discussed in detail below. These differences are of marginal statistical significance and are Altman's z-score (in Y3 and Y2) and total cash flows (in Y0). The lack of significant differences on the financial condition variables is, at least in part, due to the matching process and provides evidence that the violator and matched firms are similar not only in terms of the matching criteria, but also in terms of other financial aspects.

There were two financial measures, both of firm size, that were used in the matching process. The first was total assets and the second, net sales. For the selection process, total assets and net sales were compared three years prior and one year prior to the start of the GAAP violation. The t-test results reported in Table 7 show that there were no significant differences in firm size for any of the four years under study. However, it must be noted that the results reported in the year of the

GAAP violation (Y0) for the violator firms must be interpreted with caution. This is because it is likely that the GAAP violation involved a misstatement (generally overstatement) of the assets for a number of those companies.

As mentioned previously, the financial condition variables where there are statistically significant differences are Altman's z-score in the third and second years prior (Y3 and Y2, respectively) to the start of the GAAP violation and Total Cash Flows in the year of the GAAP violation (Y0). These differences are marginally statistically significant at the $p < 10\%$ level.

Altman's z-score is a predictor of bankruptcy or a measure of financial distress. The lower the z-score then the greater the financial distress and the greater the probability of bankruptcy. In each year, with the exception of third year prior to the violation (Y3), the matched firms had an average z-score that was lower than the average z-score of the violator firms and for both samples the z-score declined from Y2 to Y0 (see Figure 2), indicating that the financial condition was deteriorating for both groups. The only years where z-scores of the two samples were statistically significantly different were two and three years prior (Y2 and Y3) to the start of the GAAP violations. At those points the z-scores averages for both samples were 3.85 and above, suggesting that neither violators nor matches have signals of financial distress or looming bankruptcy two to three years prior to the beginning of the GAAP violations. Altman (1968, p. 604) notes that the z-score is most effective as a predictor of bankruptcy for the period not exceeding two years prior to the actual bankruptcy. Therefore, the z-scores in the second and third year prior to the start of

the GAAP violation should not be used to predict bankruptcy, financial distress or even a propensity towards GAAP violation. Those firms that did eventually go bankrupt, would have, in most cases, done in so subsequent to year the GAAP violation began, which would mean that the predictive values of the z-scores at Y3 and Y2 are limited.

It is of interest to note that the only time either of the samples, violators or matches, has an average z-score that would be indicative of financial trouble is in the year the GAAP violation started (Y0), when the matched firms have a negative z-score (-1.60). This indicates that the matches were in financial trouble. Yet they did not choose to violate GAAP. It must be noted that the z-score (3.85) for the violators in the year the violation (Y0) started cannot be relied upon as indicators of financial distress or the lack thereof, because the z-score is calculated using, among other financial statement numbers, revenues and total assets, both of which were subject to manipulation in that year.

Cash flow averages for both samples are not significantly different, in general, in the years prior to the start of the GAAP violations. Total cash flows for the matched firms were consistently increasing over the period studied (see Figure 3), but in the year when the GAAP violation started (Y0) the matched firms had on average a large increase in total cash flows. There is also a significant difference in average total cash flows between the two samples for that year. The violator firms reported on average, slightly negative total cash flows in the year the violations started (Y0), while the matched firms reported substantially positive cash flows on

average. Assuming that cash flows are considerably more difficult to manipulate than revenues or expenses, I expect that the differences in the total cash flows between the violators and matches are meaningful as well as significantly different. It is worth noting that in the year the GAAP violations began (Y0), the violator firms had an increase in net income, but a decrease in total cash flows. So it appears that the manipulations of the financial statements were able to have some positive effects on the net income, but total cash flows still declined for violator firms.

The matching process has resulted in a sample of firms that have not violated GAAP, but are similar to the violator firms in terms of a variety of measures of financial condition, not just in terms of total assets and net sales. Given these similarities, I expect and find that differences in the non-financial variables help to explain why certain firms violate GAAP and other firms, in very similar financial states, do not.

b. Managerial Variables

The managerial variables under consideration relate to the chief executive officers of the firms in both samples. These variables are CEO age, percentage of firm shares held by the CEO, CEO tenure with the firm, the number of prior executive positions the CEO had held in other companies, CEO years of education and status of CEO education and whether the CEO has MBA education. CEO education status was measured using the rankings of colleges and universities from the Gorman Report. There were no significant differences between the violator

sample and the matched sample in any year over the variables of years of education, status of education and the number of prior executive positions held by the CEO. However, there is limited data availability for those variables. The number of matched pairs where the data was available for both the violator and its matched firm on years of education and status of education and the number of prior executive positions held by the CEO, was 30 pairs at most and 14 pairs at a minimum. Therefore caution must be exercised in drawing conclusions from these particular results.

There were significant differences between the two samples on CEO age, CEO tenure and CEO ownership percent. As shown in Figure 4, the CEOs of the violator firms were younger than the CEOs of the matched firms in each year. In the second year prior (Y2) and in the year prior to (Y1) the difference (2.43 years and 2.94 years, respectively) are significant at the 10% level and the year of the GAAP violation (Y0) the difference (3.27 years) are significant at the 5% level.

Figure 5 shows that the CEOs of violator firms had shorter tenures on average with their firms than the matched firm CEOs. It must be noted that due to lack of data availability, tenure was not available for many of the CEOs in the study. For those firms where data was available, CEOs of matched firms had been with their company on average about 15 years, while the CEOs of violator firms averaged between 10 and 12 years tenure with their firm. These differences were statistically significant in all years. It is expected that age and tenure would be correlated. In a

separate analysis, not reported, the correlation between age and tenure is statistically significant at the 1% level (one-tailed test) for both samples in all years.

The last managerial variable of interest is CEO ownership percent (see Figure 6). CEOs on average owned about 10% of outstanding shares of their companies. However, while ownership percentages increased for the matched firms' CEOs, the CEO ownership in the violator group declined over the four-year period. In the year of the GAAP violation (Y0) there is a marginally significant difference between the samples ($p < 10\%$). CEOs of the matched firms owned 11.5% of the shares, while the CEOs of the violator firms owned on average 7.8%.

Therefore, in terms of managerial variables these results show that CEOs of violator firms are younger, with shorter tenure in their firms. They also have a smaller ownership stake than the CEOs of the matched firms, in the year the GAAP violations started.

c. Governance Variables

The governance variables examined are the value of CEO stock options in proportion to total cash compensation, the existence of an audit committee, the independence of the audit committee, and the proportion of outsider directors on the audit committee. There were no significant differences between the samples with respect to the existence of audit committees or the independence of the audit committees.

As noted above CEOs of violator firms owned less of the company than did the CEOs of the matched firms. However, consistently, the CEOs of the violator

firms had a larger value of stock options proportionate to their overall cash compensation than did the CEOs of the matched firms (see Figure 7). For both violator and matched firms the total value of CEO stock options was an increasing multiple of CEO cash compensation. This is consistent with reports that indicate that CEO stock compensation has been growing in recent years. The difference in the ratio of stock options value to cash compensation is significantly different between the two samples in each year, with the CEOs of violator firms having greater proportions of stock compensation than the matched CEOs. Three years prior to the GAAP violation (Y3), CEOs of violator firms had stock options that were valued at 95.3% of the amount of their cash compensation for that year while the CEOs of the matched firms had stock options that were valued at 42.1% of their cash compensation ($p < 0.10$). The trend for both samples is increasing. Two years prior to the GAAP violations (Y2) CEOs of violator firms had options valued at 206.2% of their cash compensation, while CEOs of matched firms had only 72.5% ($p < 0.05$). In the year prior to the start of the GAAP violations (Y1), the value of the CEO options for the violator firms was 317.9% and for matched firms 112.7% ($p < 0.01$). By the year the GAAP violations began (Y0), CEOs of violator firms had stock options that on average were valued at 415% of the cash compensation for that year, while the CEOs of the matched firms had options that were valued at 197% of their cash compensation on average ($p < 0.10$). Possible explanations of this finding are that the value of options for the violator firms was increasing by about 100 percentage points each year for the four years because of the stratospheric

increases in stock prices that occurred in the 1990s or because of an increased reliance on stock compensation for those firms. In any case, one effect of CEO compensation that is dependent on stock price, could be the manipulation of the financial statements in order to maintain or increase firm value and stock price at least in the short-haul. This is of particular interest, since prior research has found that insider trading to be a motivation for GAAP violations (see for example, Beneish, 1996 and Summers and Sweeney, 1998).

With respect to the governance variables, I find that audit committees are not significantly different, in general, between the violators and matches. Consistently, the value of CEO stock options as a proportion of cash compensation, is significantly greater for the violator firms than the matched firms.

d. Strategy Variable

The strategy variable of interest is acquisitions. In terms of raw numbers of acquisitions, the violator firms, on average, had a greater number of acquisitions than the matched firms in each of the years studied (see Figure 8). In addition, the average number of acquisitions for the violator firms was consistently increasing over the period. The difference in the level of acquisitions between the violator and match samples is significant in each of the two years prior to the fraud (Y2 and Y1) and in the year the fraud began (Y0). Violator firms are more actively acquiring other companies.

e. Discussion of the Historical Analysis

This comparison of the samples shows that three years prior to the start of the violations (Y3), the violators and matches were not significantly different on any measure, except for CEO tenure, value of CEO stock options and firm z-score and these differences were of marginal statistical significance. CEOs of the non-violator firms had served on average about three years longer at their firm than had the CEOs of the firms that violated GAAP. The CEOs of the matched firms had stock options valued at approximately 42% of their cash compensation for the year, while the CEOs of the violator firms had stock options worth over 95% of their annual cash compensation. Z-scores in the earlier years were significantly different between the samples, however, the average z-scores reported in those years was not an indicator of financial ill-health in either group.

Since the financial condition of the violator firms is not significantly different than that of the matched firms, then there must be other causes of GAAP violations than financial distress. I suggest, and have shown, that these causes lie in the managerial, governance and strategy domains. In the year prior to the start of the GAAP violations (Y1) the samples are statistically significantly different in terms of the managerial, governance and strategy variables. In particular, the violator firms have younger CEOs with shorter tenure than the matched non-violator firms. The violators also have higher proportions of CEO stock compensation and are more active in the acquisitions market.

In the year of the GAAP violation (Y0), there are statistically significant differences between the two samples on six variables, five of which are not related to financial distress or the financial condition of the companies. In the year of the GAAP violation, the violator firms have younger CEOs with shorter tenure and have a smaller ownership stake in their companies. These CEOs have options that are worth more than four times their cash compensation for the year while the CEOs of the matched firms have options that are worth less than two times their cash compensation. Further, the violator firms are significantly more active in the acquisitions market.

f. In Conclusion

This historical analysis of the variables in the samples shows that the violator firms were not significantly different than the matched firms on the financial variables in the years leading up to and including the year the violation occurred. However, there are noteworthy differences between the samples on certain managerial, governance and strategy variables and in general, these differences became more pronounced as the start of the GAAP violation grew closer. Accordingly, this analysis supports my assertion that a model of financial statement fraud should include non-financial variables if financial statement fraud is to be more clearly understood.

ii. Analysis of CFO Data

Due to severe limitations on data availability, I was unable to include CFO data in the main body of this dissertation. CFO data was available for at most 20 matched pairs of firms (for CEO age) and as few as six matched pairs of firms (CFO Options and CFO ownership %). When CFO age or CFO options was included in the logit model, $n = 13$, and, as a result, I was unable to come to any meaningful conclusions regarding CFOs from a logit model.

Using the limited CFO data that was available, I conducted t-tests to test the differences in the means of the paired-samples and a chi-squared test to test the CFO MBA variable. There were no significant differences between the CFOs of the violator firms and the CFOs of the matched firms in terms of age, ownership, number of prior executive experiences, or salary and bonuses. There were only two significant differences in the t-tests. These findings are presented in the Table 8. First was, the difference in the CFOs' years of education, which was statistically significant ($p < 0.05$). CFOs of violator firms had on average just over 17 years of formal education, which the CFOs of the matched firms had an average of about 16 years. With an $n = 12$, the results must be interpreted with caution. Secondly, the value of CFO options scaled by CFO cash compensation was marginally significantly different between the two groups ($p < 0.10$). The CFOs of the violator firms had stock options valued at nearly 13.5 times their total cash compensation, while the CFOs of the matched firms had stock options valued at less than two times their cash compensation. Again the sample size was very small ($n=20$).

The chi-squared test reports a statistically significant difference in the CFO MBA variable ($p < 0.05$). The number of observations was 43 matched firm CFOs and 36 violator firm CFOs. Keeping in mind the limited number of observations, the chi-squared test shows that violator firms were more likely to have CFOs with MBA education ($p < 0.05$). However, it must be noted that seven (19.4%) of the 36 CFOs of the firms subject to SEC enforcement action with data available, had MBA degrees, while only 1 (2.3%) of the 43 CFOs of the matched firms had an MBA. Given that COSO (1999) CFOs were involved in 43%¹⁶ of the cases of GAAP violation investigated, this finding, relating to CFO MBAs, is interesting and warrants further investigation when more data becomes available.

B. A Proposed Cycle of Events – Acquisitions

I performed an analysis in an attempt to identify the cycle of events that preceded this fraud. Although these findings are preliminary and should be interpreted with caution, a comparative correlation analysis of key variables in the two samples across time is revealing. Figure 9 reports these findings. For both groups, violators and non-violators, there is a positive correlation between total cash flows three years prior to the violation (Y3) and the number of acquisitions made in the second year prior to violation (Y2). Thus excess cash flows predict acquisitions

¹⁶ COSO (1999) reports that in 72% of the cases, CEOs were associated with the accounting fraud and in 43% of the cases, CFOs were involved in the fraud. Taken together, both the CEO and the CFO were named in the enforcement release as being involved in 83% the fraud cases.

for both samples. But the effects of the acquisitions on total cash flows in the year before the accounting fraud begins are notably different for the two groups. The violator firms make acquisitions that negatively impact total cash flows, while the non-violator firms make acquisitions that positively impact total cash flows.

Thus, putting these findings in the context of the overall statistical results, it suggests that the younger CEOs, who are less likely to have MBA education, are making poor acquisition decisions. The negative cash flows from the poor acquisition perhaps lead to attempts to conceal the poor results. Exploring these relationships in more detail is an obvious next step.

Chapter VI. Discussion and Conclusions

Accounting fraud, and subsequent SEC enforcement action, is not new.

Firms have been crossing over that illusory line where legitimate accounting ends and accounting fraud begins for some time. What is relatively new, however, is the large number of fraudulent accounting cases that have resulted in major corporate disasters. The public outcry for accounting reform as a result of the recent high-profile cases of financial statement fraud has resulted in the *Sarbanes-Oxley Act of 2002*.

Much of the research related to accounting fraud that has been published in the accounting journals has narrowly focused on the issue from either a financial perspective or the perspective of corporate oversight. Clearly, these perspectives are important. However, other important determinants (or drivers) of accounting fraud fall under the domains of management and strategy. This study has examined the impact of these managerial and strategic factors on accounting fraud, while at the same time considering financial and oversight factors. Although exploratory in nature, my study takes a broad and comprehensive view of accounting fraud. Importantly, these results suggest that, in one way or another, managerial, governance and strategic factors are all predictive of accounting fraud.

Indeed, I found that managerial age, MBA education, external audit committee oversight, CEO stock options and acquisition strategy predicted accounting fraud. While it is clear that financial and economic numbers play a role

in accounting fraud, organizational governance systems, such as audit committee structures and CEO compensation, also play a critical role. Moreover, at the heart of accounting fraud is the individual (or individuals) who makes the decision to conceal or misreport information. The results paint a picture of “corporate greed.” That is, younger CEOs with limited business education, large amounts of stock option compensation, and limited oversight are more likely to get involved in creative accounting perhaps to conceal the effects of faulty acquisition strategies.

The top management team literature suggests that younger managers will undertake more risky actions and Daboub et al (1995) theorize that managerial age will be an important predictor of corporate illegal activities. I find that CEOs involved in accounting fraud are more likely to be younger than their matched no-fraud counterparts. Younger managers generally have less knowledge and experience than older managers and perhaps this explains their vulnerability to unethical accounting practice.

The mean age difference, just under 3 years, may not seem younger, intuitively speaking, considering that the average age for the violators was 51.69 and for the matches it was 54.63. This age difference is significant at the 5% level and not particularly unusual given prior literature. For example, Grimm and Smith (1991) found that managers in firms that changed strategies (mean = 50.4 years) were significantly younger than managers in firms that did not change strategies (mean 52.7 years), the mean difference being 2.3 years.

I categorized CEO ages for violator firms and matched firms into five-year blocks ranging from 30 to 34 years up to 75 to 79 years. The distribution of CEO age for both the violators and matches appears normally distributed. However, for the violator firms, seventeen (23.9%) of the CEOs were under the age of 45, while for the matched firms, ten (14.1%) were under the age of 45. When it comes to older CEOs, only four (5.6%) of the CEOs of violator firms were age 65 or older. For the matched firms there were 10 (14.1%) of the CEOs who were age 65 or older. So while the CEO ages for both violator and matched firms are essentially normally distributed, the violator firms are slightly skewed towards younger CEOs. Again, this is an area where further research is warranted.

The findings with respect to hypothesis 2 are of particular interest. While I expected to find that CEOs with MBAs are more likely to be associated with accounting fraud, our actual finding, in the logit model, was that GAAP violation firms were less likely to have a CEO who had MBA education. I suggest two possible explanations for this finding.

The first explanation is consistent with Daboub et al's (1996) suggestion that CEOs with MBA education are more likely to be involved in illegal corporate activities. That is, MBA education not only leads to greater self-interested behaviors, but CEOs with MBAs have also acquired the skills necessary to more effectively hide fraudulent activity from auditors, regulators and other outside constituents. This suggests that the firms "caught" in accounting violations are less likely to be headed by CEOs with MBA education. If further research should

support this explanation, this would imply that the accounting fraud in US corporations is much more extensive than SEC enforcement actions suggest.

Secondly, as mentioned previously, Barker and Mueller (2002) report that MBA programs tend to attract students who are risk-averse and then the programs proceed to train the students to acquire skills that reinforce their risk-adverse nature and they do not acquire entrepreneurial risk-taking skills. However, Barker and Mueller's (2002) finding for "risk-averseness" may not mean avoiding good risks, but instead "avoiding *big* mistakes." If more educated executives have increased cognitive abilities and greater moral development, MBA training may perhaps teach them the skills of discerning good strategic actions with acceptable risks from actions that carry poor or high risk and the potential for costly mistakes. Graduate business education may not only engender greater abilities to integrate information, but it may also train managers to discard those options where the riskiness of the results outweighs the potential rewards. So, therefore, executives with formal management training (MBAs) may be less likely to participate in or condone illegal activity within their organization (i.e. very risky behavior) and they may have acquired the skills to avoid those extenuating circumstances that precede GAAP violation.

The finding in the post hoc analysis that CFOs of violator firms are more likely to have MBA education, could indicate the importance of the CFO in the process of perpetrating accounting fraud. Certainly there is anecdotal evidence that CFOs with MBAs have been involved in some of the notorious cases of recent accounting fraud (eg. Enron). Clearly, further research is warranted in this area.

Importantly, I find that in the context of managerial, financial and strategy factors, audit committee independence is a significant factor in discriminating between GAAP violators and non-violators. The *Sarbanes-Oxley Act* now requires completely independent audit committees. My findings tend to support this change. However, independence is not sufficient. The law now requires all members of the audit committee to be independent directors of the board. And the law goes further. The audit committee members must have some financial expertise and the audit committee must hold meetings to conduct their business. It is no longer adequate to establish an audit committee with members that have little or no financial expertise or to have an audit committee that does not meet. However, further research is warranted in this area as data becomes available to test whether such requirements as financial expertise make audit committees more effective in deterring accounting fraud.

The results with regard to CEO stock options are also insightful. The measure for this variable scales the value of total options outstanding at the beginning of the year when the accounting fraud began by total cash. In fact, I found that the value of the options for CEOs of violator firms was over three times (3.18) the cash compensation they received (Table 5), while the CEOs of non-violator firms had stock options outstanding valued at only 1.13 times cash compensation. So, for firms in the control sample, there are approximately equal amounts of cash compensation and value of outstanding options. Cash compensation, not reported in the tables, for CEOs of violator firms was \$595,382,

and for no-fraud CEOs it was \$631,235. The cash compensation for CEOs is not significantly different between the two samples (t-score = -0.290). Therefore, I can conclude that CEOs of violator firms have greater contingent compensation and accordingly greater incentive, in terms of personal wealth, to violate GAAP. As I discussed previously, the idea of contingent compensation is to align managerial and owner interest. Yet in this case, the short-term financial gains to executives, who hold options and want to keep their stock prices high, distort the “alignment of interests” that options are intended to accomplish. Thus, these findings suggest that when the level of stock options becomes exceedingly high, stock options no longer align interests in the manner agency theory predicts.

While the results of this study are important, they should be interpreted with caution. First, this study is based on a small sample of matched pair firms. Sample size was limited to 71 matched pairs (142 firms total) because I opted to gather four years of data on each violator firm to give us a more comprehensive understanding of the process leading up to accounting fraud. I also began this research prior to the current wave of misreporting in 2001. Future research could usefully expand this sample.

I began this paper by arguing that the success of our capital markets relies heavily on the accuracy and reliability of the financial statements reported by publicly traded companies. It is also clear that investor confidence in these financial statements has been shaken by the high profile cases of accounting fraud. The present research contributes by building and testing a broader and more

comprehensive model of accounting fraud based on organizational and strategic factors. While I am encouraged by the results of this study, much more work is needed if we are to fully comprehend why executives misreport the numbers.

Table 1

Sample selection of 71 firms with violations starting in 1992 or later and subject to enforcement action by the SEC.

Total Number of Accounting and Auditing Enforcement Releases Issued		1,135
Less:		
AAERs for violations starting prior to 1992	529	
AAER numbers not assigned	11	
AAER issued for auditing violations only	37	
Violation dates not given/available in AAER	12	
AAERs issued for foreign corrupt practices act violations	3	
Other	2	594
Number of AAERs issued to companies or organizations for violations starting after 1991		541
Less: Number of multiple releases involving the same firm		349
Number of companies issued AAERs		192
Less: Companies not listed on Research Insight	52	
Companies with insufficient data on Research Insight	69	121
Final Sample size		71

Table 2

Two-digit SIC classification of 71 firms violating GAAP and subject to SEC enforcement action between 1992 and 2001.

SIC	Industry Name	No. of firms
10	Metal Mining	1
15	Building Construction	1
22	Textile Mill Products	1
23	Apparel and other finished products made from fabrics	2
27	Printing, Publishing, and allied industries	2
28	Chemical & Allied Products	2
31	Leather and Leather Products	2
33	Primary Metal Industries	1
34	Fabricated Metal Products, ex Machinery and Transport Equip	3
35	Industrial and Commercial Machinery and Computer Equip	4
36	Electronic and Other Electrical Equip, ex Computer Equip	7
37	Transportation Equip	2
38	Measuring, Analyzing, and Controlling Instruments	7
39	Miscellaneous Manufacturing Industries	1
44	Water Transportation	1
49	Electric, Gas, and Sanitary Services	2
50	Wholesale Trade - durable goods	2
51	Wholesale Trade - nondurable goods	2
56	Apparel and Accessory Stores	1
59	Miscellaneous Retail	6
60	Depository Institutions	2
61	Non Depository Credit Institutions	1
64	Insurance Agents, Brokers, and Service	2
67	Holding and Other Investment Offices	1
72	Personal Services	1
73	Business Services	8
78	Motion Pictures	1
79	Amusement and Recreation Services	1
80	Health Services	1
87	Engineering, Accounting, Research, Management, and Rel Services	2
99	Nonclassifiable Establishments	1
	TOTAL	71

Table 3
 Results of Paired-Samples Testing
 Panel A - Three years prior to GAAP violation.

	<u>Violators</u> Mean (Std Dev)	<u>Non- Violators</u> Mean (Std Dev)	<u>Tests of Differences</u> Mean Difference [t-score] (p value)
Total Assets	3,887.63 -23,331.62 <i>n=71</i>	4,964.01 -31,529.99 <i>n=71</i>	-1,076.38 [-1.089] -0.28
Sales	903.75 -2,839.20 <i>n=71</i>	1,085.79 -4,011.81 <i>n=71</i>	-182.04 [-0.741] -0.49
Risk (Beta)	0.72 -1.28 <i>n=36</i>	0.98 -1.13 <i>n=36</i>	-0.26 [-0.915] -0.366
Age	13.57 -14.03 <i>n=67</i>	13.73 -11.19 <i>n=67</i>	-0.16 [-0.131] -0.896

Table 3, cont'd
 Results of Paired-Samples Testing
 Panel B – One year prior to GAAP violation.

	Violators	Non-Violators	Tests of Differences
	Mean (Std Dev)	Mean (Std Dev)	Mean Difference [t-score] (p value)
Total Assets	5,282.53 -32,378.31 <i>n=71</i>	6,734.20 -40,177.41 <i>n=71</i>	-14,521.67 [-0.624] -0.535
Sales	1,069.52 -3,263.81 <i>n=71</i>	1,280.66 -4,543.10 <i>n=71</i>	-211.14 [-0.519] -0.606
Risk (Beta)	0.59 -1.27 <i>n=31</i>	0.9 -1.27 <i>n=31</i>	-0.302 [-1.069] -0.293

Table 4
 Descriptive Statistics and Correlations
 Sample of Violators and Matches Combined

Variables	Mean	s.d	1	2	3	4	5	6
1 CEO Age	53.18	9.02						
2 CEO - MBA	0.14	0.35	-0.017					
3 Scaled Option Values	2.15	6.24	-0.131	0.089				
4 Audit Committee Independence	0.72	0.37	-0.035	0.122	0.164			
5 Acquisitions	1.48	2.87	-0.034	0.279**	0.145	0.165*		
6 Change in Stock Price	-0.59	2.08	0.070	0.003	0.016	0.208*	0.045	
7 Operating Cash Flows	46.5	118.7	0.121	0.116	0.138	0.095	0.181*	0.065
** Correlation is significant at the 0.01 level (2-tailed).								
* Correlation is significant at the 0.05 level (2-tailed).								

Table 5

T-tests and Chi-squared tests of differences in the independent variables.

Panel A - T-tests						
MEANS						
VARIABLES	No.	Violators	Matches	Difference	T-test	Sig
<u>Managerial Variables</u>						
CEO Age	142	51.690	54.630	-2.94	-2.089**	
<u>Governance Variables</u>						
% of Outsider Directors on Audit Committee	142	0.700	0.746	-0.046	-0.823	
CEO Total Options Value / Cash Compensation	142	3.179	1.127	2.053	2.453***	
<u>Strategy Variable</u>						
Number of Acquisitions	142	2.040	0.920	1.130	2.374***	
<u>Financial Condition Variables</u>						
Operating Cash Flows	136	39.873	53.960	-14.088	-0.724	
Percentage Chg in Stock Price	130	-0.790	-0.435	-0.355	-0.989	

* $p < 0.10$, ** $p < 0.05$ (one-tailed), *** $p < 0.001$

Table 5, cont'd

T-tests and Chi-squared tests of differences in the independent variables.

Panel B - Chi-Squared Tests				
		CEO - MBA		
		No	Yes	Total
Match	Count	58	13	71
	Expected Count	61	10	71
	% of Total	40.8%	9.2%	50.0%
Violator	Count	64	7	71
	Expected Count	61	10	71
	% of Total	45.1%	4.9%	50.0%
Total	Count	122	20	142
	Expected Count	122	20	142
	% of Total	85.9%	14.1%	100.0%
Pearson Chi-square		2.095		
Significance (1-sided)		0.114		

		Audit Committee		
		No	Yes	Total
Match	Count	11	60	71
	Expected Count	11.5	59.5	71
	% of Total	7.7%	42.3%	50.0%
Violator	Count	12	59	71
	Expected Count	11.5	59.5	71
	% of Total	8.5%	45.5%	50.0%
Total	Count	23	119	142
	Expected Count	23	119	142
	% of Total	16.2%	83.8%	100.0%
Pearson Chi-Square		0.042		
Significance (1-sided)		0.500		

Table 6
 Results of the LOGIT Model
 Chi-Squared = 24.06
 Pseudo-R² = 0.133

$$FRAUD_i = \alpha + \beta_1 CEOAGE_i + \beta_2 CEOMBA_i + \beta_3 \%OUTSIDE_i + \beta_4 CEOOpts_i + \beta_5 ACQ_i + \beta_6 OCF_i + \beta_7 \% \Delta STOCKPR_i + \varepsilon$$

Variable	Coefficient	Sig.	Wald
Constant	2.116	**	2.821
Age of CEO	-.030	*	1.756
MBA	-1.730	***	5.860
Total Value of Options Scaled by Cash Compensation	0.075	**	3.185
Percent of Outsiders on Audit Committee	-1.012	**	3.205
Sum of Acquisitions in 3 years prior to violation	0.260	***	5.514
Operating Cash Flows	-0.002		1.001
Percent Change in Stock Price	-0.038		0.128

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$. one-tailed.

Table 7
T-Tests for Differences in Means of Variables of Interest

VARIABLES	t-3			t-2		
	Violator	n	Match	Violator	n	Match
Size Variables						
Total Assets	3,887.6	70	4,937.7	3,934.6	71	6,264.8
Sales	903.7	70	1,059.8	915.5	71	1,202.5
Financial Condition Variables						
Z-Score	3.85	41	5.51 *	8.17	48	4.56 *
Debt to Equity Ratio	76.6	69	-388.5	-121.2	70	70.8
Net WC / Sales	-0.763	60	0.643	0.016	60	0.640
Operating Cash Flows	24.2	67	35.4	24.3	69	42.2
Total Cash Flows	4.22	65	-0.51	-1.22	67	-0.29
Net Income	44.95	70	73.74	53.80	70	79.68
Profit Margin	-1.51	70	-1.10	-0.98	69	-0.32
Managerial Variables						
CEO Age	50.33	64	52.33	50.57	70	53.00 *
CEO Ownership %	10.6%	39	9.6%	9.7%	53	9.9%
CEO Tenure	10.6	51	14.5 ***	11.8	50	14.8 **
CEO Prior Exec Positions	0.79	24	0.79	0.85	27	0.89
CEO Education (years)	17.89	18	17.67	17.8	20	17.65
CEO Education Status	4.36	16	4.4	4.29	18	4.43
Governance Variables						
Value of Options / Total Cash Comp	0.953	71	0.421 *	2.062	71	0.725 **
Cash Bonus / Total Cash Comp	17.2%	53	14.8%	22.8%	61	19.8%
Pct of Outsiders on Audit Committee	72.6%	47	79.9%	72.0%	62	77.5%
Strategy Variable						
No. of Acquisitions	0.42	71	0.18	0.75	71	0.24 ***

Table 7, cont'd
T-Tests for Differences in Means of Variables of Interest

VARIABLES	t-1			t-0		
	Violator	n	Match	Violator	n	Match
Size Variables						
Total Assets	5,351.4	70	6,830.8	11,437.6	67	7,840.8
Sales	1,080.4	70	1,291.3	1,840.0	67	1,471.9
Financial Condition Variables						
Z-Score	6.28	43	4.21	3.85	43	-1.60
Debt to Equity Ratio	72.1	67	67.7	68.2	67	55.8
Net WC / Sales	0.221	59	0.734	1.310	57	0.561
Operating Cash Flows	39.9	68	54.0	47.7	65	51.1
Total Cash Flows	1.99	66	3.86	-0.76	63	19.69*
Net Income	76.91	70	98.71	87.79	67	98.09
Profit Margin	-0.89	68	-0.48	-4.02	65	-0.12
Managerial Variables						
CEO Age	51.69	71	54.63**	52.23	66	55.50**
CEO Ownership %	10.5%	55	12.2%	7.8%	56	11.5%*
CEO Tenure	12.3	53	15.0**	12.3	51	15.1*
CEO Prior Exec Positions	0.9	29	1.14	1.07	30	1.13
CEO Education (years)	17.8	20	17.55	17.63	16	17.75
CEO Education Status	4.29	18	4.5	4.22	14	4.37
Governance Variables						
Value of Options / Total Cash Comp	3.179	71	1.127***	4.150	71	1.970*
Cash Bonus / Total Cash Comp	20.7%	66	22.3%	19.6%	59	20.0%
Pct of Outsiders on Audit Committee	70.0%	71	74.4%	77.8%	59	75.6%
Strategy Variable						
No. of Acquisitions	0.87	71	0.49**	1.00	71	0.30***

Table 8
Results of the CFO Analysis

PANEL A						
T-tests (CFO)						
VARIABLES	No.	MEANS			T-test	Sig
		Violators	Matches	Difference		
CFO Years of Education	12	17.17	16.17	1.00	2.739	**
CFO Value of Options/Cash Comp	20	13.48	1.82	11.65	1.418	*

Panel B				
Chi-Squared Test (CFO)				
		CFO - MBA		
		No	Yes	Total
Match	Count	42	1	43
	Expected Count	38.6	4.4	43
	% of Total	53.2%	1.3%	54.4%
Violator	Count	29	7	36
	Expected Count	32.4	3.6	36
	% of Total	36.7%	8.9%	45.6%
Total	Count	71	8	79
	Expected Count	71	8	79
	% of Total	89.9%	10.1%	100.0%
<i>Pearson Chi-square</i>		6.31		
<i>Significance (1-sided)</i>		0.015		

Figure 1
Diagram of GAAP Violation

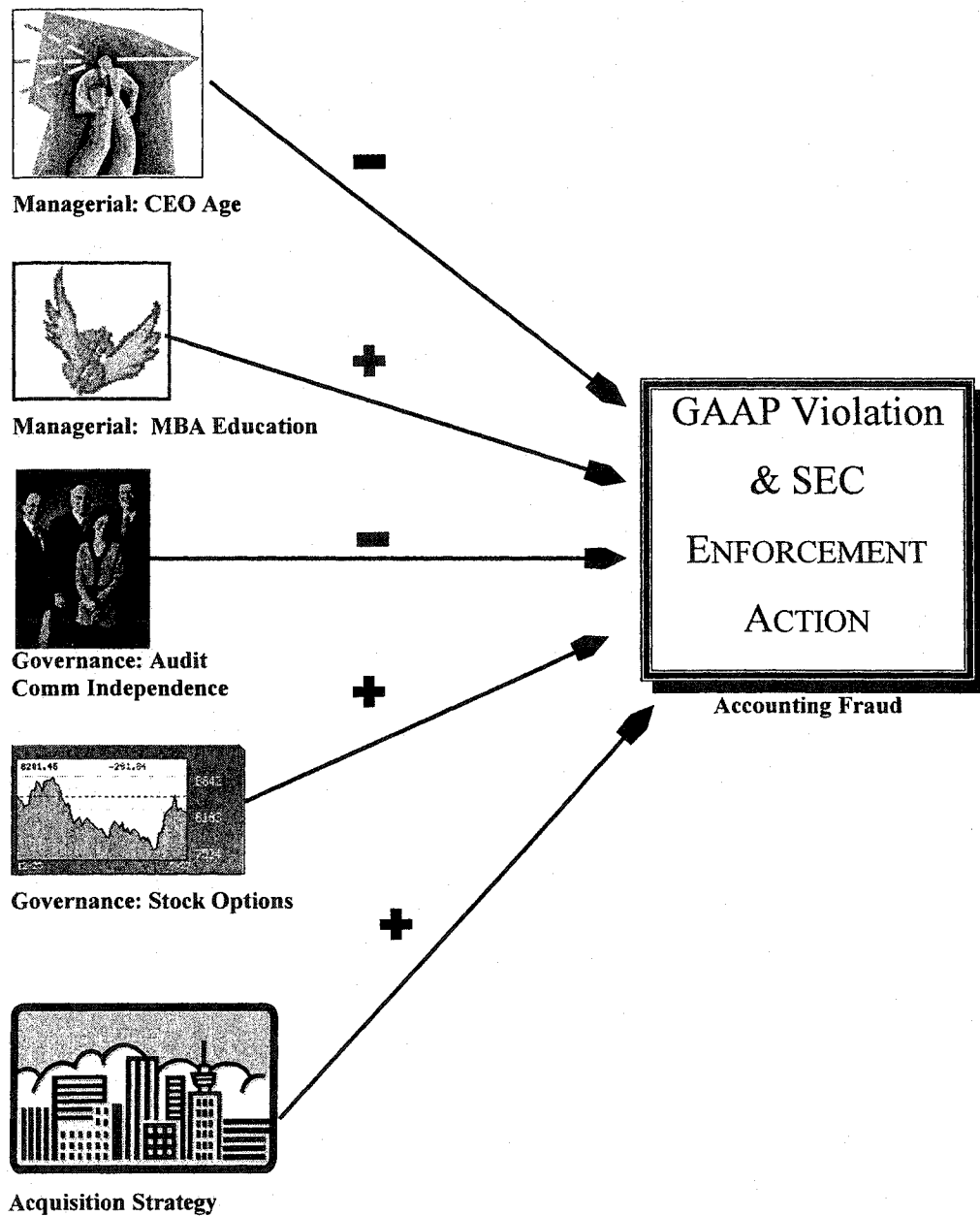


Figure 2

Altman's Z-Score

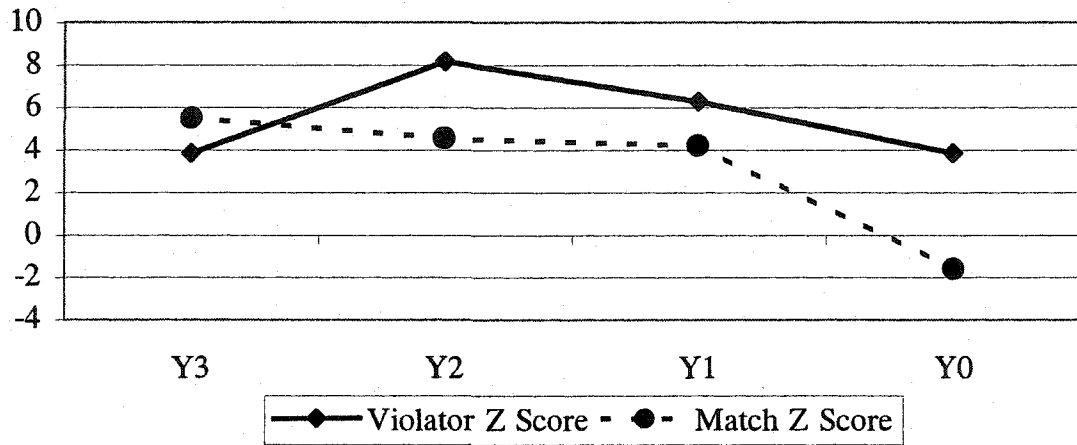


Figure 3

Total Cash Flows (\$millions)

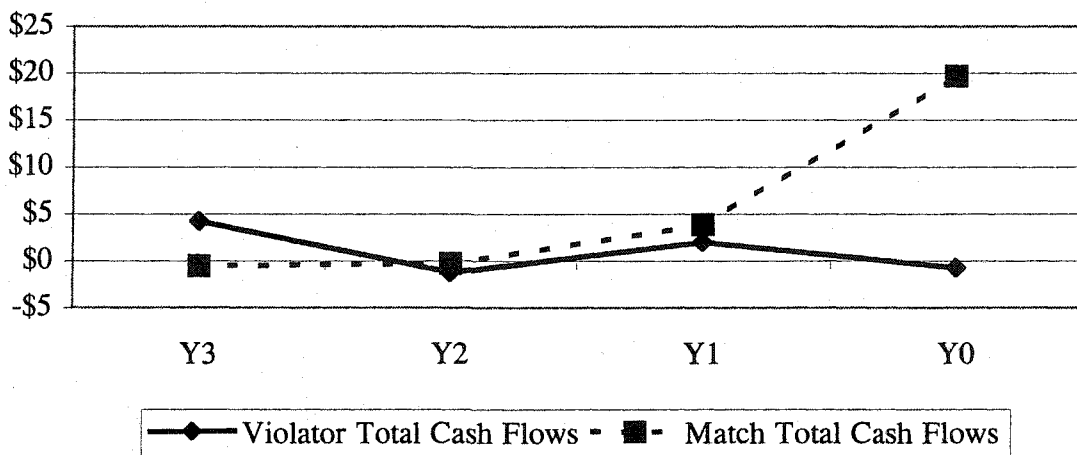


Figure 4

CEO Age

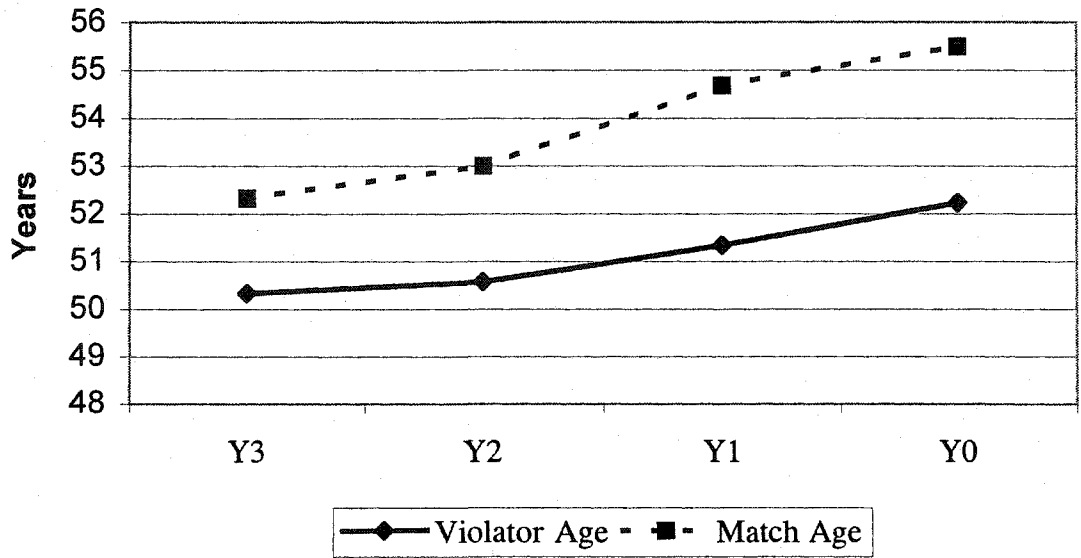


Figure 5

CEO Tenure with the Firm

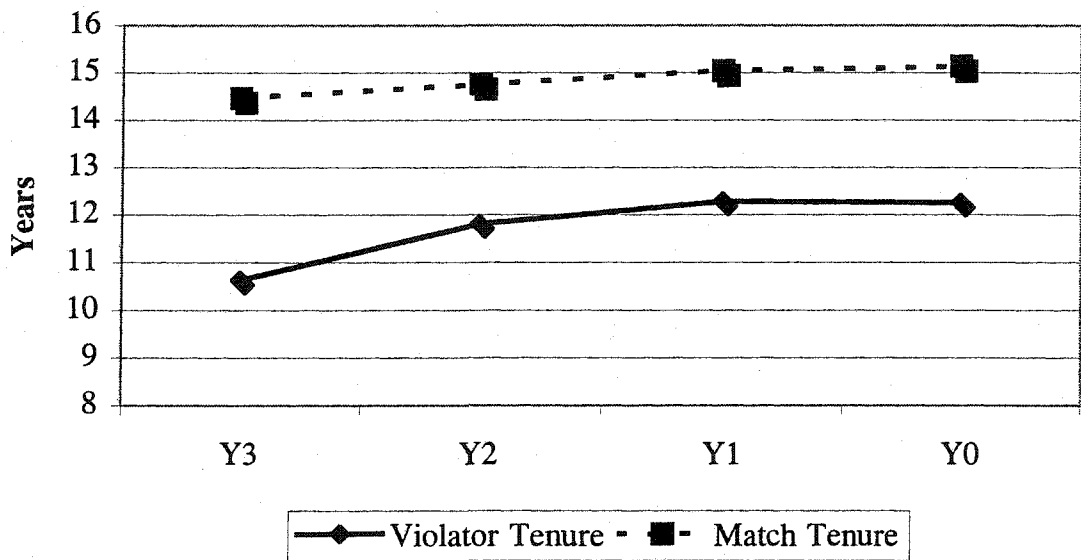


Figure 6

CEO Ownership Percentage

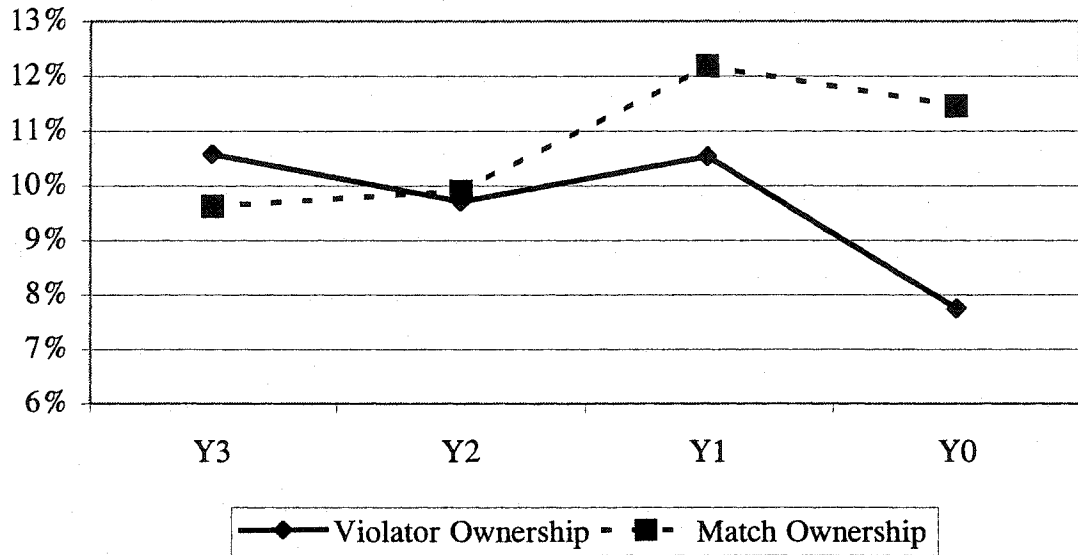


Figure 7

Total Value of CEO Options Scaled by Total Cash Compensation

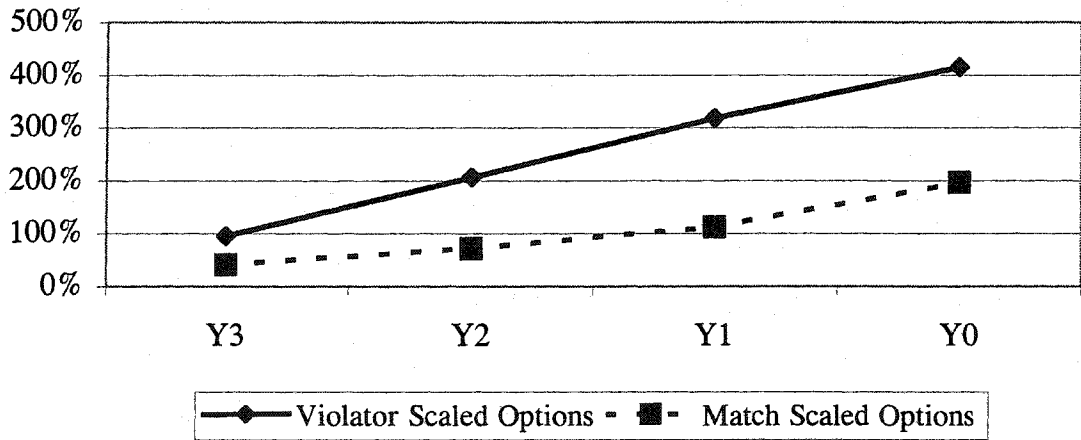


Figure 8
Acquisitions

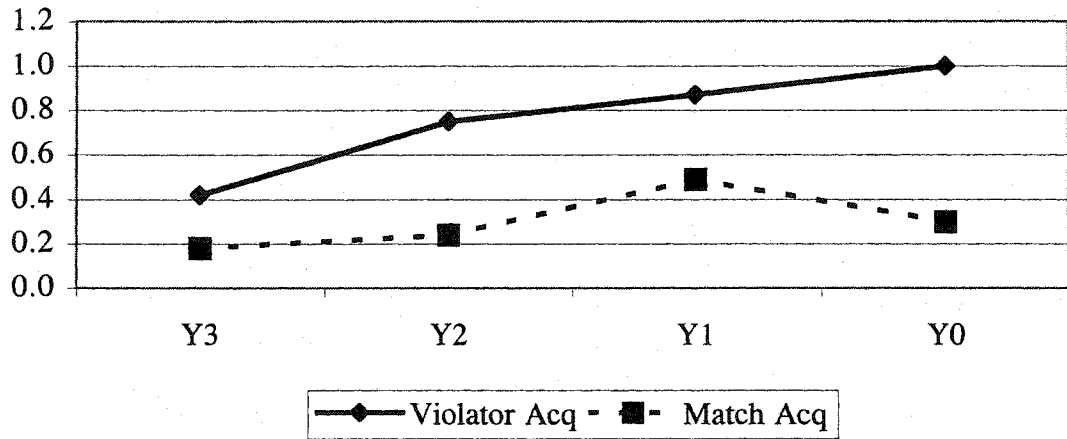
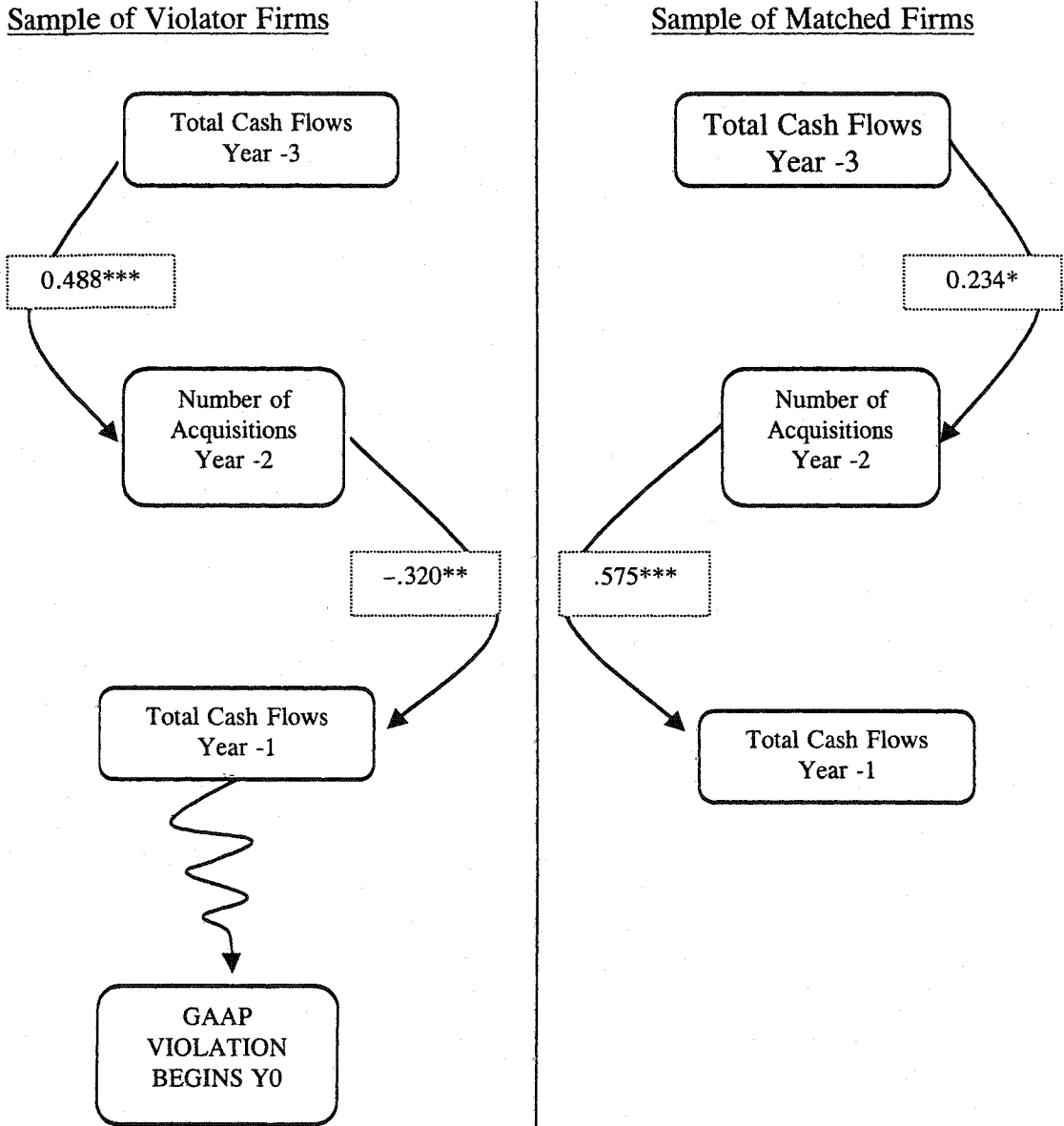


Figure 9
A Proposed Cycle of Events Preceding Accounting Violations

Pearson Correlations



* $p < .05$
 ** $p < .01$
 *** $p < .001$

REFERENCES

- Abdel-Khalik, A. R. 2002. Reforming Corporate Governance Post Enron: Shareholders' Board of Trustees and the Auditor. *Journal of Accounting and Public Policy*. Summer 21(2): 97-103.
- Altman, E. L. 1968. Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *Journal of Finance* XXIII (4):589-609.
- Bantel, K. and Jackson, S. 1989. Top Management and Innovations in Banking: Does the Composition of the Top Team Make a Difference? *Strategic Management Journal*, 10: 107-124.
- Barker III, V., and Mueller, G. 2002. CEO Characteristics and Firm R&D Spending. *Management Science*, 48: 782-801.
- Barrow, J. M., and P. M. Horvitz. 1993. Response of Distressed Firms to Incentives: Thrift Institution Performance under the FSLIC Management Consignment Program. *Financial Management* 22 (3):176-184.
- Bartov, E. 1993. The Timing of Asset Sales and Earnings Manipulation. *The Accounting Review* 68 (4):840-855.
- Beasley, M. S. 1996. An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud. *Accounting Review* 71 (4):443-465.
- Beasley, M. S., J. V. Carcello, D. R. Hermanson, and P. D. Lapedes. 2000. Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms. *Accounting Horizons* 14 (4):441-454.
- Beidleman, C. R. 1973. Income Smoothing: The Role of Management. *The Accounting Review* XLVII (4):653-667.
- Beneish, M. D. 1997. Detecting GAAP Violations: Implications for Assessing Earnings Management among Firms with Extreme Financial Performance. *Journal of Accounting and Public Policy* 16:271-309.
- Beneish, M. D. 1999a. Incentives and Penalties Related to Earnings Overstatements that Violate GAAP. *The Accounting Review* 74 (4):425-457.
- Beneish, M. D. 1999b. The Detection of Earnings Manipulation. *Financial Analysts Journal*:24-36.

- Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees. 1999. Report and Recommendations. New York, NY: NYSE and NASD.
- Bonner, S. E., Z. Palmrose, and S. M. Young. 1998. Fraud Type and Auditor Litigation: An Analysis of SEC Accounting and Auditing Enforcement Releases. *Accounting Review* 73 (4):503-532.
- Bradley, M., Desai, A., and Kim, H. 1988. Synergistic Gains from Corporate Acquisition and Their Division Between the Stockholders of Target and Acquiring Firms. *Journal of Financial Economics*, 21: 3-40.
- Brouthers, K. D., L. E. Brouthers, and S. Werner. 2000. Influences on Strategic Decision-Making in the Dutch Financial Services Industry. *Journal of Management* 26 (5):863-883.
- Bull, I. 1991. Board of Director Acceptance of Treadway Responsibilities. *Journal of Accountancy* 171 (2):67-74.
- Bulletin: Changes to Amex Independent Director and Audit Committee Requirements. 2000. The American Stock Exchange.
- Burgstahler, D. C., and I. D. Dichev. 1997. Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting and Economics* 24 (99-126).
- Byrne, J. A. 2002. Restoring TRUST in Corporate America. *Business Week*, June 24, p. 34.
- Chandy, P. 1991. Chief Executive Officers: Their Backgrounds and Predictions for the 90s. *Business Forum*, 16(1): 18-19.
- Child, J. 1974. Managerial and Organizational Factors Associated with Company Performance - Part I. *Journal of Management Studies*, 11: 175-189.
- Chingos, P. and Engel, M. 1998. Trends in stock option plans and long-term incentives. *ACA Journal*, 7: 13-19.
- COSO. 1999. Fraudulent Financial Reporting 1987-1997, An Analysis of U.S. Public Companies. Committee of Sponsoring Organizations of the Treadway Commission.
- D'Aveni, R. A. 1989. The Aftermath of Organizational Decline: A Longitudinal Study of the Strategic and Managerial Characteristics of Declining Firms. *Academy of Management Journal* 32 (3):577-605.

- D'Aveni, R. A. 1990. Top Managerial Prestige and Organizational Bankruptcy. *Organization Science* 1 (2):121-142.
- D'Aveni, R. A., and I. F. Kesner. 1993. Top Managerial Prestige, Power and Tender Offer Response: A Study of Elite Social Networks and Target Firm Cooperation During Takeovers. *Organization Science* 4 (2):123-151.
- Daboub, A. J., Rasheed. A. M. A., R. L. Priem, and D. A. Gray. 1995. Top Management Team Characteristics and Corporate Illegal Activity. *Academy of Management Review* 20 (1):138-170.
- Davis, G. F., Diekmann, K. A. and Tinsley, C. H. 1994. The Decline of the Conglomerate Firm in the 1980s: The Deinstitutionalization of an Organizational Form. *American Sociological Review* 59:547-570.
- Dechow, P. M., R. G. Sloan, and A. P. Sweeney. 1995. Detecting Earnings Management. *The Accounting Review* 70 (2):193-225.
- Dechow, P. M., R. G. Sloan, and A. P. Sweeney. 1996. Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC. *Contemporary Accounting Research* 13 (1):1-36.
- DeFond, M. L., and J. Jiambalvo. 1991. Incidence and Circumstances of Accounting Errors. *The Accounting Review* 66 (3):643-655.
- Feroz, E. H., K. Park, and V. S. Pastena. 1991. The Financial and Market Effects of the SEC's Accounting and Auditing Enforcement Releases. *Journal of Accounting Research* 29 (Supplement):107-142.
- Finkelstein, S., and Boyd, B. 1998. How Much Does the CEO Matter? The Role of Managerial Discretion in the Setting of CEO Compensation. *Academy of Management Journal*, 41: 179
- Gray, S. R., and A. A. Cannella. 1997. The Role of Risk in Executive Compensation. *Journal of Management* 23 (4):517-540.
- Grimm, C. M., and K. G. Smith. 1991. Management and Organizational Change: A Note on the Railroad Industry. *Strategic Management Journal* 12 (7):557-562.
- Hambrick, D. C., and P. A. Mason. 1984. Upper Echelons: The Organization as a Reflection of Its Top Managers. *Academy of Management Review* 9 (2):193-206.

- Hambrick, D. C., and R. A. D'Aveni. 1988. Large Corporate Failures as Downward Spirals. *Administrative Science Quarterly* 33:1-23.
- Hambrick, D. C., and R. A. D'Aveni. 1992. Top Team Deterioration as Part of the Downward Spiral of Large Corporate Bankruptcies. *Management Science* 38 (10):1445-1466.
- Hambrick, D. C., M. A. Geletkanycz, and J. W. Frederickson. 1993. Top Executive Commitment to the Status Quo: Some Tests of Its Determinants. *Strategic Management Journal* 14 (6):401-418.
- Healy, P. M. 1985. The Effect of Bonus Schemes on Accounting Decisions. *Journal of Accounting and Economics* 7 (1/2/3):85-107.
- Hitt, M. A., and B. B. Tyler. 1991. Strategic Decision Models; Integrating Different Perspectives. *Strategic Management Journal* 12:327-351.
- Hitt, M. A., Hoskisson, R. E., Johnson, R. A., and Moesel, D. D., 1996. The Market for Corporate Control and Firm Innovation. *Academy of Management Journal*, 39:1084-1119.
- Holmström, B. 1979. Moral Hazard and Observability. *Bell Journal of Economics* 10 (1):74-91.
- Holthausen, R. W., D. F. Larcker, and R. G. Sloan. 1995. Annual Bonus Schemes and the Manipulation of Earnings. *Journal of Accounting and Economics* 19:29-74.
- Hunt, S., and Chonko, L. 1984. Marketing and Machiavellianism. *Journal of Marketing*, 48: 30-42.
- Jensen, M. C., and Meckling, W. H. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3: 305-359.
- Jensen, M. C., and K. J. Murphy. 1990. Performance Pay and Top-Management Incentives. *Journal of Political Economy* 98:225-264.
- Jensen, M. C., and W. H. Meckling. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics* 3 (4):305-359.
- Kaplan, S. N. and Weisbach, M. S. 1992. The Success of Acquisitions: Evidence from Divestitures. *Journal of Finance*. 47: 31-138.

- Kelley, S., Ferrell, O., and Skinner, S. 1990. Ethical Behavior Among Marketing Researchers: An Assessment of Selected Demographic Characteristics. *Journal of Business Ethics*, 9: 681-688.
- Kesner, I. F., and D. R. Dalton. 1986. Boards of Directors and the Checks and (Im)Balances of Corporate Governance. *Business Horizons* 29 (5):17-23.
- Klein, A. 2002. Audit Committee, Board of Director Characteristics, and Earnings Management. *Journal of Accounting and Economics*, 33: 375
- Lambert, R. A. 1984. Income Smoothing as Rational Equilibrium Behavior. *The Accounting Review* LIX (4):604-618.
- Lambert, R. A., and D. F. Larcker. 1987. An Analysis of the Use of Accounting and Market Measures of Performance in Executive Compensation Contracts. *Journal of Accounting Research* 25 (3):85-125.
- Ma, C. K. 1988. Loan Loss Reserves and Income Smoothing: The Experience in the U.S. Banking Industry. *Journal of Business, Finance & Accounting* 15 (4):487-497.
- Maddala, G. S. 1991. A Perspective on the Use of Limited-dependent and Qualitative Variables Models in Accounting Research. *The Accounting Review*, 66: 788-807.
- Magrath, L., and Weld, L. 2002. Abusive Earnings Management and Early Warning Signs. *CPA Journal*, 73: 50-54.
- Markóczy, L. 1997. Measuring Beliefs: Accept No Substitutes. *Academy of Management Journal* 40 (5):1228-1242.
- Mascarenhas, B., Kumaraswamy, A., Day, D., and Baveja, A. 2002. Five Strategies for Rapid Firm Growth and How to Implement Them. *Managerial and Decision Economics*, 23: 317-330.
- McMullen, D. 1996. Audit Committee Performance: An Investigation of the Consequences Associated with Audit Committees. *Auditing*, 15: 87-103.
- Miller, D. 1988. Relating Porter's Business Strategies to Environment and Structure: Analysis and Performance Implications. *Academy of Management Journal* 39 (1):91-122.
- Nourayi, M. 1994. Stock Price Responses to the SEC's Enforcement Actions. *Journal of Accounting and Public Policy*, 13: 333-347.

- NYSE. *Corporate Governance Standards*, December 20 1999 [cited February 14, 2002].
- NYSE. *Guiding Principles of Audit Committee Best Practices*. New York Stock Exchange, 1999-07-24 1999 [cited February 14, 2002]. Available from www.nyse.com/content/publications/NT0000AE6E.html.
- Palia, D. 2000. The Impact of Regulation on CEO Labor Markets. *RAND Journal of Economics*, 31: 165-179.
- Papadakis, V. M., S. Lioukas, and D. Chambers. 1998. Strategic Decision-Making Processes: The Role of Management and Context. *Strategic Management Journal* 19:115-147.
- Perrow, C. 1967. A Framework for the Comparative Analysis of Organizations. *American Sociological Review* 32 (2):194-208.
- Persons, O. 1995. Using Financial Statement Data to Identify Factors Associated with Fraudulent Financial Reporting. *Journal of Applied Business Research*, 11: 38
- Press, S. J., and S. Wilson. 1978. Choosing between Logistic Regression and Discriminant Analysis. *Journal of the American Statistical Association* 73 (364):699-705.
- Ravenscraft, D. J. and Scherer, F. M. 1987. Life After Takeover. *Journal of Industrial Economics*, 36: 147-156.
- Roll, R. 1986. The Hubris Hypothesis of Corporate Takeovers. *Journal of Business*, 59: 197-215.
- Ronen, J., and S. Sadan. 1981. *Smoothing Income Numbers: Objectives, Means and Implications*. Reading, Mass: Addison-Wesley Publishing Co.
- Sanders, W. G. 2001. Behavioral Responses of CEOs to Stock Ownership and Stock Option Pay. *Academy of Management Journal* 44:477-492.
- Schipper, K. 1989. Commentary on Earnings Management. *Accounting Horizons* 3:91-102.
- St-Onge, S., Magnan, M., Thorne, L., and Raymond, S. 2001. The Effectiveness of Stock Option Plans. *Journal of Management Inquiry*, 10: 250-266.

- Summers, S. L., and J. T. Sweeney. 1998. Fraudulently Misstated Financial Statements and Insider Trading: An Empirical Analysis. *The Accounting Review* 73 (1):131-146.
- The Economist*. 1999. Share and Share Unalike. August 5.
- Tosi, H., Werner, S., Katz, J., and Gomez-Mejia, L. 2000. How Much Does Performance Matter? A Meta-Analysis of CEO Pay Studies. *Journal of Management*, 26: 301-339.
- Treadway, J. C. 1987. Report of the National Commission on Fraudulent Financial Reporting, October.
- Wall Street Journal, 2000. MicroStrategy Inc. Revises Accounting for 1997, '98 and '99. April 14.
- Weiner, N. , and T. A. Mahoney. 1981. A Model of Corporate Performance as a Function of Environmental, Organizational, and Leadership Influences. *Academy of Management Journal* 24 (3):453-470.
- Weitzel, W., and E. Jonsson. 1989. Decline in Organizations: A Literature Integration and Extension. *Administrative Science Quarterly* 34:91-109.
- Wiersema, M. F., and K. A. Bantel. 1992. Top Management Team Demography and Corporate Strategic Change. *Academy of Management Journal* 75 (2):123-138.
- Wright, P., Kroll, M., Lado, A., and Van Ness, B. 2002. The Structure of Ownership and Corporate Acquisition Strategies. *Strategic Management Journal*, 23: 41-53.
- Zajac, E., and Westphal, J. 1994. The Costs and Benefits of Managerial Incentives and Monitoring in Large U. S. Corporations: When is More Not Better? *Strategic Management Journal*, 94: 121-142.
- Zweig, J. 2002. How to Avoid the Next Stock Bomb. *Time*, 160(2): July 8.

