

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

**ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600**

UMI[®]

**COSTS AND BENEFITS OF MANAGING EARNINGS
TO MEET AN EARNINGS TARGET**

by

Fern Zabriskie

A dissertation submitted in partial fulfillment of
the requirements for the degree of

Doctor of Philosophy

University of Washington

Program Authorized to Offer Degree: Business Administration

UMI Number: 3053582

Copyright 2002 by
Zabriskie, Fern H.

All rights reserved.

UMI[®]

UMI Microform 3053582

Copyright 2002 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 2002

Fern Zabriskie

In presenting this dissertation in partial fulfillment of the requirements for the Doctoral degree at the University of Washington, I agree that the Library shall make copies freely available for inspection. I further agree that the extensive copying of the dissertation is allowable only for scholarly purposes, consistent with "fair use" as prescribed in the U.S. Copyright Law. Requests for copying or reproduction of this dissertation may be referred to ProQuest Information and Learning, 300 North Zeeb Road, Ann Arbor, MI 48106-1346, to whom the author has granted "the right to reproduce and sell (a) copies of the manuscript in microform and/or (b) printed copies of the manuscript made from microform."

Signature Fern Zabrista
Date 4/15/02


University of Washington
Graduate School

This is to certify that I have examined this copy of a doctoral dissertation by

Fern Zabriskie

and have found that it is complete and satisfactory in all respects,
and that any and all revisions required by the final
examining committee have been made.

Chair of Supervisory Committee:

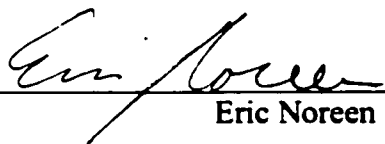


Donna J. Shores

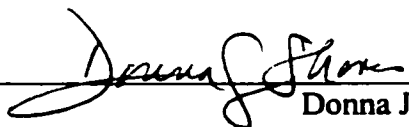
Reading Committee:



David Burgstahler



Eric Noreen



Donna J. Shores

Date: APRIL 9, 2002

University of Washington

Abstract

**COSTS AND BENEFITS OF MANAGING EARNINGS
TO MEET AN EARNINGS TARGET**

by Fern ZABRISKIE

**Chair of the Supervisory Committee: D. Shores
Associate Professor
Department of Accounting**

I examine both the incentives and the disincentives associated with managing earnings to meet a specific earnings target by looking at two related questions: What are the benefits that firms seek by managing earnings to meet an earnings target? What are the costs of managing earnings to meet an earnings target? I use a signaling perspective to describe the benefits that accrue to firms for meeting either of two earnings targets, i.e. zero EPS and the previous year's EPS. I argue that the achievement of an earnings target is a signal to the firm's stakeholders that their implicit claims with the firm are more likely to be fulfilled than if the firm had not met the earnings target. Four stakeholder groups (customers, employees, suppliers and short-term creditors) and five earnings management tools (bad debt expense, depreciation expense, pension expense, tax expense and special items) are considered. Net benefits from stakeholders are measured by abnormal returns, and the costs of managing earnings are measured in terms of the firm's "capacity" to manage earnings. I find evidence that meeting both earnings management targets simultaneously provides information to stakeholders, which they use in assessing the probability that their implicit claims will be fulfilled by the firm. I am unable to predict whether a firm meets an earnings target based on my proxies for a firm's dependence on stakeholders and its capacity to manage earnings.

TABLE OF CONTENTS

LIST OF FIGURES	ii
LIST OF TABLES	iii
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: EARNINGS TARGETS	5
CHAPTER 3: BENEFITS OF MEETING AN EARNINGS TARGET	11
A. Stakeholders and Firm Benefits	11
B. Management's Decision Process	14
C. Benefits Hypotheses	16
D. Relevant Stakeholder Groups	19
CHAPTER 4: THE COSTS OF MANAGING EARNINGS	30
A. The Costs of Managing Earnings and Related Hypothesis	30
B. Earnings Management Tools	36
CHAPTER 5: METHODOLOGY	44
A. Sample Selection	44
B. Tests of First Three Benefits Hypotheses and Related Proxies	48
C. Tests of HB ₄ and HC	54
CHAPTER 6: RESULTS – TESTS OF MARKET REACTION TO MEETING EARNINGS TARGETS (HB ₁ AND HB ₂)	66
A. Sample Selection Process	66
B. Tests of HB ₁ and HB ₂	69
CHAPTER 7: RESULTS – TESTS OF STAKEHOLDER AND COST HYPOTHESES	85
A. HB ₃	85
B. HB ₄ and HC	89
CHAPTER 8: CONCLUSION	104
REFERENCES	109
APPENDIX I – Three dimensional presentation of EPS and changes in EPS distributions	113

LIST OF FIGURES

	<i>page</i>
Figure 1, Panel A: Distribution of net income scaled by market value	9
Figure 1, Panel B: Distribution of the change in net income scaled by market value	9
Figure 2, Panel A: Distribution of diluted earnings per share, before extraordinary items	10
Figure 2, Panel B: Distribution of change in diluted earnings per share, before extraordinary items	10
Figure 3: Sequence of events in terms of a signaling game	26
Figure 4: Manager's decision process	27
Figure 5, Panel A: Cartesian plane for sample selection process	60
Figure 5, Panel B: Venn diagram of sample selection process	61
Figure 6, Panel A: Distribution of EPS after matching with CRSP	76
Figure 6, Panel B: Distribution of changes in EPS after matching with CRSP	76
Figure 7: Cartesian plane of final sample	77
Figure A-1: Frequencies of firms reporting EPS between $-\$0.04$ and $\$0.03$, and changes in EPS between $-\$0.03$ and $\$0.02$ – viewed from slightly above and to the right	116
Figure A-2: Frequencies of firms reporting EPS between $-\$0.04$ and $\$0.03$, and changes in EPS between $-\$0.03$ and $\$0.02$ – viewed from EPS axis	117
Figure A-3: Frequencies of firms reporting EPS between $-\$0.04$ and $\$0.03$, and changes in EPS between $-\$0.03$ and $\$0.02$ – viewed from changes in EPS axis	117

LIST OF TABLES

	<i>page</i>
Table 1: Firm relationships and pertinent stakeholders	28
Table 2: Relevant stakeholders, implicit claims and potential actions	29
Table 3: SIC codes for dummy variable, <i>Durable</i>	62
Table 4: Stakeholder proxies, measurements and data sources	63
Table 5: Earnings management tools, proxies, measurements and data sources	64
Table 6: Summary of sample selection results for HB ₁ and HB ₂	78
Table 7, Panel A: Results for HB ₁ and HB ₂ using a 3-day return window and the previous year's EPS as the proxy for the market's EPS expectations	79
Table 7, Panel B: Results for HB ₁ and HB ₂ using a 3-day return window and the consensus analysts' forecast as the proxy for the market's EPS expectations	81
Table 7, Panel C: Results for HB ₁ and HB ₂ using a 3-day return window, firms with no consensus analysts' forecast and the previous year's EPS as the proxy for the market's EPS expectations	83
Table 7, Panel D: Results for HB ₁ and HB ₂ using a 3-day return window, firms with a consensus analysts' forecast and the previous year's EPS as the proxy for market's EPS expectations	84
Table 8: Pearson correlation coefficients between proxies for a firm's dependence on the implicit claims of stakeholders	92
Table 9, Panel A: Results for HB ₃ using a 3-day return window and the previous year's EPS as the proxy for market's EPS expectations	94
Table 9, Panel B: Results for HB ₃ using a 3-day return window and the previous year's EPS as the proxy for market's EPS expectations, firms with no forecast on First Call	96
Table 10: Results of factor analysis on proxies for firm's dependence on the implicit claims of stakeholders	98
Table 11: Results for HB ₃ using a 3-day return window, the previous year's EPS as the proxy for market's EPS expectations and using composite stakeholder proxy	99

Table 12: Pearson correlation coefficients between proxies for a firm's capacity to manage earnings	100
Table 13: Results for HB₄ and HC for firms that meet both targets simultaneously	102
Table A-1: Frequencies of firms reporting EPS between -\$0.04 and \$0.03, and changes in EPS between -\$0.03 and \$0.02	117

ACKNOWLEDGEMENTS

I would like to thank my committee members, D. Shores (chairperson), Dave Burgstahler, Eric Noreen, Jennifer Koski and Eugene Silberberg for the guidance and helpful comments during this project. I would also like to thank Lew Thorson for all the SAS and Compustat support he provided, Dawn Matsumoto and Lucky Eames for their suggestions on getting analysts' forecast data, and Terry Shevlin and Michelle Hanlon for their helpful suggestions regarding tax proxies. I am grateful for the financial support of the American Institute of Certified Public Accountants' Doctoral Fellowship and the University of Washington Business School Lorig Fellowship. Last but not least, I am indebted to Jon Robins, Deepika Bagchee and my parents for; without their moral support, this dissertation would not have been possible.

CHAPTER 1: INTRODUCTION

There is growing concern that earnings reports reflect earnings management in addition to a firm's economic performance. Arthur Levitt (1998) of the SEC stated that the process of managing earnings "has evolved over the years into what can best be characterized as a game among market participants. A game that, if not addressed soon, will have adverse consequences for America's financial reporting system." In October 1999, Levitt (1999) appealed to "every financial analyst, every corporate manager, every board member, and every auditor to renew [their] covenant with investors and reaffirm [their] commitment to quality" in the financial reporting process.

Before effective actions can be taken to limit the amount of earnings management that appears in financial statements, it is important to understand why managers engage in the practice. I examine both the incentives and the disincentives associated with managing earnings to meet a specific earnings target by looking at two related questions: What are the benefits that firms seek by managing earnings to meet an earnings target? What are the costs of managing earnings to meet an earnings target?

There are many earnings targets towards which a firm can strive. Previous academic literature has identified and ranked three external earnings targets: zero earnings, the previous year's earnings, and analysts' forecasts.¹ I choose to focus on two targets: zero earnings per share (EPS) and the previous year's EPS. The zero benchmark is fundamental in human thought processes; we immediately compare an amount to zero to determine if something is positive or negative and often interpret this as good or bad

(DeGeorge, Patel and Zachauser, 1999). We also compare reported EPS to the previous year's EPS to assess whether the firm is growing and whether operations are improving. Firms focus our attention on the prior year by providing the prior year's earnings in the current year's earnings release, and this comparison is repeated when earnings are published in such media as the Wall Street Journal's Digest of Earnings.

I do not look at analysts' forecasts as a primary earnings target for two reasons. The first is that analysts' forecasts are influenced by firms' management (Matsumoto, 1998). The second is that analysts' forecasts are not available for all firms.

I use a signaling perspective to describe the benefits that accrue to the firm for meeting either of the two earnings targets, i.e. zero EPS and the previous year's EPS. I argue that the achievement of an earnings target is a signal to the firm's stakeholders that their implicit claims with the firm are more likely to be fulfilled than if the firm had not met the earnings target. Since terms of trade, which include the prices of goods and services purchased or sold by the firm, are more favorable to the firm when there is a higher probability that the stakeholders' implicit claims will be fulfilled, the firm benefits from achieving the earnings target. The benefits from better terms of trade are reflected in the firm's expected cash flows, which are in turn reflected in the firm's market value. I hypothesize that firms meeting an earnings target generate a higher abnormal return at the earnings release date than firms not meeting an earnings target. In essence, I hypothesize that meeting an earnings target conveys information about a firm in addition to the information contained in earnings alone. To test these hypotheses, I develop proxies for a

¹ See Burgstahler and Dichev (1997), Dechow, Richardson and Tuna (2000), Burgstahler and Eames (1999), Myers and Skinner (1999), DeGeorge, Patel, and Zachauser (1999).

firm's dependence on the implicit claims of various stakeholder groups and look at abnormal returns for a firm as a function of meeting an earnings target and the firm's dependence on the implicit claims of stakeholders while controlling for the market's expectations of the firm's earnings.

The second research question addresses the costs of managing earnings to meet an earnings target. Abilities to meet an earnings target differ across firms. Some firms can meet the target by simply reporting the results of operations without using earnings management to alter the reported earnings. Other firms must manage reported earnings to report the desired results, and these firms incur costs associated with managing earnings. Firm managers presumably compare the expected costs of managing earnings to meet an earnings target to the expected benefits from meeting an earnings target to determine whether to manage earnings.

Healy and Wahlen (1999) provide a succinct definition of earnings management:

Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to mislead some stakeholders about underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.

The costs of managing earnings are related to the various earnings management tools used by the firm and the probability that the earnings management will be revealed in the future. I restrict my analysis to include only earnings management tools that can be implemented after the close of the accounting period in order to concentrate on pure "bookkeeping" tools, which are "those undertaken purely to manage earnings" (Schipper, 1989). I further restrict my study to earnings management tools that are not easily identified on a firm's income statement. This reduces the possibility that the users of the

financial statements can unwind the impact of earnings management and estimate the firm's unmanaged earnings. To be consistent with previous literature, I concentrate on earnings management tools that fall within GAAP. "If managers choose impermissible [earnings management tools], earnings are no longer being managed" (Schipper, 1989).

The remainder of this dissertation consists of seven chapters. In Chapter 2, I discuss earnings targets in greater depth. In Chapter 3, I discuss the benefits of meeting an earnings target and develop the related benefit hypotheses. In Chapter 4, I discuss earnings management tools and their costs and present the related cost hypothesis. I review the methodology in Chapter 5 and present the results in Chapters 6 and 7. I conclude the dissertation in Chapter 8.

CHAPTER 2: EARNINGS TARGETS

Burgstahler and Dichev (1997) provide evidence that some firms manage earnings to report earnings at or above zero. They look at the frequency distribution of net income scaled by beginning market value. I have recreated this distribution using Compustat data from 1980 - 2000² and present it in Figure 1, Panel A. There is an apparent anomaly in the distribution around zero. Based on the smoothness of the distribution elsewhere, more firms appear immediately to the right of zero than would be expected and fewer firms appear immediately to the left of zero than would be expected. Burgstahler and Dichev assume that in the absence of earnings management the distribution would be smooth everywhere and argue that the anomaly is evidence that some firms manage earnings to report earnings at or above zero, in other words, to avoid a loss.

Burgstahler and Dichev also consider the previous year's earnings as a target and show that more firms report earnings immediately above the previous year's earnings than would be expected and fewer firms report earnings immediately below the previous year's earnings than would be expected based on the shape of the distribution of the changes in net income scaled by market value. I also recreate this distribution in Figure 1, Panel B. From the anomaly around zero, Burgstahler and Dichev conclude that some firms manage earnings to report results above the prior year.

The observation that some firms manage earnings to meet earnings targets can be used to infer that managers believe that there are benefits from meeting earnings targets. Furthermore, the observation that there are some firms in close proximity to, but below,

an earnings target can be used to infer that there are costs associated with managing earnings and that these costs exceed the benefits of meeting an earnings target for some firms. The decision process by which managers weigh the costs and benefits of managing earnings to meet two specific earnings targets, zero EPS and the previous year's EPS, forms the central focus for this dissertation and is discussed in the next chapter.³

Similar to Burgstahler and Dichev, I examine the frequency distribution around an earnings target; however, I focus on the distribution of annual diluted earnings per share (EPS) and the change in annual diluted EPS instead of net income scaled by market value and the change in net income scaled by market value.⁴ Firms tend to announce current EPS in conjunction with the previous year's EPS, so focus is concentrated on the magnitude of the current EPS and the direction and amount of change from the previous year's EPS.

Before proceeding with the choice of EPS and the change in EPS as earnings management targets, I need to demonstrate that the anomalies observed in the previous literature are present when using EPS and the change in EPS. The distribution of reported EPS is shown in Figure 2, Panel A. The distribution is not as smooth as one

² Burgstahler and Dichev use Compustat data from 1976 - 1994.

³ Though I concentrate on two earnings targets, I expect that the decision process to manage earnings to meet other earnings targets not discussed in this dissertation is similar.

⁴ I choose to focus on EPS instead of income for two reasons: recent stories in the popular press focus on a firm's EPS and analysts' forecasted EPS more often than income. I focus on *annual* EPS to be consistent with Burgstahler and Dichev who focus on *annual* earnings targets. I use diluted EPS instead of primary EPS based on the evidence provided by Jennings, LeClere and Thompson (1997) that "fully diluted EPS most explains prices." Furthermore, the calculation of diluted EPS was less impacted by the definition changes adopted by the FASB in 1997 (SFAS No. 128) so that the calculation of diluted EPS remains relatively consistent over time where the calculation of primary EPS does not. I also focus on EPS before extraordinary items because I concentrate on earnings management tools that cannot be clearly identified

might expect. The number of firms reporting zero EPS is more than 50% greater than the number of firms reporting EPS just below zero, just above zero or any other amount. Not surprisingly, more firms report EPS greater than zero than less than zero. I use the above two observations as evidence that firms manage EPS to report EPS greater than or equal to zero, in other words, to avoid a loss. This is consistent with the evidence provided by Burgstahler and Dichev.

The distribution is not as smooth to the right of zero EPS as it is to the left of zero EPS; there are more firm-year observations at multiples of ten cents than would be expected if the distribution were smooth. This is consistent with Thomas' work on rounding behavior in a firm's reported earnings (1989) where he observes "unusually high proportions of EPS numbers divisible by ten cents." As explanations, he suggests that firms manage reported earnings upward to reference points because small changes in reported earnings near those reference points can have large effects on firm value and that earnings targets specified in lending and compensation contracts are specified in round numbers.

The distribution of the change in EPS is shown in Figure 2, Panel B. Again the distribution is not smooth. Sixty-six percent more firms report zero changes in EPS than report changes in EPS just below zero, and thirty-one percent more firms report zero changes in EPS than report changes in EPS just above zero. As in the distribution of EPS, more firms report changes above zero than below zero. I use these two

observations as evidence that firms manage EPS to report EPS at least as great as they reported in the previous year, in other words, to avoid a decline in EPS.

In conclusion, I use the distribution of EPS and the changes in EPS as evidence that firms manage reported EPS to meet two EPS targets, EPS and changes in EPS greater than or equal to zero. This is similar to the earnings management evidence provided by Burgstahler and Dichev (1997).

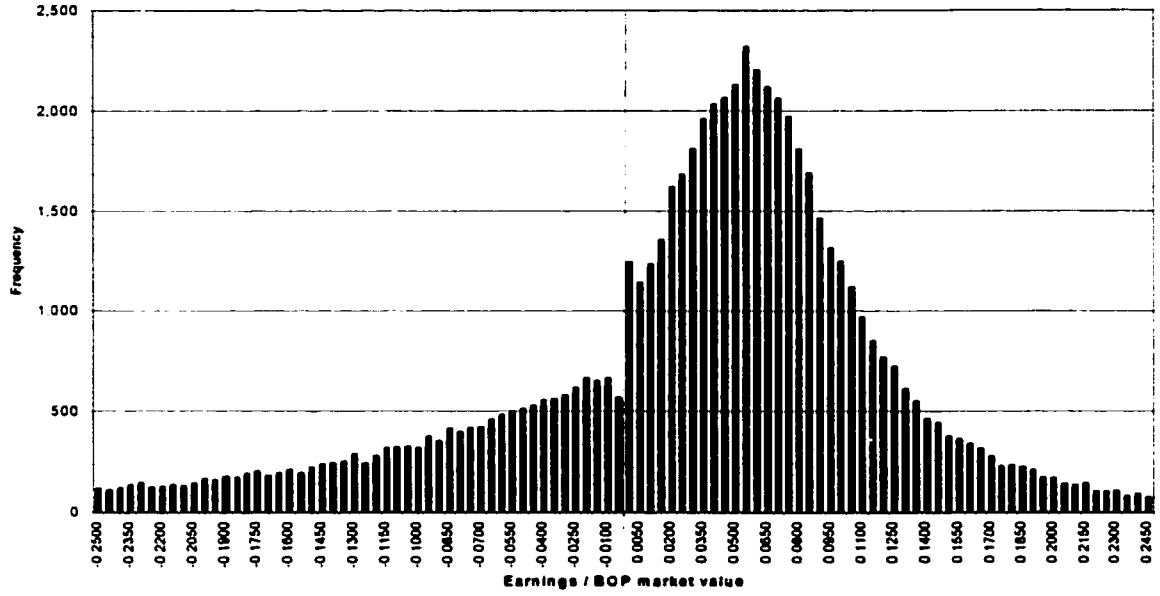


Figure 1, Panel A - Distribution of net income scaled by market value

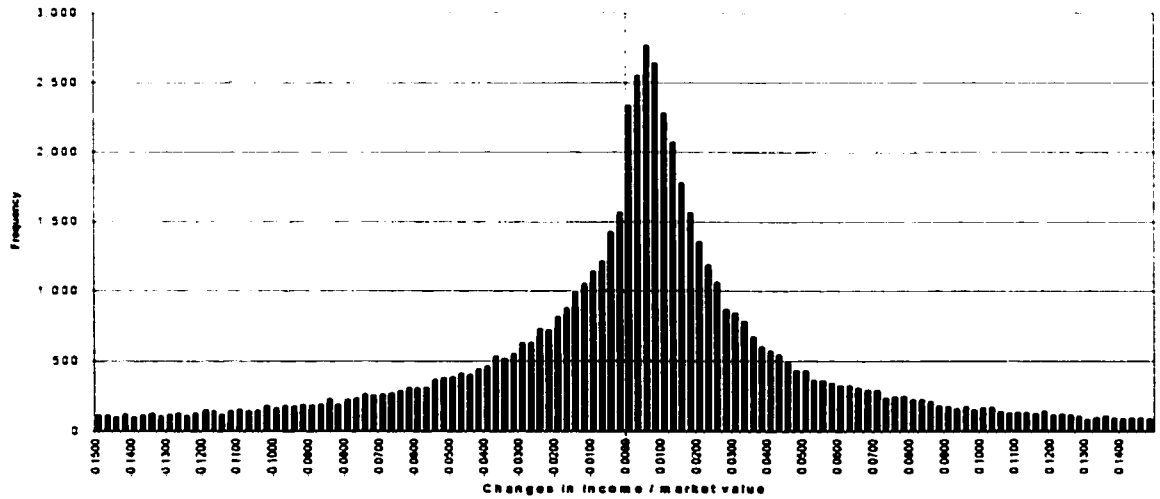


Figure 1, Panel B - Distribution of the change in net income scaled by market value

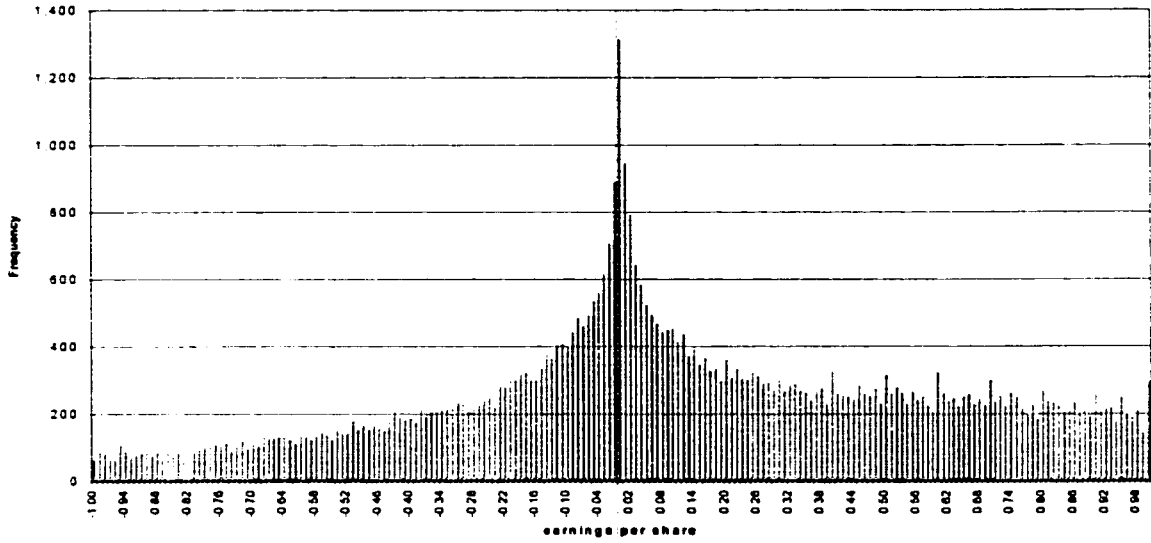


Figure 2, Panel A - Distribution of diluted EPS, before extraordinary items

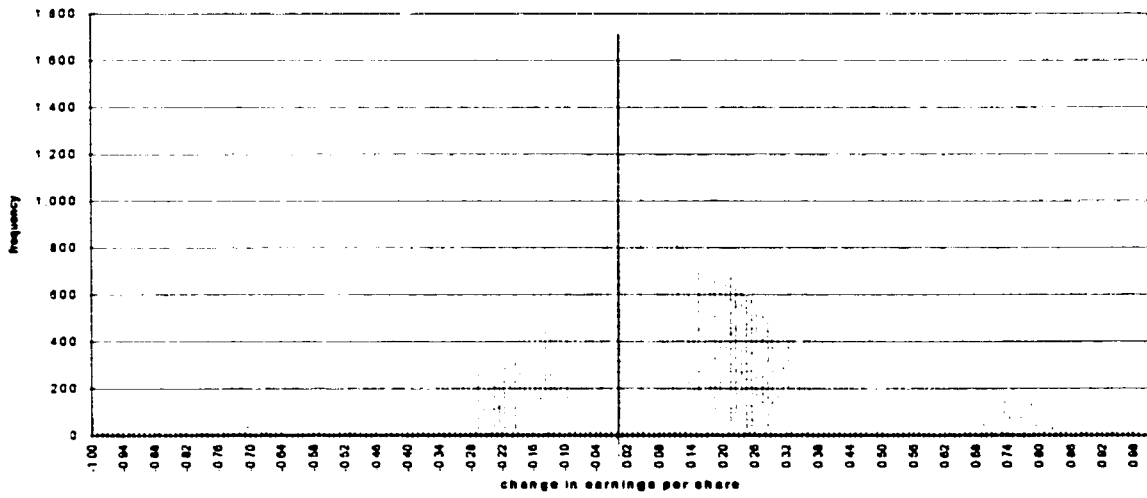


Figure 2, Panel B - Distribution of change in diluted EPS, before extraordinary items

CHAPTER 3: THE BENEFITS OF MEETING AN EARNINGS TARGET

The evidence discussed in Chapter 2 is consistent with the generally accepted notion that firms manage earnings to meet earnings targets, but we still do not have a good understanding as to why this earnings management occurs. In this chapter, I suggest a potential explanation. Specifically, I discuss stakeholders and how firms receive benefits from stakeholders when earnings targets are met. I review the management decision process to meet an earnings target in terms of a signaling model, and I present the hypotheses used to test the signaling theory. I conclude the chapter with a discussion of four relevant stakeholder groups (customers, employees, suppliers, and creditors) and the reasons for excluding other stakeholder groups (competitors, regulators, rating agencies, and stockholders).

A. Stakeholders and Firm Benefits

Coase (1937) defined the firm “as a system of relationships” where the suppliers of the factors of production contract with the firm to provide the factor for a fee, and the firm acts as a middleman between the consumer and the supplier of the inputs. Even though firm managers have replaced firm owners as the decision-makers for many modern firms, Coase's basic definition is still valid. This basic concept was expanded by Jensen and Meckling (1976) and Jensen (1983); Jensen defines the firm as a “legal entity that serves as a nexus for a complex set of contracts ‘written and unwritten’ among disparate individuals.” These individuals, who are often referred to as stakeholders, include “suppliers of labor, capital, raw materials, risk bearing services, and customers.” Mitroff (1983) defines stakeholders as “all those interest groups, parties, actors,

claimants, and institutions – both internal and external to the corporation – that exert a hold on it. That is, stakeholders are all those parties that either affect or who are affected by a corporation's actions, behaviors, and policies.”

Contracts with stakeholders can be broken into two classes: explicit and implicit. Explicit contracts are formal agreements where the contractual claims negotiated between stakeholders and firms are overtly stated; these include product warranties, price contracts, and wage contracts. Implicit contracts, on the other hand, are contracts where the claims by both parties are " too nebulous and state contingent to reduce to writing at a reasonable cost" (Cornell and Shapiro, 1987). Although a formal, written contract does not exist. "the two sides of the trade are nevertheless acting 'as if' one existed." (Bull, 1983). Examples of implicit claims include a firm's promise to provide service and parts for its installed base of products, continued employment for people without employment contracts, and the firm's continued positive relation with its suppliers.

The firm receives compensation for many of the implicit claims it makes, even though the implicit claims cannot be unbundled from the goods and services the firm provides or purchases. A firm can sell a good that carries an implicit claim of high quality at a higher price than a good that carries no such claim. A firm that makes an implicit claim of job security can pay a lower wage rate to its employees than a firm where the risk of termination is higher. The prices of the goods and the wage rates, referred to as "terms of trade with stakeholders" for the purposes of this paper, reflect the compensation the firm receives for the implicit claims the stakeholders have on the firm.

The actual price at which an implicit claim can be sold depends on the payoffs the stakeholders expect to receive, i.e. the product of the amount of the payoff and the probability that it will be received. If the probability of a payoff is high, the stakeholder pays more for the implicit claim than if the probability is low; in other words, the terms of trade are more favorable for firms that have a higher probability of fulfilling their implicit claims than for firms with a lower probability of fulfilling their implicit claims. Favorable terms of trade are reflected as higher expected revenues and lower expected expenses for the firm. These expected benefits generate higher expected net cash flows for the firm, which in turn are reflected in higher firm value.

If a firm's financial reports indicate that the firm has financial difficulties⁵, the stakeholders are likely to lower their probability assessments that future implicit claims can be satisfied. Cornell and Shapiro (1987) argue that "if a firm runs into financial difficulty, the payouts on implicit claims may be cut substantially." Burgstahler and Dichev (1997) suggest that firms manage reported earnings because various stakeholder groups use benchmarks to evaluate the firm's financial condition and evaluate the probability it will fulfill its implicit claims.

I make three assumptions based on the above discussion. EPS relative to an EPS target provides stakeholders information about the firm's financial condition. Firms in better financial condition are perceived by stakeholders as having a higher probability of fulfilling their implicit claims with stakeholders than firms in poorer financial condition. Firms that have a higher perceived probability of fulfilling implicit claims have better

terms of trade for future transactions with stakeholders and better expected cash flows, which are reflected in higher firm value at the time earnings are announced.

B. Management's Decision Process

Some firms have the ability to manage reported earnings upward to meet an earnings target even though their unmanaged earnings fall below the target. The manager's decision process to manage earnings to meet an earnings target can be thought of in terms of a signaling game, where the firm's reported EPS relative to an EPS target is a signal of the firm's ability to fulfill its implicit claims. Specifically, firms that meet an earnings target are signaling that they have a higher probability of fulfilling implicit claims than firms not able to meet an earnings target.

According to Gibbons (1992), a signaling game is a dynamic game of incomplete information. "Dynamic" means that players move in sequence (i.e., Player 1 moves, then Player 2 moves), and "incomplete" refers to the fact that not all players have the same information set. In the current setting, there is a continuum of firm types, but to ease the following discussion, I refer to only two types of firms. Type G has a higher probability of fulfilling its implicit claims, and Type B has a lower probability of fulfilling its implicit claims. The manager (Player 1) knows more about the firm's ability to meet its implicit claims with stakeholders than the stakeholder (Player 2) knows and would like to signal to the stakeholder that the firm is of Type G. The manager can signal that the firm has high ability to fulfill implicit claims by reporting earnings above a

⁵ By "financial difficulties," I do not mean to infer that bankruptcy or default on explicit claims is eminent, only that the firm's expectations of future cash flows and profitability are lower than previously estimated, or lower than those of comparable firms.

benchmark but will send the signal only if the expected benefits from stakeholders exceed the costs of sending the signal.⁶

The complete sequence of events in terms of a signaling model is diagrammed in Figure 3. The firm sends a signal by announcing EPS. The stakeholder sees the announcement and compares it to an EPS benchmark to assess the probability that implicit claims will be fulfilled. The stakeholder then can choose one of two actions. If the stakeholder assesses that the probabilities have changed from the preceding period, he/she can modify the terms of trade with the firm. If the stakeholder does not assess any change in the probabilities, he/she need not modify the terms of trade. The firm's expected cash flows increase, decrease, or stay the same, depending on the stakeholders' actions, and the firm value reflects the expected cash flows.

The manager's decision process concerning the meeting of an earnings target is diagrammed in Figure 4. At the end of the accounting period, but before earnings are reported, the manager knows the unmanaged EPS for the period and compares it to an earnings target.⁷ If unmanaged earnings are greater than the target, the manager can report the numbers without managing earnings upward or he/she can manage earnings up

⁶ For a signal to be credible, it is critical that the signal be more costly for Type B firms to send than for Type G. The costs of managing earnings to send the signal and why they are different for Type G firms than Type B firms are discussed in Chapter 4.

⁷ In the discussion that follows, it is assumed that the firm's manager is the decision-maker and knows unmanaged earnings per share with certainty. This may not always be true because unmanaged EPS are usually calculated by the manager's accounting staff, not by the manager him/herself. The staff member may have different objectives from the manager which gives the staff member an incentive to use discretion when reporting the unmanaged EPS to the manager (Demski, 1980). The process by which the decision maker receives and assesses the reliability of the unmanaged earnings per share is beyond the scope of this paper. However, I do not expect that the analysis of how the manager assesses whether to manage earnings to meet the earnings target would be fundamentally different if unmanaged earnings were not known with certainty. The manager would make the decision based on his/her expectation of the true unmanaged earnings given the information available to him/her and his/her aversion to risk.

or down to meet another objective beyond zero EPS or the prior year's EPS⁸. If unmanaged earnings are less than the target, the manager must decide whether it is cost effective to manage earnings upward to meet the target. It is the firms whose managers must choose to manage earnings to meet one of the two earnings targets that form the focal point of this paper.

C. Benefits Hypotheses

I test the above explanation of why firms strive to meet earnings targets in several steps. In the first step, I test whether the expected benefits to the firm from attaining either of the two earnings targets are reflected in firm value. In the next step, I test whether the benefits to the firm from meeting an earnings target are a function of the firm's dependence on implicit claims of stakeholders. In the last step, I test whether firms depending more on implicit claims with stakeholders have a higher probability of managing earnings to meet an earnings target than firms that depend less on implicit claims with stakeholders.

To test whether firm value incorporates the benefits expected from stakeholders when earnings targets are met, I test the stock market reaction around an earnings release date. I predict that the stock market has a more favorable reaction at the earnings announcement date for firms that meet an earnings target than for firms that do not. My first benefits hypothesis is:

HB₁: Abnormal returns around the earnings release date are greater for firms that meet an earnings target than for firms that do not meet an earnings target (ceteris paribus).

⁸ For example, these firms may choose to manage earnings downward to establish reserves that may be used to increase earnings at some later date. The decision process that goes into this choice is beyond the scope of this paper.

My second hypothesis assumes that stakeholders value the reporting of non-negative EPS more highly when it represents an improvement in earnings than when it represents a decline, in other words, when both EPS targets are met simultaneously. I posit that the firms reporting increased EPS and non-negative EPS have a greater improvement in future terms of trade with stakeholders than firms that report an increase in EPS or a non-negative EPS, but not both. The benefits of better terms of trade with stakeholders on future transactions for the former group of firms are reflected in higher market returns.

My second benefits hypothesis is:

HB₂: Returns around the earnings release date are greater for firms that report both non-negative EPS and an increase in EPS over the previous period, than for firms that report only non-negative EPS or an improvement in EPS from the previous period, but not both (*ceteris paribus*).

These two hypotheses are different from hypotheses in previous literature that look at the relationship between abnormal returns and EPS or changes in EPS, because these studies look for a relationship between the magnitude of EPS or the magnitude of the changes in EPS and returns, while I investigate whether the market reacts to meeting or beating an earnings target only, not by how much.

The next step in explaining the benefit from meeting an earnings target is to demonstrate the relation between the benefits (as proxied by the stock market reaction) and the firm's dependence on implicit claims by stakeholders. Tiras et al. (1998) find a positive relationship between a firm's value and its reputation for fulfilling the implicit claims of its customers and employees. My third benefits hypotheses investigates the relation between the change in firm value from an earnings signal and the firm's

dependence on implicit claims of the four stakeholder groups discussed later in this chapter.

HB₃: Abnormal returns for firms that meet an earnings target are positively associated with the extent to which the firm depends on implicit claims with stakeholders (ceteris paribus).

The more the firm depends on a stakeholder group, the greater the value of the expected benefits. Several previous studies have looked at the relevance of stakeholders in management decision processes. Bowen, DuCharme, and Shores (1995) demonstrate that firms are more likely to choose an income increasing accounting method as reliance on stakeholders' implicit claims increases. Holder, Langrehr, and Hexter (1998) demonstrate the importance of implicit claims with stakeholders in the dividend decision by showing that dividend payout ratios are lower for firms that want to preserve liquidity to fulfill implicit claims on the firm. The fourth benefits hypothesis tests whether firms that depend more on implicit claims with stakeholders are more likely to manage earnings to meet earnings targets.

HB₄: Firms that depend more on implicit claims with stakeholders have a higher probability of managing earnings to meet an earnings target than firms that depend less on implicit claims with stakeholders.

In summary, this study uses stakeholder theory to explain the benefits that firms seek by managing earnings to meet an earnings target. I predict that increases in equity value result from meeting an earnings target (HB₁ and HB₂), that these increases depend on the firm's reliance on stakeholder implicit claims (HB₃), and that the likelihood of firms meeting earnings targets depend on the firm's reliance on implicit claims with stakeholders (HB₄).

D. Relevant Stakeholder Groups

Based on methods described by Mitroff (1983), I use a two-step process to identify the set of stakeholders that I consider in this paper: customers, employees, suppliers, and creditors. In the first step, I identify four relationships that the firm has with a broad set of stakeholders and consider the implicit claims of each group. In the second step I examine each stakeholder group to determine which stakeholders feel strongly enough to take actions based on the information contained in a firm's earnings release. These are the stakeholders that are likely to alter their terms of trade with the firm depending on the information contained in the firm's earnings.

The results of step 1 are summarized in Table 1. The four common relationships between stakeholder groups and the firm develop around the firm's products or services, its production processes, its financial requirements, and the community and environment in which it operates.

In step two, I examine each stakeholder group to see if reported EPS provides the stakeholder with information relevant to their assessment of the probabilities that the firm will fulfill their implicit claims on the firm and what actions the stakeholders can take if they lower their probability assessments. It is generally assumed that earnings releases provide information about the firm's future profitability and growth. The stakeholders most interested in these qualities are those whose implicit claims depend on an on-going relationship with the firm and the firm's abilities to meet its financial commitments. The

four stakeholder groups resulting from this evaluation are customers, employees, suppliers, and creditors. These are summarized in Table 2 and are discussed below⁹.

Customers: Products offered by firms run the range from expensive durable products, (e.g. jet planes) to inexpensive non-durable products, (e.g. paper clips). Customers' implicit claims include product value, a steady source of supply, continued service, and an innovative product line that fulfills the present and future needs of the customer. If a firm reports EPS below a target, the customer can interpret this as a signal that the firm will no longer be investing in the research and development that gives rise to the products that will meet the customers' future needs. If customers do not believe that the company is making the necessary investments in future products, they may seek their product requirements elsewhere, or will not be willing to pay as high a price on the existing product line.

Customers of durable products further expect the product to satisfy its immediate specified purpose, to last for an unspecified time into the future, depending on the type of product and its usage, and that service and parts will be available in the future. If a firm reports EPS below zero and/or the prior year's EPS, the durable goods customer may interpret this as evidence that the firm will not be around in the long-run, will not have sufficient funds to have an adequate inventory of spare parts or will not be able to respond quickly to service calls. If a durable goods customer feels that the long-term implicit claims are in jeopardy, they have several choices: they can seek an alternate source, they can demand insurance from the firm to cover the costs of service and parts

⁹ Much of the discussion of the implicit claims and terms of trade for customers, employees, suppliers and creditors is based on the work done by Bowen, DuCharme and Shores (1995).

supplied by alternate sources, or they can demand a lower price at the time of the original sale. All of these alternatives have a negative impact on the firm's expected cash flows.

On the other hand, customers of non-durable products expect the product to perform its immediate specified purpose and have little or no expectations of long-term serviceability or commitments made by the firm. They have fewer implicit claims of future parts availability and are less likely to modify terms of trade if EPS does not meet the targets.

Employees: Employees' implicit claims include a safe and comfortable work environment, wages paid on a timely basis, on-going employment and opportunities for advancement within the organization. Terms of trade with employees include the wages and salaries paid for a particular job and the benefits package the employees receive. If employees receive information that causes them to doubt the timeliness of wage payments or to decrease their expectations for continued employment or advances, they can demand higher wages and benefits for the same job or seek employment elsewhere. Increased wages and benefits decrease expected cash flows; higher turnover has similar effects on the firm's future cash flows since it leads to higher recruiting and training costs.

Suppliers: The implicit claims of suppliers relate to timely payments for supplies and a continuing demand for product or service from the firm. The terms of trade (price charged on supplies, payment terms, the quality of product or service provided, order fulfillment priority, and a continued source of supply for the firm) can be modified by the supplier if the supplier receives information, such as a missed earnings target, that causes

him to lower his probability assessment that these claims will be fulfilled. Increased prices or poorer payment and delivery terms increase the firm's costs of doing business with the supplier and decrease the firm's expected cash flows.

Creditors: The implicit claims of creditors include an on-going relationship with the firm. Terms of trade are reflected in the interest rate charged to the firm and the availability of funds provided to the firm. If a firm misses an earnings target and creditors subsequently increase interest rates or decrease funding, the effect on the firm would be a decrease in its expected cash flows.

A few comments should be made about the stakeholders who were eliminated during Step 2. It is difficult to identify specific terms of trade with a firm for some stakeholders, even though those stakeholders have an influence over the terms of trade with other stakeholder groups. For example, a firm's competitor fits the definition of a stakeholder because it has a claim on the firm through the pricing of competitive products, and those prices can affect the price at which the firm puts on its own products or services, which are the terms of trade with a different stakeholder group, customers. In other words, competitors can influence the terms of trade with a different stakeholder group, customers, even though it does not trade directly with the firm. Since the competitor has no direct transactions with the firm and therefore has no direct terms of trade that can be modified, I exclude them from my list of relevant stakeholders even though they have an influence over the terms of trade with a different stakeholder group.

Regulators, such as the Consumer Protection Agency and OSHA, are interested in the safety of customers and employees. Even though regulators may interpret failure to meet

an earnings target as an increase in the probability that safety codes will be violated in the future, it is not an indication of a violation. Because actions are taken when violations occur, regulators will not impose a fine or require modifications when earnings targets are missed.

Rating agencies and security analysts are both interested in a firm's earnings release, but it is difficult to identify the direct terms of trade with the firm. If a firm misses an earnings target, the rating agencies or analysts may change the ratings on the firm's debt and equity. These changes directly impact the terms of trade with other stakeholder groups, though not with the rating agencies.

Distributors are interested in a relationship with the firm because its customers are interested in the firm's products; if the customer no longer demands the firm's products, the distributor will stop distributing the products. Whether a firm meets the earnings target provides information to the distributor only through the customer's assessment of the firm. Finally, the community in which a firm establishes a presence is an involuntary stakeholder (Tiras, 1998) and is unlikely to take actions against the firm unless the firm breaks the law.

The firm's managers have been excluded from the above discussion of stakeholders even though it has been shown that the firm's managers benefit from the firm's realization of an earnings target (Matsunaga and Park, 1999). I consider the firm's management the decision-maker for the firm and in possession of private information about the firm's

ability to meet stakeholder claims. They are the surrogate for the firm and the sender of the signal, not the receiver¹⁰.

The last significant group that is often considered a stakeholder but is not included in my list is the group of existing stockholders. Existing stockholders are the residual claimant on a firm's operations and benefit from changes in the market value of the firm or a distribution of earnings. Though they may take action by selling their holdings of the firm's stock if a firm misses an earnings target, the effect is on the buyers and sellers of the stock not directly on the firm. If a firm misses an earnings target, stockholders may demand a higher return on future transactions with the firm, but these transactions will occur only if the firm issues additional stock. Because existing stockholders do not have terms of trade with the firm that affect the firm's cost of doing business, I exclude them from my list of stakeholders.¹¹

In summary, the stakeholders that are considered in this paper are the customers, employees, suppliers, and creditors. The implicit claims of each of these groups are similar in that they all depend on the long-term viability of the firm and the ability of the firm to meet its commitments. EPS relative to zero or the previous year's EPS provides each of these stakeholders groups with information that is important for assessing the firm's ability to fulfill implicit claims and is likely to be used by the stakeholders in

¹⁰ This assumption is consistent with the work done on stakeholder theory by Jones (1995) who states "professional managers run the firm and are contracting agents for the firm, and therefore are not considered stakeholders."

¹¹ There are many recent examples of stockholders suing their own companies when earnings management has been exposed or earnings expectations are lowered. Recent examples include Lucent Technologies, Xerox Corporation, Schering-Plough, and Enron to name a few. I do not consider stockholder suits as changes in the terms of trade between the stockholder and the firm because the suits result from additional information, such as the restatement of past earnings, which is not contained in the earnings release.

evaluating the probability that their implicit claims will be fulfilled. The firm benefits from better terms of trade with these stakeholder groups by meeting an earnings target because that sends a signal to the stakeholders that the firm has a high probability of fulfilling its implicit claims.

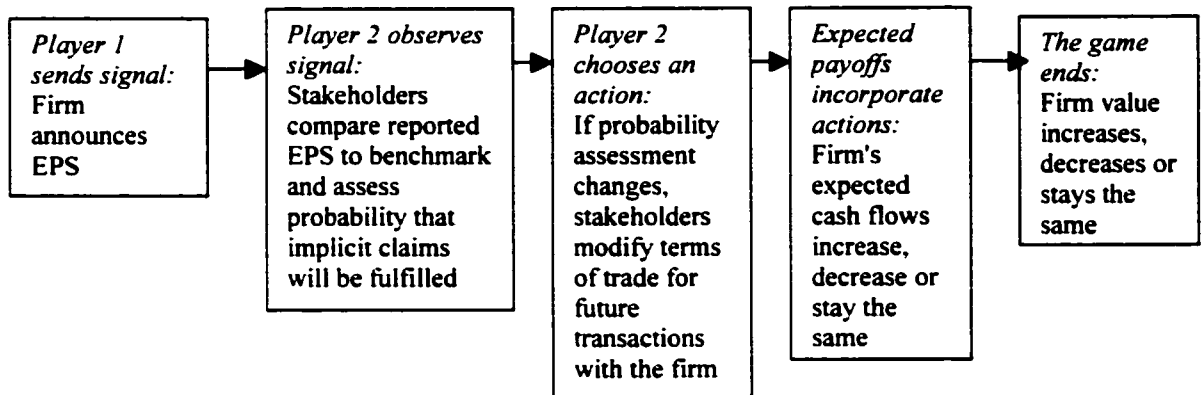


Figure 3 - Sequence of events in terms of a signaling game

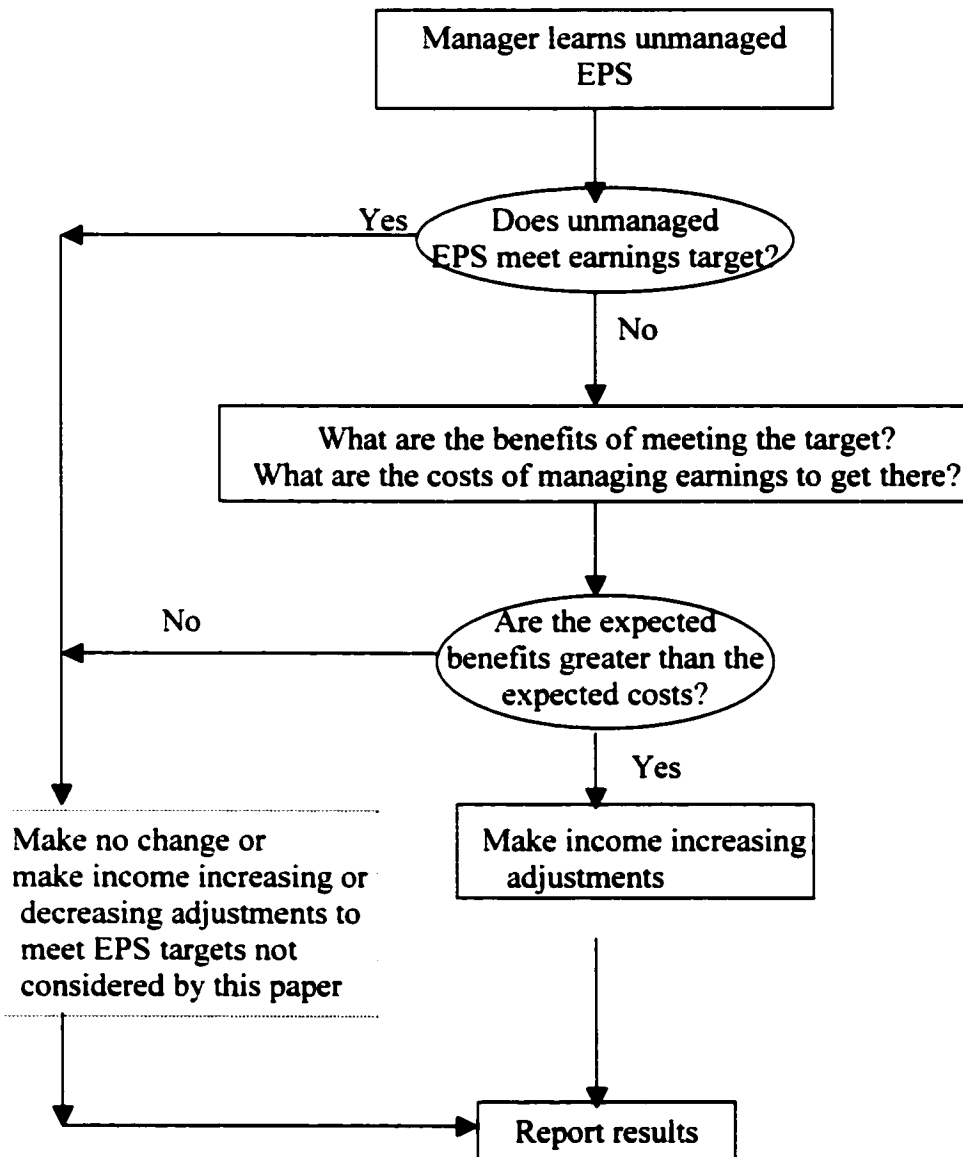


Figure 4 - Manager's decision process

Table 1 - Firm relationships and pertinent stakeholders

Relationships based on:	Stakeholders and Implicit Claims
Products	<p>Customers – product value, steady source of supply, continued service, innovative product line</p> <p>Competitors - firm behaves in manner consistent with prior behaviors and consistent with competitive position in industry</p> <p>Distributors – demand for product remains strong, no delays in shipment</p> <p>Regulators (Consumer Protection Agency) – non-injurious products, non-defective products</p>
Production Resources	<p>Employees – pay commensurate with job, job security, timely payments</p> <p>Suppliers – timely payments, continued relationship with firm</p> <p>Regulators (OSHA) – safe work environment</p>
Financial Resources	<p>Stockholders – good investment, ready market for shares</p> <p>Creditors – continued demand for funds</p> <p>Security analysts and rating agencies – firms readily communicate accurate information</p> <p>Regulators (SEC, FASB) – firm follows appropriate guidelines</p>
Environment	<p>Community – firm provides employment, firm does not pollute, firm contributes to community</p> <p>Regulators (EPA) – firm follows appropriate guidelines</p>

Table 2: Relevant stakeholders, implicit claims, and potential actionsCustomers:

implicit claims	specified product performance, continued supply of innovative products, service and parts availability
terms of trade	price, payment terms, quantity ordered, explicit warranties and contracts
potential actions related to firm's financial condition	seek alternate sources, demand written contracts, lower prices

Employees:

implicit claims	favorable working conditions (clean, safe, pleasant), on-going employment (job security), opportunities for advancement
terms of trade	wages, benefits, hours worked, productivity
potential actions related to firm's financial condition	seek alternate employment, demand for written contracts, demand higher wages and more benefits

Suppliers:

implicit claims	timely payments, continuing demand for product or service
terms of trade	price, payment terms, quality of product or service provided, continued source of supply, order fulfillment priority
potential actions related to firm's financial condition	seek alternate customers, demand higher prices, lower priority of order fulfillment

Creditors:

implicit claims	continuing demand for funds
terms of trade	interest rates, payment terms, quantity of funds supplied
potential actions related to firm's financial condition	limit availability of funds, impose more restrictive debt covenants, increase interest rates

CHAPTER 4: THE COSTS OF MANAGING EARNINGS

A manager's decision to meet an earnings target by managing earnings upward is based on the expected costs of managing earnings as well as the expected benefit. In this chapter, I discuss the costs of managing earnings and present the related hypothesis. I describe how five earnings management tools (bad debt expense, depreciation expense, pension expense, income tax expense and special items) can be used and their effects on the firm's reported income.

A. The Costs of Managing Earnings and Related Hypothesis

A critical element of a signaling model is that the signal is costly and the cost increases with the distance to the signal. In his seminal paper on job signaling, Spence (1973) specifically identified the costs of the job market signal as the time, money and energy required to get an education, but he recognized the role of "less direct costs.... associated with reputation for signaling reliability." In other words, not all the costs associated with a signal can be expressed directly in terms of cash outflows to the signaler at the time the signal is generated; some costs are indirect and relate to the reputation of the signaler. In his signaling model of firm value, Hughes (1986) uses this concept of indirect costs. The signal the firm sends is a disclosure of expected cash flows. The benefit the firm seeks is an increase in firm value, but the cost of the signal is an ex post penalty imposed on the firm if the subsequent cash flows are less than those disclosed. According to Hughes, the firm pre-commits to pay a penalty for a poor outcome.

In the model of stock splits developed by Brennan and Copeland (1988), managers announce a stock split as a signal about the future prospects of the firm. Doran (1994 and 1995) suggests that the associated cost of stock split announcements is a "diminution of [the firm's] future ability to signal." In other words, the cost of the signal is the potential lost credibility of future signals if the first signal is found to be false. Dye (1988) identifies one of the costs of managing earnings as the lost credibility of future reported earnings. I suggest that the costs of managing earnings to meet an earnings target are a combination of lost credibility, as suggested by Dye and Doran, and a penalty, as suggested by Hughes.

Signals can be revealed as false in three ways: future earnings targets are missed, the firm takes a charge to re-establish the relationship between certain balance sheet and/or income statement accounts deemed appropriate by users of its financial statements,¹² or the firm restates past earnings. If it is revealed that a firm has met an earnings target by managing earnings, stakeholders are likely to discount future signals, impose a penalty (e.g. increase the scrutiny of the firm's subsequent financial statements or file a law suit against the firm), and lower terms of trade to levels at or below those that would have been in place had the firm originally missed the earnings target.

Firm managers faced with the decision to manage earnings to meet an earnings target weigh the expected benefits¹³ against the expected costs. The expected costs depend on the costs mentioned above and the probability that the earnings management will be

¹² The relationship between accounts is a judgement made by users of financial statements and does not involve the application of specific rules. Such users include, but are not limited to, auditors, shareholders, security analysts and rating agencies.

¹³ See Chapter 3.

revealed. If it is revealed that the firm met an earnings target by managing earnings, it is the same as the revelation that the signal was false. To estimate the expected cost of managing earnings, the manager must evaluate the probability that the earnings management will be revealed for each of the earnings management tools available.

I posit that the probability that a signal will be revealed as false is directly proportional to the firm's "capacity" to manage earnings before earnings are reported. I define capacity as the firm's ability to use one of five earnings management tools without causing the firm to miss a future earnings target, requiring the firm to take a future charge to reinstate acceptable relationships among associated balance sheet accounts and income statement accounts, or restating previous earnings. The more capacity a firm has in the current period, the more likely the firm will have capacity in the future for managing future reported earnings, even if earnings are managed in the current period, and the less likely the firm will need to reverse the current earnings management at a later date. Furthermore, the more capacity a firm has, the less likely an in-depth review of a firm's financial statements will reveal the inappropriateness of certain balances. As capacity increases, the probability of earnings management being revealed in the future decreases and the expected costs of managing earnings decrease.

I make the following prediction in my cost hypotheses:

HC: Firms that have a greater capacity to manage earnings to meet an earnings target are more likely to meet an earnings target than firms that have less capacity to manage earnings before earnings are reported (*ceteris paribus*).

For a signaling model to be appropriate, it is important that Type B firms have a higher expected signaling cost than Type G firms. In other words, Type B firms have a

lower capacity to manage earnings than Type G firms and therefore a greater probability that earnings management will be revealed in the future.

An indicator of a firm's capacity to manage earnings is in the relationship between an asset¹⁴ and its related liability or contra-account (e.g. gross accounts receivable and allowance for doubtful accounts). Generally accepted accounting principles provide guidelines for measuring many of these items, but as with any guideline, flexibility in its application remains. This flexibility is designed so that management can use its private information in such a way that financial statements are more informative than if no flexibility was allowed. For instance, "accounts receivable are reported in the financial statement at net realizable. Net realizable value is equal to the gross amount of receivables less an estimated allowance for uncollectible accounts" (Miller GAAP Guide, 1996. p9.10). Management uses its private information to estimate how much of gross receivables are collectible and how much are uncollectible in such a way that the reported net receivable is a fair presentation of the future realizable value. Not only does management have flexibility in estimating the amount of any related liability or contra account, there remains flexibility in measuring the value of an asset. For example, "under specific circumstances, [property, plant, and equipment] may be valued at ... historical cost..., replacement cost..., fair market value... [or] present value.... (Miller GAAP Guide, 1996. p11.05). The types of estimates and judgments allowed will be discussed later in this chapter for each of five earnings management tools.

¹⁴ In the following discussion, I do not define net assets in the accounting sense, but define it as the relationship between something that produces future cash flows and a related liability or contra-account. Under this assumption, employees are considered assets, and the net asset is dependent on the relationship between employees and the firm's pension benefit obligation.

While flexibility is allowed, there is generally a reasonable range, outside of which auditors and other users of financial statements are likely to infer that earnings management is occurring. If the relationship is such that the reported asset value compared to its related liability or contra-account is outside a reasonable range, the firm is said to have no capacity to manage earnings.¹⁵ On the other hand, if a firm can make an earnings management adjustment without causing the users of financial statements to question the relationship, the firm is said to have capacity to manage earnings.

Within the context of the signaling model discussed above, Type G firms are firms with a higher probability of meeting the implicit claims of stakeholders and have a higher capacity to manage earnings. Both of these result from sound economic performance and conservative accounting practices.

Type B firms are firms that have a lower probability of meeting the implicit claims of stakeholders and have a lower capacity to manage earnings. There are two reasons that Type B firms would have a lower capacity to manage earnings. The firm has used earnings management in the past to meet earnings targets and hide deteriorating economic performance. As noted above, generally accepted accounting principles allow flexibility in financial reporting, but only up to the limits, which the users of the financial statements define as reasonable. Type B firms that have experienced declining economic performance may have reached the user defined boundaries and no longer have capacity to manage earnings.

¹⁵ As stated in footnote 12, the relationship between accounts is a judgment call made by the users of financial statements. To make their assessment of the relationship, users make comparisons to the firm's historical statements, other firms in the same industry, or some other benchmark.

A second reason is that the users of financial statements, particularly the auditors, anticipate a decline in economic performance and would disallow any income increasing earnings management adjustments on the grounds that the relationship between the assets and their related liability or contra-account would be misleading. In fact, these firms may be required to make income-decreasing adjustments to maintain acceptable relationships in the future.¹⁶

To test HC, I segregate Type B firms and Type G firms based on whether they managed earnings to meet an earnings target or whether they did not manage earnings and missed an earnings target. I then compare the capacity of firms that met the earnings target (Type G firms) to those that that did not meet the earnings target (Type B firms). As discussed in Chapter 5, this segregation of Type G firms from Type B firms is subject to error and will miss-classify some Type G firms as Type B firms and vice versa.

The appropriate relationship between an asset and its related liability or contra account is a judgement call and is monitored by a firm's auditors and other users of financial statements. If this relationship becomes distorted in their judgement, the firm will be required to take a charge to income to re-instate the "proper" relationship; such a charge will reveal that the past earnings signal was false and/or will lower the probability that the firm will meet its next earnings target.

¹⁶ As an example, consider a firm that has a large receivable balance with another firm that has declared bankruptcy. The lower expected cash flows from this receivable will decrease the firm's ability to meet the implicit claims of its stakeholders, and the relationship between the gross receivable and its allowance for doubtful accounts does not reflect the potential write-off of this account. The firm may be required by its auditors to increase the bad debt expense, which lowers reported income, to better reflect the expected default of this account.

B. Earnings Management Tools

There are two categories of earnings management which include "a broad set of actions which affect earnings, ranging from 'real' actions to pure 'bookkeeping' actions, which affect only the accounting measures of earnings" (Burgstahler, 1998). I limit my discussion of earnings management tools to those that can be implemented after the end of the accounting period when unmanaged earnings for the period are known but before they are reported to the public (See Figure 4). My discussion therefore concentrates on "bookkeeping" actions and excludes "real" actions since real actions cannot be put into place after the end of the accounting period.

I also limit my discussion to earnings management tools that cannot be identified easily on the firm's income statement or balance sheet. If an earnings management tool is easy to detect, the users of financial information are able to unwind the effect to calculate unmanaged earnings. Stakeholders would then make their probability assessments based on unmanaged earnings, and the original incentive for managing earnings to meet an earnings target is lost. Stakeholder terms of trade for future transactions with the firm would then be based on the unmanaged EPS, and the expected benefits from improved terms of trade would not be generated.¹⁷

Bookkeeping adjustments to manage earnings are possible because publicly traded companies use accrual accounting in the preparation of their financial statements.

¹⁷ The Wall Street Journal (10/29/99) reports several instances where the stock market discounted reported earnings, even though earnings targets were met. American Express stock suffered when reported earnings included \$80 million from "gain-on-sale" of credit-card loans. Pitney Bowes shares also lost value when it became apparent that current earnings targets had been met by beneficial changes in the effective tax rate. This provides anecdotal evidence that investors discount the information contained in an earnings release when the reported earnings include identifiable evidence of earnings management.

Accrual accounting modifies the timing of an expense or revenue item relative to cash flows in an attempt to better reflect the economic impact of a business event (Harrison and Horngren, 1998). Since accruals are based on estimates, which can be changed by the finance/accounting department after the end of the accounting period but before earnings are released and are not explicitly stated in the financial statements, changes in accruals are potential tools for managing earnings. Common accruals include bad debt expense, pension expense, depreciation expense and income tax expense. A final earnings management tool that is considered here is the reversal of reserves previously established by the firm for a special purpose. Each tool is discussed below.

Bad Debt Expense: Bad debt expense is a "cost to the seller of extending credit [and] arises from the failure to collect from credit customers." (Harrison and Horngren, 1998) and is reported on the firm's income statement. In the absence of earnings management, the firm uses the bad debt expense to adjust the allowance for uncollectible accounts so that the net receivable balance reported on the balance sheet is a fair reflection of expected future cash receipts.

There are two common procedures for estimating bad debt expense: directly as a percentage of sales in the given period or indirectly by maintaining a target percent relationship between the gross and net receivable balances at the end of the period. A decrease in the percentage estimate lowers the bad debt expense and increases reported income in the current period. If the firm decreases its bad debt expense relative to sales or accounts receivable in the current period, the firm is effectively decreasing its capacity to use the bad debt expense to manage earnings in the future. If the bad debt expense or

the allowance for uncollectible accounts decrease below a level that the users of the financial statements deem to be acceptable, the firm may need to increase the expense in the future to reinstate the desired relationships. This increases the probability that future earnings targets will be missed.

Depreciation Expense: Depreciation expense is designed to match the costs of acquiring an asset to the productive life of the asset and "is one of the larger accruals over which managers exercise discretion" (Keating and Zimmerman, 1979). Its calculation requires estimates of the productive life and the salvage value for capital assets. If the estimated productive life is extended beyond the actual productive life of the asset or the salvage value is overestimated the firm will have to write off the remaining net book value at the end of the asset's productive life. The effect is to increase income during the asset's productive life and decrease income when the asset's productive life ends.

Pension Expense: The calculation of pension expense is governed by SFAS 87 (Employer's Accounting for Pensions), which was issued in 1985 to replace ABP No. 8. The stated objective of SFAS 87 is to "recognize the compensation cost of an employee's pension benefit over the employee's approximate service period" (SFAS 87). Though this was the intent of the FASB, one of the unforeseen effects was to increase the opportunity to use pension expense to manage earnings (Ali and Kumar, 1992). Brown (2000) provides evidence consistent with firms using pension expense to manage earnings by documenting that firms choose income increasing and pension obligation reducing pension expense estimates when they are highly leveraged or have low profitability.

Under SFAS 87, there are four major components to the calculation of pension expense. The first is service cost, which is the present value of the Projected Benefit Obligation (PBO) that is attributable to the current period. The PBO is a function of the number of employees, the average length of time of their service, income levels and expected salary increases. Changes to any of these assumptions have an impact on this portion of pension expense. For example, in 1998, Exxon estimated the long-term average salary increase for U.S. employees to be 4.0%, but in 1999 they estimated the long-term average salary increase to be 3.5%. A decrease in the expected salary increase reduces the amount of the reported pension expense.

The second component of pension expense is also driven by the PBO and is equal to the increase in the obligation attributed to the passage of time. It is called the interest cost and is calculated by multiplying the related PBO by the discount rate used to calculate the present value of the PBO. It is difficult to determine whether an increase in the discount rate will have a positive or negative effect on pension expense because increases in the discount rate will decrease the service cost but increase the interest cost at the same time. The net impact depends on the relative size of the PBO at the beginning of the period compared to the amount of the service cost for the current period.

The third component of pension expense is the Expected Return on Plan Assets (ERPA), which is the estimated interest income from the plan's portfolio of investments and has the effect of partially offsetting the service and interest costs discussed above. Under SFAS 87, the rate used to calculate the income is equal to the expected return¹⁸ on

¹⁸ This was changed under SFAS 135, (1999), which now requires that firms use the actual rate of return to calculate the return on the plan's assets.

the assets and is not the same as the discount rate used above. For example, in 1999, Exxon reported a discount rate of 7.75% to calculate the 1999 service and interest costs but used 9.5% as the ERPA. Estimated increases in this rate reduce current pension expense. Amir and Benartzi (1997) report that firms in their test sample overstate the expected return, which understates pension expense and overstates net income.

The fourth component of pension expense is the amortization of the costs associated with employees' service before the pension plan was introduced, changes in the pension plan assumptions and the difference between the actual return and the estimated return on plan assets. Amortization is only required if the total of the above changes or differences is 10% greater than the beginning of the period's PBO or plan assets. Changes within the corridor are recognized as a component of the current period's pension expense calculation. Firms can use retroactive changes to a pension plan, changes in assumptions about employees' life expectancies, employment or salary expectations, or changes to the discount rate or return on planned assets to manage earnings.

Tax Expense: The calculation of income tax expense is governed by SFAS 109 (1992) and is done in three steps¹⁹: the calculation of income taxes payable for the current period, the calculation of the change in deferred tax liabilities (assets) for the current period and the difference between these two amounts, which is the income tax expense reported on the firm's income statement. Deferred tax assets and liabilities contain the effects of operating loss and other carry forwards, a valuation allowance, timing differences between the financial books and the tax statements, and bases differences between the financial and tax books.

Earnings management affects reported taxes in two ways. In the first way reported income taxes increase by the tax rate times the amount expenses are decreased using the other earnings management tools. This affect partially offsets the impact of the other tools on EPS. In the second way reported taxes are managed directly through changes to the estimates used to calculate deferred taxes. One such estimate that has received a lot of attention recently is the valuation allowance.²⁰ Decreases in the valuation allowance will have decrease taxes and therefore increase reported net income.

Many of the early research studies of earnings management and income taxes studied firms that shifted taxable income between periods to reduce income taxes payable.²¹ Only recently has research looked at how modifications to income tax expense reported on a firm's financial statements affects reported income. There is evidence that firms forego income tax savings to smooth earnings and lower debt-related costs (Hunt, Moyer and Shevlin, 1996) and that firms manage the effective tax rate to report an increase in reported earnings (Myers and Skinner, 1999).

Reversal of Previously Established Reserves: The use of special reserves is different from the other earnings management tools discussed above. Bad debt expense, depreciation expense, pension expense and income tax expense result from normal operating activities and appear regularly on a firm's financial statements. To use these tools to manage earnings the firm makes adjustments to accrual levels that are considered

¹⁹ See Spiceland, Sepe, Tomassini (2001), p. 732.

²⁰ See Bauman, Bauman and Halsey (2001) for a discussion of the literature in this area.

²¹ See Boyton, Dobbins, and Plesko (1992), Scholes, Wilson and Wolfson (1992), Guenther (1994) and Maydew (1997).

normal for the firm; any offsetting negative impact on earnings occurs subsequent to the period when earnings are being managed upward.

On the other hand, the special reserves are established through an accounting entry that is not considered usual for the firm or it occurs infrequently. Furthermore, the negative impact on earnings occurs when the special reserve is established and therefore precedes the positive impact when amounts from that reserve are released to earnings. At the time the reserve is established the firm recognizes a negative amount²² (APB No. 30, paragraph 26) which decreases income, but *subsequent* income is positively impacted when the reserve is used to offset expenses that otherwise would be included in the firm's income calculation. Even though FASB requires that the amount of and reason for the amount be disclosed by the firm at the time that the firm establishes the reserve, there is no such requirement when the reserve is used to offset expenses. The amount of the reserve used and the timing of its use are not disclosed separately in the firm's financial statements. Since the use of the reserve is not easily identified on a firm's financial statements, can be implemented after the close of the accounting period and falls within GAAP, it fits the definition of an earnings management tool.

Many of these reserves are established to account for plant closings, employee terminations, and other costs associated with restructuring, but the "aim of many of today's giant write-offs is to front load expenses," (Business Week, 10/5/98). In 1996, Lucent Technologies established a \$2.8 billion restructuring reserve. According to

²² Income increasing unusual or infrequently occurring amounts have been excluded as an earnings management tool because a sample of footnotes for firms reporting income increasing special items revealed that these items result from operating activities such as the sale of assets, divestiture of product

Business Week (10/5/98), Lucent overstated the reserve by \$382 million, which they were able to reverse back into income over three years, thus, giving subsequent income a "big boost." Since the reversal of these reserves is rarely separately disclosed on the firm's income statement, the user of financial statements may not be cognizant of when or how these reserves are actually utilized. "The user of the [financial statements] may ... disregard the [special] provision in the year in which it is charged (on the grounds that it is a one-off item that does not reflect the underlying performance of the company) and fail to appreciate that it has misleadingly enhanced the results of subsequent years," (Callaway, 1997). The reversal of the reserve is different from other earnings management tools because the negative impact on earnings precedes the positive impact.

In summary, firms must consider the expected costs of managing earnings to meet an earnings target as well as the expected benefits from meeting the target. The costs include lost credibility and imposed penalties, if the firm's signal is revealed as false. The probability that a firm's signal is revealed as false is inversely proportional to the firm's capacity to manage earnings. As capacity increases, the firm has more flexibility to manage current earnings without increasing the probability that future earnings target will be missed, the firm will have to restate past earnings or recognize an additional expense to re-establish an expected relationship between accounts. Bad debt expense, depreciation expense, pension expense, tax expense and the release of special reserves are five earnings management tools considered. Proxies for each of these are discussed in the next chapter.

lines that are not considered discontinued operations, or the settlement of litigation related to the firm's business.

CHAPTER 5: METHODOLOGY

This chapter is divided into three sections. In the first section I discuss the sample selection process. In the second section, I discuss the tests of the first three benefit hypotheses and the related proxies. In the third section, I discuss the fourth benefit hypothesis in conjunction with the cost hypothesis and the proxies for measuring the costs of managing earnings.

A. Sample Selection

Conceptually, firms can be segregated into four categories as shown below:

	Firms that meet an earnings target	Firms that do not meet an earnings target
Firms that manage earnings	A	B
Firms that do not manage earnings	C	D

Since the major focus of this paper is to examine the benefits of meeting targets compared to the costs of managing earnings to meet those targets, I am interested in comparing the costs and benefits of firms that manage earnings to meet an earnings target (cell A) to firms that do not manage earnings and subsequently miss an earnings target (cell D). The firms in the former category find it cost effective to manage earnings, while the firms in the latter category do not.

It is easy to separate firm-year observations into “meet” and “do not meet” categories because reported EPS and the changes in reported EPS are easily observed and the two targets, zero reported EPS and the previous year's reported EPS, are easily identified for

each firm. On the other hand, it is more difficult to distinguish firms that manage earnings from firms that do not manage earnings because earnings management is not directly observable.

I look at the frequency distribution for firms reporting earnings around a particular earnings target and assume that the frequency distribution of earnings would be a smooth distribution in the absence of earnings management. If more firms than expected for a smooth distribution appear in a small interval above an earnings target, I assume that more of these firms have managed earnings to attain that particular earnings level than in other intervals in the distribution. This technique does not assume that earnings management does not occur in other intervals; it just assumes that a greater proportion of firms manage earnings in the intervals where the frequency is greater than expected. This reasoning is extended to infer that if there are fewer firms below a target than expected, then firms have managed earnings to attain earnings levels outside of this interval and a smaller proportion of the remaining firms have managed earnings than in other intervals of the distribution.

Following this line of reasoning, I use firms reporting EPS and changes in EPS at or just above zero as my sample of firms that manage earnings to meet either zero EPS or the previous year's EPS targets. (The exact cutoffs are addressed in Chapter 6, Results.) I assume these firms appear in cell A. I use firms in the intervals just below each of the earnings targets as my sample of firms that do not manage earnings and do not meet the

target. I assume these firms appear in cell D. I test the cost and benefit hypotheses by comparing firms in cell A to firms in cell D.²³

This categorization is not perfect. Some firms in the intervals just above an earnings target may not have managed earnings and some firms just below an earnings target may have managed earnings. Nevertheless, I expect that there is a greater proportion of earnings management firms in the interval just above an earnings target and refer to these firms as my "earnings management sample." In addition, I expect that there is a smaller proportion of earnings management firms in the interval just below a target than in other intervals of the distribution and refer to these firms as my "non-earnings management sample." The fact that both samples contain firms of both types goes against finding support for my hypotheses.

The sample selection process is diagramed in Figure 5, Panels A and B. Firms' EPS and changes in EPS can be plotted on a Cartesian plane where the x-axis is EPS and the y-axis is changes in EPS, as in Panel A. Firms reporting EPS and changes in EPS greater than or equal to zero appear in quadrant I. I define a dummy variable, *MeetBoth*, to identify these firms since they meet both earnings targets simultaneously. Firms reporting EPS below zero and changes in EPS greater than or equal to zero appear in quadrant II. I define a dummy variable, *MeetPrYr*, to identify these firms. Firms reporting EPS and changes in EPS below zero appear in quadrant III. I define a dummy

²³ I do not make any comparisons of cell A to cell C, which would be comparing firms that have managed earnings to meet the target to firms that did not manage earnings but still meet the target. Firms that do not manage earnings and still meet the target are not a central focus of this paper because they do not go through the decision process described in Chapter 3. Furthermore, I do not compare firms in cell B (firms that manage earnings and do not meet an earnings target) to firms in cell D (firms that do not manage and do not meet the earnings target) because the firms in cell B may be managing earnings to meet a target different than the two considered by this paper (such as budgetary goals, compensation targets, etc.).

variable, *MeetNeit*, to identify these firms which do not meet either target. Firms reporting EPS greater than or equal to zero and changes in EPS below zero appear in quadrant IV. I define a dummy variable, *MeetZero*, to identify these firms.

The two shaded bands around the two axes represent firms in close proximity to the two targets. The vertical band around the y-axis includes firms reporting EPS slightly above and slightly below zero; changes in EPS for these firms can run for well below zero to well above zero. The horizontal band around the x-axis represents reporting EPS slightly above or slightly below the prior year. in other words, changes in EPS slightly above zero or slightly below zero. EPS for these firms can run from well below zero to well above zero.

In Panel B, the sample selection process is diagramed using Venn diagrams. The sample of firms in close proximity to zero EPS and zero changes in EPS is represented by the enclosed area. The dotted circle represents firms reporting EPS at or just above zero EPS and the dashed circle represents firms reporting changes in EPS at or just above zero. The intersection of the two circles defines firms that meet both targets simultaneously and is represented by the dummy variable, *MeetBoth*. Firms included in the dotted circle but not in the intersection of the two circles are firms that report EPS greater than or equal to zero but below the prior year. These firms are represented by the dummy variable, *MeetZero*. Firms included in the dashed circle and not in the intersection are firms reporting EPS greater than or equal to the prior year but below zero. These firms are identified by the dummy variable *MeetPrYr*. Firms that are excluded

from both circles are firms that have met neither target and are identified by the dummy variable, *MeetNeit*.

The hypotheses are tested under three scenarios:

- Scenario 1 (Meet Either Target) - This scenario looks at the firms in the shaded area on Figure 5, Panel A, or the union of *MeetZero* and *MeetPrYr* compared to its complement in Figure 5, Panel B. Tests compare firms that manage earnings to meet either target to firms that do not manage earnings and miss both targets.
- Scenario 2 (Meet Zero Target) - This scenario looks at firms around the zero EPS target and compares firms meeting the zero EPS target to those firms reporting EPS just below zero. These firms are in the vertical shaded area on Panel A.
- Scenario 3 (Meet Prior Year's EPS Target) - This scenario looks at firms around zero changes in EPS and compares firms meeting the zero changes in EPS target to those firms reporting EPS changes just below zero. These firms appear in the horizontal shaded area on Panel A.

B. Tests of First Three Benefits Hypotheses and Related Proxies

HB₁ and HB₂: HB_1 and HB_2 are tested together. The first benefits hypothesis predicts that abnormal returns at the earnings announcement are greater for firms meeting an earnings target than for firms not meeting an earnings target. The second benefits hypothesis predicts that firms meeting both EPS targets simultaneously have a higher abnormal return than firms meeting only one EPS target.

To test these hypotheses, I regress returns on the four dummy variables discussed above, *MeetNeit*, *MeetZero*, *MeetPrYr* and *MeetBoth*, and one control variable, *Surprise*, as shown in the following regression:

$$AbnRet = \alpha_1 MeetNeit + \alpha_2 MeetZero + \alpha_3 MeetPrYr + \alpha_4 MeetBoth + \alpha_5 Surprise + \varepsilon \quad (1)$$

Each of the variables is described below.

There are two choices that must be made when developing the measure of abnormal return (*AbnRet*): over what window should the return be measured and what is the baseline return for determining the abnormal return. I rely on the work by Bernard, Thomas and Whalen (1997), LaProta, Lakonshok, Schliefer, and Vishney (1997), and Pitroski (2001) to choose a three-day window, from one day before an earnings release to one day after the earnings release (from -1 day to +1 day). I use the fourth quarter report date as reported by Compustat in the quarterly earnings file for the date of the annual earnings release.^{24, 25} This assumes that firms announce fourth quarter and annual earnings at the same time.

To reduce the possibility that my results are due to the choice of the baseline for defining abnormal returns, I measure abnormal return in two ways: using the value weighted CRSP index as the baseline and using the return on the size-matched CRSP

²⁴ According to a consultant at Compustat, the announcement day is the day Compustat gets the data and may not be the exact date when earnings are published in the Wall Street Journal. Furthermore, the date reported in Compustat may not be a trading day. If the Compustat date is a non-trading day, I adjust the announcement date to reflect the next available trading day. Since, Compustat does not give the time of the announcement it is possible for some firms to announce in the morning, other firms to announce in the afternoon, and yet other firms to announce after the close of the trading day. I consider one day after the first trading day to allow at least 24 hours of trading for all firms.

²⁵ Skinner and Sloan (1995) caution that a short window before the announcement date may preclude the effect on returns for bad news firms since many bad-news firms pre-announce during the two weeks

decile portfolio as the baseline. The abnormal return is calculated by taking the difference between the return for the firm and the baseline and summing over the return window.

The variables of interest, *MeetNeit*, *MeetZero*, *MeetPrYr* and *MeetBoth* are dummy variables and are set equal to one as discussed above and 0 otherwise. I predict that the coefficients on *MeetZero* and *MeetPrYr* are positive in support of HB₁ and that the coefficient on *MeetBoth* is positive in support of HB₂. I expect that the sign on *MeetNeit* is zero or negative indicating that the market has no reaction or a negative reaction to firms that miss both targets.

Surprise, which is calculated by subtracting market expectations for EPS from reported EPS, is included to control for the well-known and widely studied relation between returns and unexpected earnings.²⁶ I measure market expectations in two ways: using the firm's previous year's reported EPS and using the latest consensus analysts' forecast from First Call. Analysts' forecasts are considered a better proxy of market expectations but result in a significant reduction in sample size since they are not available for all the firms in my sample. Based on the previous research, I expect that the sign on the coefficient of *Surprise* to be positive, reflecting that the market positively prices good news and negatively prices bad news.²⁷

preceding the announcement date. As a sensitivity, I test the HB₁ through HB₃ with a 12-day window from ten days before the Compustat date to one day after.

²⁶ See Brown (1997) for a review of the literature in this area.

²⁷ Depending on which measure of *Surprise* is used, *Surprise* will take on a secondary meaning not expressly considered in this paper. When *Surprise* is calculated using prior year's earnings as the proxy for the market's EPS expectations, *Surprise* becomes a measure of by how much the firm met or missed the *MeetPrYr* earnings target. When the consensus analyst's forecast is used as the proxy for the market's EPS expectations, *Surprise* takes on two meanings: whether a firm met a third earnings target, analyst's

Test of HB₃: The third benefits hypothesis predicts that the abnormal returns for firms meeting earnings targets are positively related to the firm's dependence on the implicit claims of stakeholders. I consider the importance of four stakeholder groups: customers of durable goods, employees, suppliers, and creditors.

To test HB₃, I regress abnormal returns on the dummy variables discussed above, *Surprise* and the interaction between the dummy variables and the proxies for the firm's dependence on the implicit claims of the four stakeholder groups. The regression is shown in equation (2) where *MeetTar* is replaced by *MeetZero*, *MeetPrYr*, or *MeetBoth*, depending on the scenario, and *N* is the number of implicit claims proxies:

$$AbnRet = \alpha_0 + \alpha_1 MeetTar + \alpha_2 Surprise + \sum_{j=1}^N \alpha_{j+2} MeetTar * Stakeholder_j + \varepsilon \quad (2)$$

All the proxies for the firm's dependence on the implicit claims of stakeholders, with the exception of the proxy for a firm's dependence on the implicit claims of employees, are based on the work done by Bowen, DuCharme and Shores (1995). I use income statement and balance sheet variables before the year of interest to develop the proxies for a firm's dependence on the implicit claims of the various stakeholder groups. Since these variables are subject to year to year fluctuations reflecting changes in the firm's operations or choices made by its management, I average the variables over the three years preceding the year of interest. I then scale the averages by the firm's assets before the year of interest to control for size effects.

I establish two proxies for the firm's dependence on the implicit claims of customers. I include a variable, *R&D*, as an indicator of the firm's dependence on the implicit claims

forecasts, and by how much they met or missed the analyst's forecast. This later interpretation will be

of customers seeking product innovation and set it equal to the average of the firm's R&D expenses over the prior three years scaled by the firm's assets.

The proxy for a firm's dependence on the implicit claims of durable goods customers is a dummy variable, *Dummy*, set equal to one if the firm's SIC code indicates that the firm sells a durable product. The relevant SIC codes are listed in Table 3. Since this proxy is not a continuous variable and does not depend on the firm's income statement or balance sheet it is not subject to the averaging and the scaling discussed above.

I assume that the dependence on the implicit claims of employees is more important in labor intensive firms compared to capital intensive firms. To measure the relative importance of employees and capital equipment in the firm's production function, I calculate the ratio of the three year average number of employees to the three year average of gross property, plant and equipment for the end of the period before the period of interest. The higher the ratio, the greater the dependence on the implicit claims of employees.²⁸

The proxy for suppliers is also based on the work by Bowen, DuCharme and Shores (1995). To proxy for the firm's dependence on the implicit claims of suppliers I use "purchases" which I calculate by summing the cost of goods sold and the change in inventory and averaging over three years. This calculation works well for non-manufacturing firms, but the cost of goods sold and changes in inventory for

discussed again in Chapter 6.

²⁸ Bowen, DuCharme and Shores (1995) define *Labor* as $1 - (\text{Gross Property, Plant and Equipment} / \text{Firm Size})$. My measure gets directly at the relative importance of the implicit claims of employees and capital equipment in a firm's production function. I recognize that this is a rough proxy for the firm's dependence on the implicit claims of employees because it places capital intensive firms with a skilled workforce as firms with a low dependence on the implicit claims of employees when the reverse may be true. It also

manufacturers include labor and overhead costs in addition to supplier costs. Because the resulting variable for manufacturing firms includes other costs besides suppliers' costs (such as labor and overhead), I expect it to be a noisier proxy for these firms' dependence on the implicit claims of suppliers than for non-manufacturing firms. To distinguish between manufacturers and non-manufacturers, two dummy variables are created ($Dummy_{Man}$ and $Dummy_{Non}$ ²⁹) and multiplied by the sum of the firm's cost of goods sold ($COGS$) and change in inventory ($\Delta Invent$). I call the two resulting variables $Suppliers_{Man}$ and $Suppliers_{Non}$. I predict that the coefficient on both proxies to be positive reflecting that the abnormal return is greater for firms with a greater dependence on the implicit claims of suppliers.

My proxy for the firm's dependence on the implicit claims of creditors is Notes Payable plus long-term debt scaled by assets ($Creditors$). The greater the value, the more the firm depends on the implicit claims creditors. Lastly, advertising (Adv) is used to proxy for the firm's dependence on the implicit claims of all stakeholders since it reflects "a form of firm-specific investment that is likely to be used by firms to build and protect their reputations" (Bowen, DuCharme and Shores, 1995). The more the firm invests in advertising, the more the firm's reputation is important for all stakeholder groups.

The seven stakeholder proxies are summarized in Table 4. If R&D and advertising expense data are not available for a specific firm-year observation, I set the value equal to zero. The final equation to test HB_3 is:

places labor intensive firms with an unskilled workforce as firms with a high dependence on the implicit claims of employees, which may not be true. Such mischaracterization goes against finding results.

$$\begin{aligned}
AbnRet = & \alpha_0 + \alpha_1 MeetTar + \alpha_2 Surprise + \alpha_3 MeetTar * Durable + \\
& \alpha_4 MeetTar * R\&D + \alpha_5 MeetTar * Labor + \alpha_6 MeetTar * Supp_{Man} + \\
& \alpha_7 MeetTar * Supp_{Non} + \alpha_8 MeetTar * Creditors + \alpha_9 MeetTar * Advertising + \varepsilon \quad (3)
\end{aligned}$$

As in equation (2), *MeetTar* is equivalent to *MeetZero*, *MeetPrYr* or *MeetBoth*, depending on the scenario chosen.

C. Tests of H_{B4} and H_C :

The final two hypotheses combine the expected benefits from the terms of trade with various stakeholder groups and the expected costs of managing earnings to predict the likelihood that a firm manages earnings to meet an earnings target. I expect that the probability of a firm managing earnings to meet an earnings target increases with the expected benefits from stakeholders and decreases with the expected costs of managing earnings to meet an earnings target. This relationship is shown in equation (4) and will be tested using logit:

$$\text{prob}(MeetTar) = E[\text{Benefits from Stakeholders}] - E[\text{Costs of Managing Earnings to meet an Earnings Target}] \quad (4)$$

Again, *MeetTar* is equivalent to *MeetZero*, *MeetPrYr* or *MeetBoth*, depending on the scenario chosen.

As discussed earlier, the cost associated with each of the earnings management tools is inversely proportional to the capacity to use that particular earnings management tool. Substituting the proxies for a firm's dependence on implicit claims with stakeholders for the expected benefits and the proxies for a firm's capacity to manage earnings for the expected costs, equation (4) becomes:

²⁹ *Dummy_{Man}* is set equal to one for firms with SIC codes between 3000 and 4000, indicating that these firms are manufacturing firms and 0 otherwise. *Dummy_{Non}* is set equal to one if *Dummy_{Man}* is zero, and zero otherwise.

$$\text{prob}(\text{MeetTar}) = \text{Stakeholder Proxies} + \text{Capacity to Manage Earnings Proxies} \quad (5)$$

The proxies for the firm's implicit claims with stakeholders are discussed above and the proxies for a firm's capacity to manage earnings are discussed below. To reduce the possibility of measurement error, I develop two proxies, where possible, for my measures of earnings management capacity. My primary measures of capacity are based on the firm's ending financial statements for the year preceding the year of interest. Secondary measures are based on industry averages. Tests of HC are run with both the primary and secondary proxies. The capacity proxies are expressed scaled by average assets to be consistent with the implicit claims proxies and are summarized in Table 5.

Bad Debt Expense: The primary proxy for a firm's capacity to manage bad debt is equal to the firm's entire allowance for uncollectible accounts. This is the upper limit on how much the firm can manage earnings using the bad debt expense. If the firm reverses all of the allowance for uncollectible accounts, the firm is stating that 100% of its outstanding receivables are collectible; the resulting reversal has a positive effect on the firm's earnings.

The secondary measure for a firm's capacity to use bad debt expense is based on industry averages and is done in several steps. In the first step, I calculate an average ratio for the allowance for uncollectible accounts to gross receivables for all firms with the same 2-digit SIC code³⁰ across the three years preceding the year of interest. I next calculate an expected level for the firm by multiplying this ratio and the balance in the firm's gross receivables before the year of interest. In the final step, I subtract the

expected level from the firm's actual level at the end the year preceding the year of interest to calculate the firm's capacity to manage earnings.

Depreciation: The primary proxy for a firm's ability to manage earnings using depreciation expense equals the previous year's depreciation expense. This is the approximate upper limit of the amount that the firm can manage earnings using this particular tool. If a firm stops depreciating its current plant, property and equipment, it is stating that these assets are already being reported at their salvage value and no more depreciation is appropriate.

Pension Expense: The proxy for a firm's ability to manage earnings using pension expense is simply the balance in the pension benefit obligation that appears in the notes to a firm's financial statements before the year of interest. Unlike the primary proxy for bad debt capacity, this amount is not the upper limit of the amount that firms can manage earnings using pension expense because a total reversal is equivalent to the firm renegeing on past pension promises made to employees. I do assume that the larger the pension benefit obligation is, the more the firm can manage earnings through changes to the pension expense assumptions (See Chapter 4). Therefore, the capacity to use pension expense as an earnings management tool changes in proportion to the size of the pension benefit obligation.

To calculate the secondary measure, I first calculate the three year average pension benefit obligation per person across firms with the same two digit SIC code. I then multiply this ratio by the number of employees for each firm at the end of the year before

³⁰ I choose a two digit SIC because the use of one digit does not give industry breakdowns that are refined enough for my purposes and the use of three or four digits does not allow for enough observations to

the year of interest to calculate the theoretical pension benefit obligation. As I do for bad debt, I subtract the theoretical amount from the actual reported pension benefit obligation at the end of the year before the year of interest. I assume this amount represents the firm's capacity to manage earnings using pension expense.

Reversal of Special Reserves: There is very little research as to how firms actually use special reserves and over what period of time the reserve is used. I make the assumption that the amount of earnings that can be managed using these reserves is directly proportional to the original negative unusual or infrequent item which established the reserve. I also concentrate on special items in the three years prior to the year of interest and on amounts whose absolute value is greater than 1% of a firm's assets.³¹ I recognize that I will include unusual or infrequently occurring items that were included on a firm's income statement for reasons other than earnings management in my proxy. This inclusion goes against finding results to support my hypothesis.

Tax Expense: Unfortunately for those interested in tax-related research, Compustat combines long-term deferred tax assets and liabilities into one category and includes short-term tax assets (liabilities) in other current assets (liabilities). This necessitates that tax researchers hand collect data by examining firms' financial statements. For my sample of firms, this is prohibitively expensive, so I develop two alternatives. As a

calculate an industry average.

³¹ In the Compustat annual database, datum "Special Items" (data17) includes adjustments to prior years, significant non-recurring items, non-recurring profits or the loss on the sale of assets, investments and securities, as well as the write-down of receivables and securities. This definition closely matches the intent of APB 30, paragraph 26, and is often used as if it were synonymous with APB's "unusual or infrequently occurring items." I choose 1% of a firm's assets based on the work done by Elliot and Hanna (1996) who investigated the relationship between the earnings response coefficient and large negative special items reported by firms. According to them, special items are often a combination of write-offs of

primary measure of the firm's capacity to manage earnings using tax expense as an earnings management tool, I calculate the ratio between the deferred tax expense and the provision for taxes as reported on all available past income statements for the firm. As the ratio increases, I assume that the firm has more capacity to manage earnings through modifications to its deferred tax balances. These adjustments, such as changes to the valuation allowance, can change the firm's reported tax expense and therefore its reported EPS.

As a secondary measure, I define a dummy variable that indicates a firm's propensity to use the effective tax rate (ETR) to manage earnings. I assume that a tax rate with a high variance indicates that a firm has used the ETR to manage reported net income and will use it again as necessary. Since this is not a measure of capacity, I further assume that if a firm has a high propensity to use the ETR to manage earnings then the firm has sufficient capacity to manage earnings upward when preliminary earnings fall below an earnings target. This is different than my other capacity measures since a high variance may also indicate that all earnings management potential using the ETR has already been used and the firm has no capacity left. This goes against finding results to support my cost hypothesis. I set the dummy variable, *Tax*, equal to 1 if the variance in a firm's ETR is greater than the variance of its industry's ETR and 0 otherwise.³²

impaired assets and accruals for establishing reserves for future charges but the amount in either category is not differentiated in Compustat.

³² I recognize that propensity to manage taxes using the ETR and capacity to manage earnings using the ETR are not the same thing. I make the assumption that if the firm has the propensity to manage earnings using the ETR, they also have the capacity to manage earnings using the ETR.

Equation (5) is rewritten to include the stakeholder proxies and each of the capacity proxies. The resulting logit expression is used to test HB₄ and HC and is shown in equation (6):

$$\begin{aligned} \text{prob}(\text{MeetTar}) = & \alpha_0 + \alpha_1 \text{Durable} + \alpha_2 \text{R\&D} + \alpha_3 \text{Labor} + \alpha_4 \text{Suppliers}_{\text{Man}} + \\ & \alpha_5 \text{Suppliers}_{\text{Non}} + \alpha_6 \text{Creditors} + \alpha_7 \text{Adv} + \alpha_8 \text{BadDebt} + \alpha_9 \text{Pension} + \\ & \alpha_{10} \text{Deprec} + \alpha_{11} \text{Tax} + \alpha_{12} \text{SplItems} + \varepsilon \end{aligned} \quad (6)$$

Again, *MeetTar* takes on the value of *MeetZero*, *MeetPrYr* and *MeetBoth*, depending on the scenario. I test HB₄ and HC once using the primary proxies and again by replacing the primary proxies with the secondary proxies where possible. I predict that the signs on both the benefit variables and the capacity variables are positive. The primary and secondary proxies to measure a firm's capacity to manage earnings are summarized in Table 5. Financial and return data are selected from the most recent Compustat and CRSP files.

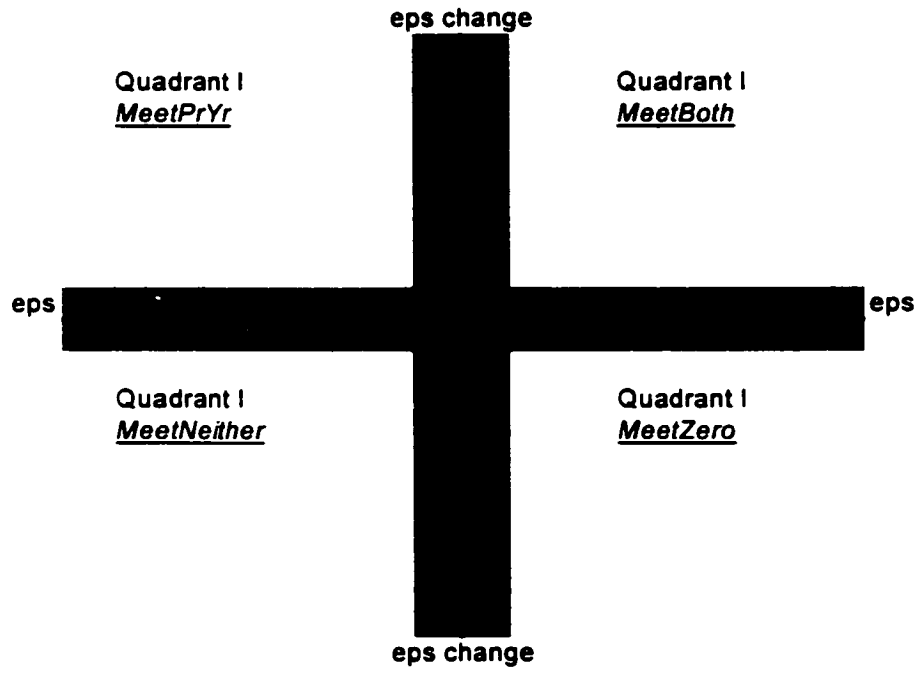
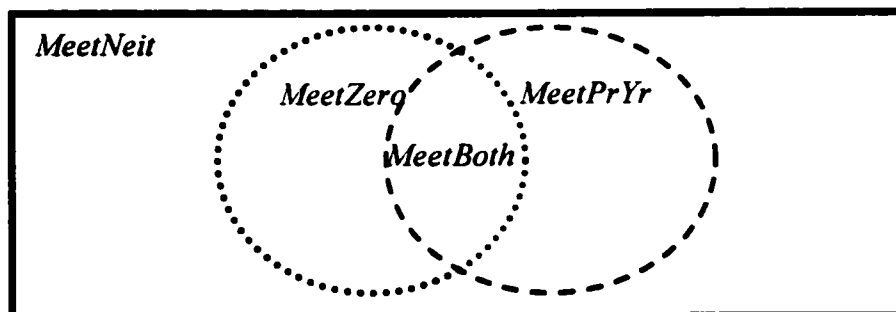


Figure 5, Panel A – Cartesian plane for sample selection process



Definition of circles:

MeetNeit = Firms that report $EPS_t < 0$ and $EPS_t < EPS_{t-1}$

MeetBoth = Firms that report $EPS_t \geq 0$ and $EPS_t \geq EPS_{t-1}$

MeetZero = Firms that report $EPS_t \geq 0$ and $EPS_t < EPS_{t-1}$

MeetPrYr = Firms that report $EPS_t < 0$ and $EPS_t \geq EPS_{t-1}$

Comparisons:

- **Scenario 1 (Meet Either Target)** - This scenario looks at the union of *MeetZero* and *MeetPrYr* compared to its complement. Tests compare firms that manage earnings to meet either target to firms that do not manage earnings and miss both targets.
- **Scenario 2 (Meet Zero Target)** - This scenario only looks at firms around the zero EPS target and compares firms meeting the zero EPS target to those firms reporting EPS just below zero.
- **Scenario 3 (Meet Prior Year's EPS Target)** - This scenario only looks at firms around zero changes in EPS and compares firms meeting the zero changes in EPS target to those firms reporting EPS changes just below zero.

Note: The t-subscript refers to the year of interest, and the subscript t-1 refers to the year before the year of interest.

Figure 5, Panel B – Venn diagram of sample selection process

Table 3 - SIC codes for dummy variable, *Durable*

SIC code(s)	Description
1520 -1799	Building and Construction
2450 - 2452	Wood Buildings
2510 - 2599	Furniture and Fixtures
2830 - 2836	Drugs and Pharmaceuticals
3010 - 3011	Tires and Inner Tubes
3210 -3299	Stone, Clay, Glass and Concrete
3310 - 3399	Primary Metals
3410 - 3499	Fabricated Metals
3510 - 3599	Industrial and Commercial Machinery
3610 - 3699	Electrical Equipment
3710 - 3799	Transportation Equipment
3810 - 3899	Measuring, Photo and Optical Instruments
3910- 3999	Miscellaneous Manufacturing Industries

Table 4 - Stakeholder proxies, measurements and data sources

Stakeholder Group	Variable Name	Measurement and Data Source^a
Customers	<i>Durable</i>	if DNUM in {list of SIC codes, Table 3} then Durable = 1, 0 otherwise
	<i>R&D</i>	Research and Development Expense = Data46
Employees	<i>Labor</i>	Employees / PPE = Data29 / Data7
Suppliers	<i>Supp_{Man}</i>	$Dummy_{Man} * (COGS + \Delta Invent)$ = $Dummy_{Man} * (Data41 + Data303)$ where $Dummy_{Man} = 1$ if DNUM is in 3000s and 0 otherwise
	<i>Supp_{Non}</i>	$Dummy_{Non} * (COGS + \Delta Invent)$ = $Dummy_{Non} * (Data41 + Data303)$ where $Dummy_{Non} = 1$ if DNUM is not in 3000s and 0 otherwise
Creditors	<i>Creditors</i>	Notes Payable + Long-term Debt = Data206 + Data9
All Stakeholders	<i>Advertising</i>	Advertising Expense = Data45

^a DataXX refers to the variable name in the Compustat annual data file

Table 5 - Earnings management tools, proxies, measurements and data sources^{a, b}

Earnings Management Tool	Primary Measure:		Secondary Measure:		Theoretical Level	Capacity Proxy
	Capacity Proxy	3-year industry average	3-year industry average	Theoretical Level		
Bad Debt Expense	<i>BadDebt</i> = Prior Year's Allowance for Bad Debt (Data67)	Bad Debt Ratio, = (Allowance for Bad Debt _i / Gross Receivables _i) = (Data67 _i / (Data2 _i + Data67 _i))	Bad Debt Ratio, = (Allowance for Bad Debt _j / Gross Receivables _j) = (Data67 _j / (Data2 _j + Data67 _j))	Expected Allowance for Bad Debt _j = Bad Debt Ratio _j * Gross Receivables _j = Bad Debt Ratio _j * (Data2 _j + Data67 _j)	<i>BadDebt</i> = Actual Allowance for Bad Debt - Expected Allowance for Bad Debt	
Depreciation Expense	<i>Deprec</i> = Prior Year's Depreciation Expense (Data14)	-----	-----	-----	-----	
Pension Expense	<i>Pension</i> = Prior Year's PBO (Data286)	Pension Ratio, = (Pension Benefit Obligation _i / number of employees _i) = Data286 _i / Data29 _i	Pension Ratio, = (Pension Benefit Obligation _j / number of employees _j) = Data286 _j / Data29 _j	Expected Pension Benefit Obligation _j = Pension Ratio _j * Number of Employees _j = Pension Ratio _j * Data29 _j	<i>Pension</i> = Actual Pension Benefit Obligation _j - Expected Pension Benefit Obligation _j	

^a DataXX refers to the variable name in the Compustat Annual File. All variables are selected for the end of the year preceding the year of interest.

^b The "i" subscript refers to industry i, and the "j" subscript refers to firm j

Table 5, Continued

Earnings Management Tool	Primary Measure:		Secondary Measure:	
	Capacity Proxy	3-year industry average	Theoretical Level	Capacity Proxy
Special Items	$SpItem = \text{Prior 3 Years' Income Decreasing Special Items} \\ = \text{lag(Data17)} + \text{lag2(Data17)} + \text{lag3(Data17)}$	-----	-----	-----
Tax Expense	$Tax^c = \frac{\sum \text{Deferred Tax Expense}}{\sum \text{Income Tax Provision}}$	ETR = provision for taxes / income before taxes = Data16 / Data17	-----	$Tax = 1 \text{ if } \text{var}(\text{firm ETR}) > \text{var}(\text{industry ETR}), \text{ and } 0 \text{ otherwise}$

^c An alternative measure for tax would be $= \Sigma(\text{Deferred Tax Expense} / \text{Income Tax Provision}) / N$, where N is the number of observations which gives equal weight to all years. My measure gives more weight to the years with the largest deferred tax expense as a percent of the income tax provision.

CHAPTER 6: RESULTS – TESTS OF MARKET REACTION TO MEETING EARNINGS TARGETS (HB₁ AND HB₂)

In this chapter I present the results of the tests of the first two benefits hypotheses as discussed in Chapter 5. First, I review the sample selection process and then present the results.

A. Sample Selection Process

I summarize the selection of the sample used to test HB₁ and HB₂ in Table 6. I start with the 2001 Annual Compustat Industrial data file and select firm-year observations where earnings per share data are available, resulting in 90,516 firm-year observations. I then match these firms with the 2001 Quarterly Compustat Industrial data file to get the date of the fourth quarter earnings release, which I assume to be the same as the annual earnings release date. This results in 66,908 firm-year observations. I then match the data with the CRSP return file resulting in a sample of 50,870. The distribution for EPS and the change in EPS using this sample are plotted and shown in Figure 6, Panels A and B, respectively.

By examining these two distributions, I establish my ranges for firms slightly below and slightly above the two EPS targets. There are 303, 400, 358 and 344 firm-year observations in the four EPS increments from \$0.00 EPS through \$0.03 EPS for a total of 1,405 firm-year observations. Since there are more firm-years in these intervals than other intervals of the same size and more firm-years than would be expected based on the shape of the distribution elsewhere, I define firm-year observations in this range as my sample of firms that manage earnings to report EPS equal to or greater than zero. There

are 172, 181, 193 and 213 observations in the four EPS intervals from $-\$0.04$ through $-\$0.01$ EPS for a total of 759 firm-year observations, which are fewer than would be expected based on the shape of the distribution elsewhere. I define firms in this interval as my sample of firms that do not manage earnings and therefore do not meet the zero earnings target.

The distribution of changes in earnings per share is bi-modal; the mode between $\$0.00$ changes in EPS and $\$0.02$ changes in EPS does not fit with the shape of the distribution elsewhere.³³ I define the firm-year observation in this range as my sample of firm-years that manage EPS to meet or beat the previous year's EPS. I define firms that do not manage earnings and miss the change in earnings target as the firm-year observations in the range from $-\$0.03$ changes in EPS through $-\$0.01$ changes in EPS.³⁴ Combining the sample of firms around the zero EPS and the zero changes in EPS targets results in a sample of 3,538 firm-year observations that are just above or just below either of the two earnings targets. (See Appendix I for a three dimensional view of firm-year observation in proximity to both targets.)

The Cartesian plane for this sample is diagramed in Figure 7. There are 1,493 firm-year observations reporting EPS above zero and above the prior year and therefore meet both targets simultaneously. The average 3-day abnormal return is 1.39% and is significantly different from zero. These firms are identified by the dummy variable, *MeetBoth* in the regression equations discussed below. There are 425 observations with

³³ There are 657, 697 and 667 firm-year observations for each of the EPS intervals for a total of 2,021 firm-year observations.

³⁴ There are 469, 483 and 445 firm-year observations for each of the EPS intervals for a total of 1,397 firm-year observations

EPS less than zero, but with EPS greater than the previous year's EPS. These firms are identified by the dummy variable *MeetPrYr*. There are 1,170 firm-year observations with EPS greater than zero but with EPS less than the prior year's EPS. These firms are identified by the dummy variable *MeetZero*. There are 450 firm-year observations with EPS and changes in EPS below zero. These firms meet neither target though they fall in close proximity to one or both of the targets and are identified by the dummy variable *MeetNeit*. The abnormal return for the later three groups are not significantly different from zero.³⁵

I also compare each cell with the other cells to determine whether the abnormal returns of each cell differ from the abnormal returns in the other cells. The abnormal return for firms in the *MeetBoth* quadrant are significantly higher than those in the *MeetPrYr* and *MeetZero* quadrants at the 5% level, and than those in the *MeetNeit* quadrant at the 10% level. Though these comparisons do not control for the market's expectations of EPS, they provide preliminary support for HB_2 and none for HB_1 .

I use the sample discussed above to run the regression in equation (1) to test HB_1 and HB_2 when I proxy for the market's EPS expectation with the prior year's EPS. Since analysts' forecasts are often considered a better proxy for the market's EPS expectation, I next match the observations with First Call data to get the most recent consensus EPS forecast before earnings are released for each of the firm-year observations. The sample is further reduced to 807 firm-year observations. Both measures of *Surprise* are winsorized at 1% to eliminate the impact of outliers.

³⁵ The returns reported here are adjusted by the value weighted CRSP index. Similar results are found using the portfolio adjusted abnormal return.

B. Tests of HB_1 and HB_2

The results of running the regression in equation (1) on the samples described above for the three scenarios and two measures of abnormal return are presented in Table 7. Panel A shows the results of the regression using the prior year as the proxy for the market's EPS expectations, and Panel B shows the results using the analysts' consensus forecast from First Call as the proxy for the market's EPS expectations.

In Panel A, the coefficient on *Surprise* is significantly positive in all cases. From this I conclude that abnormal returns increase with the difference between current EPS and the prior year's EPS. A one-tailed significance test on the coefficients for *MeetZero* and *MeetPrYr* are not significant at the 5% level in any of the scenarios for either measure of abnormal return. This is contrary to the expectations stated in HB_1 for the zero EPS or zero changes in EPS targets.

The coefficient for *MeetBoth* is also significant and in the expected direction for all scenarios using both measures of abnormal returns, providing support for HB_2 . I interpret these results as evidence that abnormal returns are greater when firms meet both targets simultaneously than when meeting either target individually.

A two-tailed test on the coefficient of *MeetPrYr* reveals the coefficient to be significantly different from zero but the sign is opposite to expectations and contrary to intuition. *MeetPrYr* and *Surprise* are highly correlated since *MeetPrYr* is defined as 1 when *Surprise* is greater than or equal to zero, and zero when *Surprise* is less than zero.³⁶ I expect that some of the explanatory value of *MeetPrYr* for abnormal returns is included

³⁶ The Spearman correlation coefficient is .35805 and is significantly different from zero.

in the variation of *Surprise*, which makes the sign and magnitude of the coefficient on *MeetPrYr* difficult to interpret.

To test this, I regress *MeetNeit*, *MeetZero*, *MeetPrYr* and *MeetBoth* on abnormal returns without controlling for the market's expectation for EPS (results not shown). The R^2 is reduced in all cases indicating that much of the variation in abnormal returns is explained by the variable *Surprise*. The sign on *MeetPrYr* is still negative in scenarios one and three, but it is not significantly different from zero. In fact, the only coefficient with a sign that is significantly different from zero is the coefficient on *MeetBoth*, and it is positive as expected. I interpret this as additional evidence in support of HB_2 and support for my supposition that the negative sign on *MeetPrYr* is partially caused by the correlation between *Surprise* and *MeetPrYr*.

The R^2 for the Meet Prior Year scenario in Panel A is below 1% which suggests that the regression equation is not explaining much of the variation in the dependent variable. I attribute this to two factors: the high degree of correlation between *MeetPrYr* and *Surprise*, and the fact that the sample is restricted to firms where *Surprise* is in the range from minus \$.03 per share to \$.02 per share. This restriction means that *Surprise* does not provide much information to the OLS procedure and that the equation does not explain much of the variation in abnormal returns for this sample.

Table 7, Panel B presents the results from running the regression in equation (1) using the consensus EPS forecast as a proxy for the market's EPS expectations. The coefficient on *Surprise* is significant at the 5% level in the first and third scenarios. The R^2 is lower than the levels reported in Table 7, Panel A, and the coefficients on *MeetZero* and

MeetPrYr are not significant in the expected direction in any of the scenarios. These results do not support either HB_1 or HB_2 .³⁷

In an effort to explain why I find support for HB_2 when using the larger sample and the prior year as the proxy for the market's EPS expectations and not when using the smaller sample and the consensus forecast as the proxy for the market's EPS expectations, I divide the sample of firms used in Panel A into two samples: firms with no First Call forecast and firms with a First Call forecast. I use the prior year's EPS as the proxy for the market's EPS expectations in both cases. The results for firms without a First Call forecast are presented in Panel C and the results for firms with a First Call forecast are presented in Panel D. In Panel C, the coefficients on *Surprise* and *MeetBoth* are significantly positive at the 5% level in all scenarios providing additional support for HB_2 , as in Panel A. The coefficient on *MeetNeit* is positive and significant at the 5% level, which is counter intuitive. I attribute this in part to a high degree of correlation between *Surprise* and *MeetNeit* though there may be other dynamics at work for this sample of firms close to but below both earnings targets.³⁸ In Panel D, the only coefficient that is significant and in the expected direction is the coefficient on *MeetBoth*

³⁷ In Chapter 5, I mentioned that when *Surprise* was calculated using the consensus analysts' forecast as the proxy for the market's EPS expectations, it also indicated whether the firm met the consensus analyst's forecast and by how much. To distinguish the information contained in meeting the forecast from the information contained in the magnitude above or below the forecast, I added a dummy variable, *MeetFcst*, for these firms and set it to one if reported EPS was equal to or greater than the consensus forecast and zero otherwise. Though the results are not reported here, the R^2 s are higher than those reported in Panel B, but lower than those reported in Panel A. The coefficient on *MeetFcst* is positive and significant, and the coefficient on *Surprise* is no longer significant. I interpret this to mean that the market reacts to the fact that the firm reported EPS above the consensus forecast rather than to the amount above or below the forecast.

³⁸ The correlation coefficient between *MeetNeit* and *Surprise* is -0.4323 , which is significantly different from zero. Firms with *MeetNeit* = 1 are firms that have reported EPS less than zero and current EPS less than those of the previous year, in other words, where *Surprise* is negative.

in scenario 1. The coefficient on *Surprise* is negative and significantly different from zero in scenarios 1 and 2. From this I conclude that earnings releases and meeting earnings targets provide more information to the stock market for firms that are not followed by security analysts than for firms followed by security analysts.

It is not unusual that the R^2 for firms followed by security analysts to be small. In her investigation of the relationship between investor sophistication and market expectations, Walther (1997) regressed size adjusted abnormal returns from the day before an earnings release to the day of the earnings release on analysts' forecast errors scaled by price and reported an R^2 of approximately 1%. In their study of the relationship between unexpected returns and earnings surprise based on analysts' forecasts, Freeman and Tse (1992) report R^2 s ranging from .1% to 2.9%.

Walther (1997) and Bhattacharya (2001) offer two possibilities for explaining the difference between the R^2 s for firms followed by analysts and firms not followed by analysts. Bhattacharya investigates the trading activities around quarterly earnings release dates and concludes that trading responses are largely related to seasonal random-walk forecasts (e.g. forecasts based on the prior year's EPS) for firms "with relatively impoverished information environments." Firms followed by security analysts are more likely to have rich information environments because analysts and other news media communicate other information about these firms in addition to earnings forecasts.

Walther suggests that market participants put less weight on forecasts the more sophisticated they are. Market participants of firms that are followed by security analysts are more likely to be institutional and other large traders and would be more sophisticated

than the traders of non-analyst followed firms. These participants are likely to use the complete information environment including the forecast as well as the other information available. The R^2 on a regression of abnormal returns on earnings surprise using the analysts' forecast will be relatively low if the other information is not captured in the regression.

From these two studies, I conclude that the R^2 of a regression of abnormal returns on market expectations using a random walk would be higher for a sample of firms not followed by security analysts than for a sample of firms followed by security analysts because the information environment is poorer for the firms not followed by the analysts and the users are less likely to use other information that may be available. The R^2 in Table 7, Panel C, where the sample consists of firms not followed by security analysts, is greater than the R^2 in Table 7, Panel D, where the sample consists of firms followed by security analysts. Furthermore, the R^2 's for both Panels B and D, are low compared to the R^2 's in Panels A and D. The sample of firms for both Panels B and D is the sample of firms followed by security analysts only, further supporting the supposition that R^2 for the sample of firms not followed by security analysts will be greater than the R^2 for the sample of firms followed by security analysts.

It may be difficult to interpret the value of the coefficient on *Surprise* because the relationship between abnormal returns and *Surprise* may be non-linear as suggested by Subramayan (1996) and Freeman and Tse (1992). According to them, abnormal returns increase(decrease) at a decreasing rate with the increase(decrease) in unexpected earnings up to a maximum value and then level off. The slope, as measured by the coefficient on

Surprise, would be lower(higher) for firms further from(closer to) zero *Surprise*. In Panels A and C, the coefficient on *Surprise* is greater in Scenario 3, where *Surprise* is restricted to a small range around zero, than in the other scenarios, where *Surprise* can take on a much broader range of values. If non-linearity is assumed, one would expect the coefficient on *Surprise* in scenario 3 to be the greatest because it is restricted to a small range around zero where the slope is expected to be the steepest. The coefficient on *Surprise* in scenarios 1 and 2 reflect the average of the steep slope around zero and the flatter slope after unexpected returns have reached their maximum and is consistent with other short-window return studies, such as the work done by Walther (1997).

Using a longer window than the three-day window discussed above allows the test to include the market's reactions to EPS pre-announcements that occur within the 10 days before earnings are released. The results, not shown here, are consistent with those presented in Panel A. The coefficients on *MeetBoth* are significant at the 5% level and in the expected direction for all three scenarios and both measures of abnormal return.

To test whether the results are driven by the ranges around the earnings targets which I used to segregate earnings managers from non-managers, I re-run regression equation (1) on a sample of firm-year observations with expanded ranges used to define managers and non-managers. Firms reporting EPS just below the zero EPS target are defined as firms reporting EPS from $-\$0.06$ to $-\$0.01$ and firms meeting or beating the zero EPS target as firms reporting EPS from $\$0.00$ to $\$0.04$. Firms reporting change in EPS just below the zero changes in EPS target are defined as firms reporting changes in EPS

from $-\$0.05$ to $-\$0.01$ and firms meeting or beating the zero changes in EPS target as firms reporting EPS from $\$0.00$ EPS to $\$0.03$.

The results, not reported here, of the regression in equation (1) using the expanded ranges are consistent with those presented in Panel A, even though the R^2 is slightly reduced. The coefficients on *Surprise* and *MeetBoth* are significant and in the expected direction.

From the above observations I conclude that the market values the meeting of both earnings targets simultaneously more than meeting either target alone and they do this differently for firms reported in the First Call database and those that are not. This provides evidence in support of HB_2 , but does not support HB_1 . I will concentrate the rest of my discussion on firms that meet both targets simultaneously, since the results are significant and in the expected direction for this variable only.

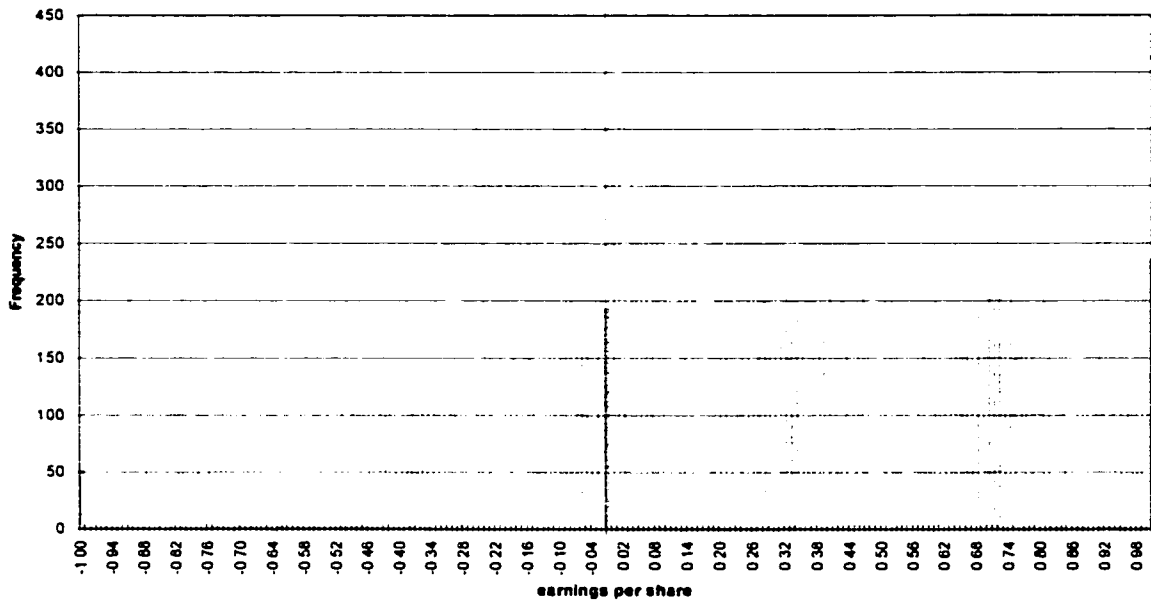


Figure 6, Panel A: Distribution of EPS after matching with CRSP

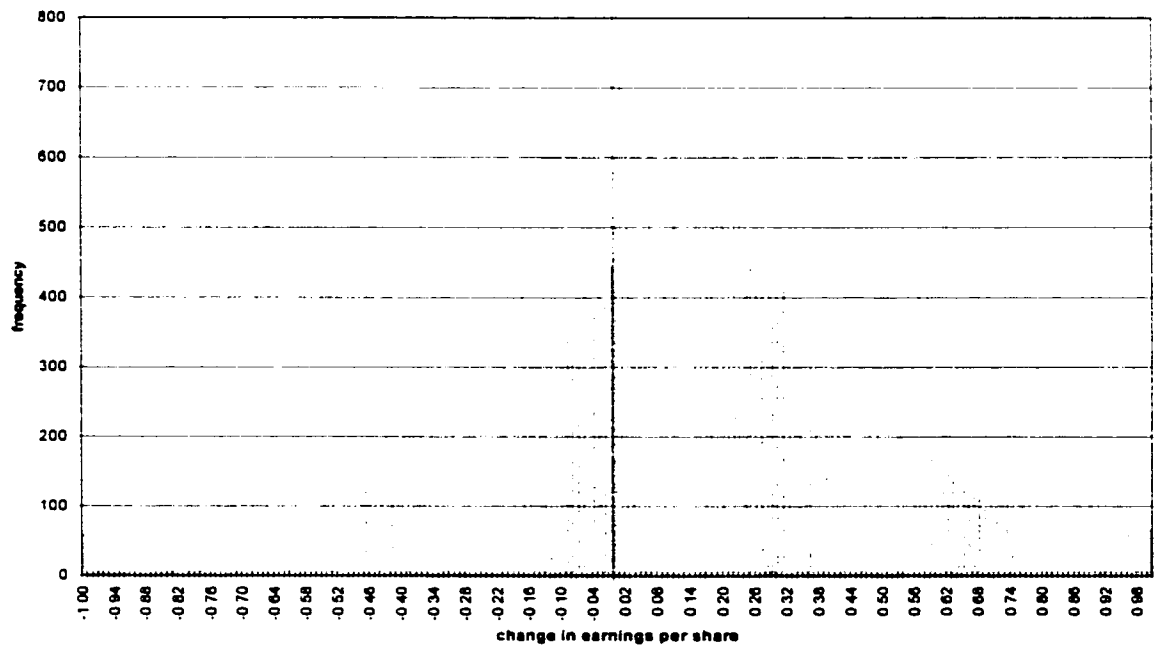
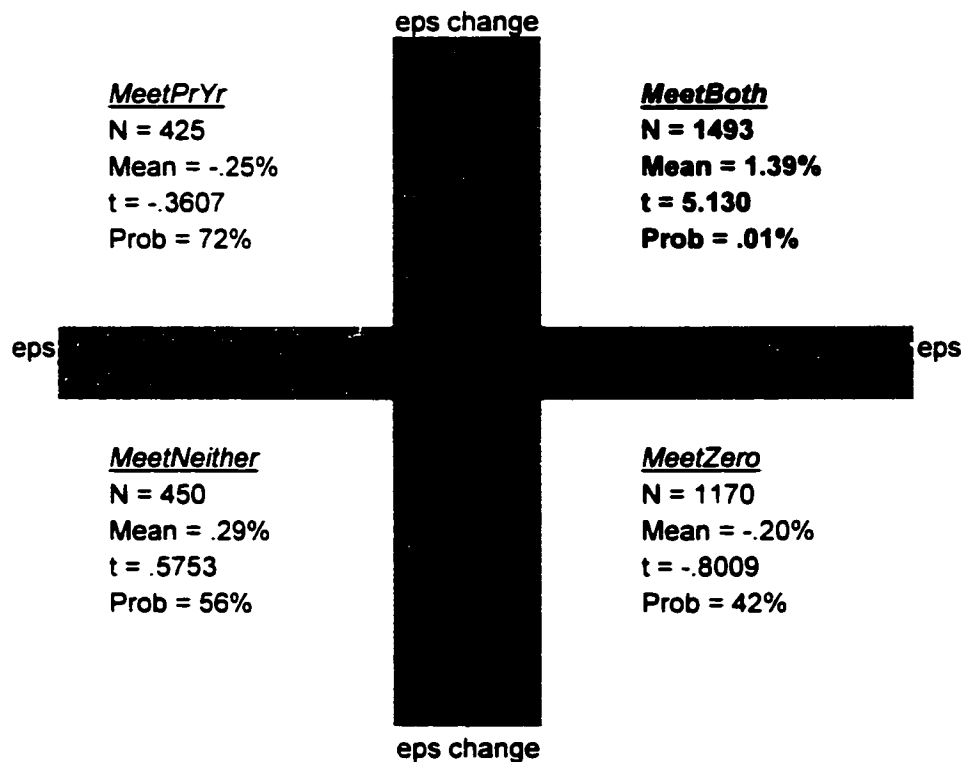


Figure 6, Panel B: Distribution of changes in EPS after matching with CRSP



<u>Cross Comparisons</u>	<u>t-value</u>	<u>probability</u>
MeetBoth = MeetPrYr	-2.2076	2.8%
MeetBoth = MeetNeither	-1.8978	6.2%
MeetBoth = MeetZero	-4.2357	0.0%
MeetPrYr = MeetNeither	0.6336	52.7%
MeetPrYr = MeetZero	-0.0746	94.1%
MeetZero = MeetNeither	0.8611	39.0%

Figure 7: Cartesian plane of final sample

Table 6: Summary of sample selection results for HB₁ and HB₂

Annual Compustat Sample	194,600
less: observations with no EPS information	<u>104,084</u>
	90,516
less: observations with no report dates	<u>23,608</u>
	66,908
less: observations with insufficient return data	<u>16,038</u>
	50,870
less: observations outside of earnings management range	<u>47,332</u>
Sample of firms before matching with First Call	3,538
less: observations without analysts' forecast	<u>2,731</u>
Sample of firms with First Call forecast	807

Table 7, Panel A: Results for HB₁ and HB₂ using a 3-day return window and the previous year's EPS as the proxy for the market's EPS expectations

$$AbnRet = a_1 MeetNeit + a_2 MeetZero + a_3 MeetPrYr + a_4 MeetBoth + a_5 Surprise + e \quad (1)$$

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either	2 zero	3 prior year	1 either	2 zero	3 prior year
n		3,538	1,603	2,245	3,538	1,603	2,245
MeetNeit	- or 0	0.00585	0.00893	0.00468	0.00627	0.00922	0.00519
n		450	269	219	450	269	219
t-value		1.21	1.24	0.71	1.30	1.28	0.79
probability		11.3%	10.7%	23.8%	9.7%	10.0%	21.5%
MeetZero	+	0.00014	0.00232	0.00093	0.00033	0.00249	0.00112
n		1,170	490	766	1,170	490	766
t-value		0.05	0.44	0.27	0.11	0.47	0.33
probability		48.1%	33.2%	39.2%	45.6%	32.0%	37.0%
MeetPrYr	+	-0.01256	-0.00949	-0.01571	-0.01262	-0.00990	-0.01541
n		425	244	216	425	244	216
t-value		-2.50	-1.23	-2.49	-2.51	-1.29	-2.44
probability		99.4%	89.1%	99.4%	99.4%	90.1%	99.3%
MeetBoth	+	0.00923	0.01169	0.00776	0.00933	0.01176	0.00785
n		1,493	600	1,044	1,493	600	1,044
t-value		3.46	2.38	2.70	3.49	2.39	2.73
probability		0.0%	0.9%	0.4%	0.0%	0.8%	0.3%
Surprise	+	0.07151	0.07053	0.32853	0.07143	0.07052	0.32683
n		12.56	10.50	2.04	12.54	10.49	2.03
t-value		0.0%	0.0%	2.1%	0.0%	0.0%	2.1%
probability		4.9%	7.5%	0.6%	4.9%	7.5%	0.6%
Adjusted R ²							

Table 7, Panel A - continued

Definition of Scenarios:

Scenario 1: Firms meet or beat **Either** EPS target and no differentiation is made between the targets. All firms in sample are included.

Scenario 2: Firms meet or beat **Zero** EPS target and only firms in close proximity to zero EPS are included.

Scenario 3: Firms meet or beat the **Prior Year** EPS target and only firms in close proximity to zero changes in EPS are included.

Definition of Variables:

MeetNeit

= 1 if $EPS_t < 0$ and $EPS_t < EPS_{t-1}$, 0 otherwise

MeetZero

= 1 if $EPS_t \geq 0$ and $EPS_t < EPS_{t-1}$, 0 otherwise

MeetPrYr

= 1 if $EPS_t < 0$ and $EPS_t \geq EPS_{t-1}$, 0 otherwise

MeetBoth

= 1 if $EPS_t \geq 0$ and $EPS_t \geq EPS_{t-1}$, 0 otherwise

Surprise

$(EPS_t - EPS_{t-1}) / \text{price before event period}$

Table 7, Panel B: Results for HB₁ and HB₂ using a 3-day return window and consensus analysts' forecast as the proxy for market's EPS expectations

$$AbnRet = a_1 MeetNeit + a_2 MeetZero + a_3 MeetPrYr + a_4 MeetBoth + a_5 Surprise + e \quad (1)$$

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either	2 zero	3 prior year	1 either	2 zero	3 prior year
<i>n</i>		807	281	541	807	281	541
<i>MeetNeit</i>	- or 0	-0.01291	-0.00780	-0.02777	-0.01258	-0.00705	-0.02780
<i>n</i>		111	65	48	111	65	48
<i>t-value</i>		-1.65	-0.62	-2.71	-1.60	-0.56	-2.69
probability		95.1%	73.3%	99.7%	94.5%	71.2%	99.6%
<i>MeetZero</i>	+	0.00237	0.00929	-0.00189	0.00256	0.00979	-0.00199
<i>n</i>		303	109	202	303	109	202
<i>t-value</i>		0.50	0.95	-0.38	0.54	1.00	-0.39
probability		30.9%	17.1%	64.7%	29.6%	16.0%	65.3%
<i>MeetPrYr</i>	+	-0.00890	0.01040	-0.02440	-0.00800	0.01109	-0.02308
<i>n</i>		82	37	46	82	37	46
<i>t-value</i>		-0.98	0.63	-2.32	-0.87	0.66	-2.18
probability		83.5%	26.6%	99.0%	80.8%	25.4%	98.5%
<i>MeetBoth</i>	+	0.00782	0.00837	0.00723	0.00843	0.00949	0.00763
<i>n</i>		311	70	245	311	70	245
<i>t-value</i>		1.68	0.69	1.60	1.79	0.78	1.67
probability		4.7%	24.4%	5.5%	3.7%	21.8%	4.8%
<i>Surprise</i>	+	0.08169	0.04786	0.05856	0.08162	0.04756	0.05857
<i>t-value</i>		2.27	0.99	1.72	2.25	0.97	1.71
probability		1.2%	16.2%	4.3%	1.2%	16.6%	4.4%
Adjusted R ²		0.9%	0.7%	2.6%	0.9%	0.7%	2.5%

Table 7, Panel B - continued

See Table 7, Panel A for description of scenarios and variables, except for *Surprise* which is equal to the latest consensus forecast from First Call divided by the price before the year of interest

Table 7, Panel C: Results for HB₁ and HB₂ using a 3-day return window, firms with no consensus analysts' forecast, and the previous year's EPS as the proxy for market's EPS expectations

$$AbnRet = a_1 MeetNeit + a_2 MeetZero + a_3 MeetPrYr + a_4 MeetBoth + a_5 Surprise + e \quad (1)$$

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either	2 zero	3 prior year	1 either	2 zero	3 prior year
n		2,731	1,322	1,704	2,731	1,322	1,704
<i>MeetNeit</i>	- or 0	0.01146	0.01327	0.01432	0.01192	0.01341	0.01501
n		339	204	171	339	204	171
<i>t-value</i>		1.97	1.57	1.80	2.05	1.59	1.89
probability		2.5%	5.8%	3.6%	2.0%	5.6%	2.9%
<i>MeetZero</i>	+	-0.00087	-0.00047	0.00226	-0.00068	-0.00040	0.00257
n		867	381	564	867	381	564
<i>t-value</i>		-0.24	-0.08	0.54	-0.19	-0.06	0.61
probability		59.5%	53.0%	29.6%	57.4%	52.5%	27.0%
<i>MeetPrYr</i>	+	-0.01193	-0.01121	-0.01312	-0.01222	-0.01183	-0.01311
n		343	207	170	343	207	170
<i>t-value</i>		-2.04	-1.31	-1.74	-2.09	-1.38	-1.74
probability		97.9%	90.5%	95.9%	98.2%	91.7%	95.9%
<i>MeetBoth</i>	+	0.00973	0.01235	0.00780	0.00969	0.01227	0.00777
n		1,182	530	799	1,182	530	799
<i>t-value</i>		3.09	2.30	2.23	3.08	2.29	2.22
probability		0.1%	1.1%	1.3%	0.1%	1.1%	1.3%
<i>Surprise</i>	+	0.07802	0.07711	0.38353	0.07799	0.07712	0.38441
<i>t-value</i>		12.26	10.52	2.20	12.26	10.53	2.21
probability		0.0%	0.0%	1.4%	0.0%	0.0%	1.4%
Adjusted R ²		5.9%	9.0%	0.6%	6.0%	9.0%	0.6%

See Table 7, Panel A for description of scenarios and variables.

Table 7, Panel D: Results for HB₁ and HB₂ using a 3-day return window, firms with a consensus analysts' forecast and the previous year's EPS as the proxy for market's EPS expectations

$$AbnRet = a_1 MeetNeit + a_2 MeetZero + a_3 MeetPrYr + a_4 MeetBoth + a_5 Surprise + e$$

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1	2	3	1	2	3
Scenario		either	zero	prior year	either	zero	prior year
n		807	281	541	807	281	541
<i>MeetNeit</i>	- or 0	-0.01501	-0.01174	-0.02815	-0.01469	-0.01100	-0.02785
n		111	65	48	111	65	48
t-value		-1.91	-0.94	-2.41	-1.85	-0.87	-2.37
probability		97.2%	82.5%	99.2%	96.8%	80.7%	99.1%
<i>MeetZero</i>	+	0.00034	0.00367	-0.00254	0.00053	0.00418	-0.00252
n		303	109	202	303	109	202
t-value		0.07	0.37	-0.47	0.11	0.42	-0.46
probability		47.2%	35.4%	68.0%	45.6%	33.7%	67.8%
<i>MeetPrYr</i>	+	-0.00607	0.02363	-0.02626	-0.00515	0.02435	-0.02505
n		82	37	46	82	37	46
t-value		-0.65	1.34	-2.47	-0.55	1.37	-2.34
probability		74.2%	9.1%	99.3%	70.7%	8.6%	99.0%
<i>MeetBoth</i>	+	0.00894	0.01546	0.00717	0.00955	0.01660	0.00753
n		311	70	245	311	70	245
t-value		1.90	1.25	1.56	2.01	1.33	1.63
probability		2.9%	10.7%	5.9%	2.2%	9.3%	5.2%
<i>Surprise</i>	+	-0.03965	-0.05413	-0.02115	-0.03983	-0.05424	0.04511
t-value		-2.05	-2.13	-0.02	-2.04	-2.11	0.04
probability		98.0%	98.3%	50.7%	97.9%	98.2%	48.4%
Adjusted R ²		0.8%	0.5%	2.1%	0.8%	0.6%	2.0%

See Table 7, Panel A for description of scenarios and variables.

CHAPTER 7: RESULTS – TESTS OF STAKEHOLDER AND COST HYPOTHESES

In the previous chapter, I showed that firms benefit, as measured by abnormal returns, from meeting two earnings targets simultaneously. In this chapter I test the theory that managers compare the expected benefits and the expected costs of managing earnings to meet an earnings target in order to decide whether to manage earnings to meet an earnings target. I first test whether the benefits of meeting an earnings target increase with the firm's dependence on the implicit claims of stakeholders (HB_3). I next test whether the manager's decision to manage earnings to meet an earnings target (see Figure 4) can be predicted using proxies for the firm's dependence on the implicit claims of stakeholders and proxies for the expected costs of managing earnings to meet a earnings target (HB_4 and HC). HB_3 is tested as a standalone regression using equation (3), and HB_4 and HC are tested together using equation (6).

A. HB_3

The variables used to proxy for the implicit claims of stakeholders are described in Chapter 5. Since proxies for a firm's dependence on the implicit claims of stakeholder are not available for all firms, the sample size is reduced to 2,179.

The correlation coefficients between the different stakeholder proxies are presented in Table 8. There is a high degree of correlation among many of the variables. For example, $Supp_{Man}$ is negatively correlated with $Supp_{Non}$ as expected since $Supp_{Man}$ is defined to be zero when $Supp_{Non}$ is non-zero and vice versa. $Durable$ is positively correlated with $R\&D$ and $Supp_{Man}$, and negatively correlated with $Supp_{Non}$, $Creditors$ and

Advertising. *R&D* is negatively correlated with *Supp_{Non}*, and *Creditors*. *Labor* is positively correlated with *Supp_{Non}* and *Advertising*. This high degree of correlation between many of the different variables suggests that there may be an underlying variable not reported which explains the interaction between the proxies for a firm's dependence on the implicit claims of stakeholders and abnormal returns. I perform a factor analysis on the implicit claims variables and discuss the results later in this chapter.

I present the results of running regression equation (3) using *MeetBoth* as the dummy variable for meeting both targets simultaneously and present the results in Table 9. Panel A shows the results for the sample of all firms, including those with a forecast on First Call. The R^2 for scenarios 1 and 2 are 10% and 15% but below 1% for scenario 3; as in the discussion of Table 7, I attribute this lack of explanatory power in scenario 3 to the low amount of variation in the control variable *Surprise*. The coefficient on *Surprise* is significantly different from zero and in the expected direction in the Meet Either and the Meet Zero scenarios. The coefficient on the interaction term for *Labor* is significant at the 5% level and in the expected direction. I take this as evidence that abnormal returns are higher for firms that meet both earnings targets simultaneously and have a greater dependence on the implicit claims of employees.

The coefficient on the interaction term for *Supp_{Man}* is significant and in the expected direction for scenarios 1 and 2 but only significant and in the expected direction for interaction term on *Supp_{Non}* for scenario 1.³⁹ Since *Supp_{Man}* is a noisy proxy for a manufacturing firm's dependence on suppliers and may include some of the effects of a

³⁹ Scenario 1 includes firms around either EPS target, scenario 2 includes only those firms around the zero EPS target and scenario 3 includes only those firms around the prior year EPS target.

firm's dependence on the implicit claims of employees and the other components of overhead, I cannot interpret this as clear evidence that abnormal returns increase with a manufacturing firm's dependence on the implicit claims of suppliers. The coefficient on *Supp_{Non}* is significant and in the expected direction only in scenario 1, which provides some evidence that abnormal returns increase with a non-manufacturing firm's dependence on the implicit claims of suppliers. Taken together, I interpret the coefficients on *Supp_{Man}* and *Supp_{Non}* as weak evidence in support of the conclusion that abnormal returns increase with a firm's dependence on the implicit claims of suppliers.

The evidence contained in Table 7 also indicates that the market reacts differently to an earnings release for firms with and without analysts' forecasts. In Table 9, Panel B, I present the results of running regression equation (3) for firms meeting both targets simultaneously and without an analyst's forecast. The results are similar to those presented in Table 9, Panel A, though the R^2 's are higher. The coefficients on *Surprise* and the interaction terms on the proxies for employees and suppliers to manufacturing firms are significant at the 5% level and in the expected direction. The coefficient on *Supp_{Non}* is significant at the 10% level and in the expected direction. I interpret this as weak evidence that that abnormal returns increase with a firm's dependence on the implicit claims of suppliers for firms not on the First Call database.

Establishing proxies for measuring a firm's dependence on the implicit claims of stakeholders is difficult and subject to error. Since there is a high degree of correlation between several of the implicit claims proxies (See Table 8), I run a factor analysis on my

continuous implicit claim proxies (i.e. all proxies except *Durable*⁴⁰) to determine if the results are caused by an unobserved factor underlying the proxies that I have used.

I use least squares as the initial factor method as recommended by Kim and Mueller (1978). The result of the factor analysis is presented in Table 10. Only one factor resulted from the factorization, which is significant in that it means the covariation between my proxies is determined by only one common factor. In the first column of Table 10, I report the final communality estimate, which is the variance in the observed variables that is explained by the underlying factor, and in the second column I report the factor loadings, which are equivalent to the correlation of the factor and the respective variables. I use the factor loadings to calculate a summary variable, *SHI*⁴¹. The factor receiving the highest communality estimate is *SuppNon*, which is the variable with the highest correlation coefficients with all the other variables. This suggests that the underlying variable is responsible for most of the covariation between *SuppNon* and the other variables.

Equation (2) is re-written using the summary variable, *SHI*, and the dummy variable *Durable*, which is not included in *SHI*:

$$\begin{aligned} AbnRet = & \alpha_0 + \alpha_1 MeetBoth + \alpha_2 Surprise + a_3 MeetBoth * Durable \\ & + a_4 MeetBoth * SHI + \varepsilon \end{aligned} \quad (7)$$

The results of running this regression for firms meeting both earnings targets simultaneously are presented in Table 11. The coefficient on *SHI* is positive and in the expected direction which is consistent with the hypothesis that the abnormal returns for

⁴⁰ Factor analysis is traditionally applied to continuous variables, therefore *Durable* has been excluded since it is a dichotomous variable taking on the values 0 or 1.

firms meeting an earnings target increase with the firm's dependence on the implicit claims of stakeholders. The coefficient on *Surprise* is significant and in the expected direction for scenarios 1 and 2 which is consistent with the results in Table 9, Panel A. The coefficient on *MeetBoth * Durable* is not significant also, consistent with the results in Table 9, Panel A.

From the tests discussed above, I conclude that there is some evidence to support HB_3 . Specifically, abnormal returns for firms that meet both earnings targets simultaneously are positively associated with the extent to which firms depend on implicit claims with employees and suppliers. This is also consistent with the evidence provided by Bowen, DuCharme and Shores (1995) that firms with a high dependence on the implicit claims of stakeholders choose income increasing accounting methods over firms less dependent on these implicit claims. Though the choice of accounting methods does not fit my definition of managing earnings, their conclusions are similar to mine: a firm's dependence on the implicit claims of stakeholders influences management's decision process regarding the reporting of earnings.

B. HB_4 and HC

HB_4 predicts that the probability of managing earnings to meet an earnings target is greater for firms that depend more on implicit claims with stakeholders, and HC predicts that firms with a greater capacity to manage earnings have a higher probability of managing earnings and meeting an earnings target. Since the probability that a firm will manage earnings to meet an earnings target is a function of both the benefits expected

⁴¹ $SH1 = -0.12467R \& D + 0.11512Labor - 0.40339Supp_{Man} + 1.00229Supp_{Non} + 0.07842Creditors + 0.14903Advertising$

from better terms of trade with stakeholders and the costs of managing earnings, HB₄ and HC are tested together.

The correlation coefficients between capacity proxies are presented in Table 12. The correlation coefficient between the primary bad debt capacity proxy and the secondary bad debt capacity proxy is positive and significantly different from zero, as is the correlation coefficient between the primary and secondary pension capacity proxies. This would be expected if the primary and secondary capacity variables were measuring the same underlying variable. The only other correlation coefficients that are significantly different from zero are the correlation coefficient between the primary bad debt capacity proxy and the secondary pension capacity proxy, and depreciation capacity and special items.

Table 13 presents the results of running equation (6) to test HB₄ and HC concurrently for firms meeting both earnings targets simultaneously compared to firms meeting only one EPS target or neither target. The results using the primary capacity proxies are shown in the first three columns, and the results using the secondary capacity proxies, where available, are shown in the second three columns. The measure of goodness of fit⁴² is low indicating that the model does not predict well whether a firm will manage earnings to meet both earnings targets simultaneously. Furthermore, few coefficients are significant at the 5% level.

Since the tests of HB₂ and HB₃ have higher R² when I use the sample of firms without analysts' forecast on First Call, I run the tests of HB₄ and HC on the sample of

⁴² Defined as $1 - (\ln L / \ln L_0)$ where $\ln L$ is the log-likelihood function (Greene, 1997)

firms without a forecast on First Call (results not reported). The results are very similar to those reported above and do not support HB₄ or HC.

In summary, I find evidence that abnormal returns are greater for firms meeting both earnings targets simultaneously (HB₂) and evidence linking the abnormal returns for firm's meeting both earnings targets to the firm's dependence on the implicit claims with employees and suppliers (HB₃). I find no support for HB₄ and HC.

Table 8: Pearson correlation coefficients between proxies for a firm's dependence on the implicit claims of stakeholders

	<i>Durable</i>	<i>R & D</i>	<i>Labor</i>	<i>Supp_{Man}</i>	<i>Supp_{Non}</i>	<i>Creditors</i>	<i>Advertising</i>
<i>Durable probability</i>	1.00000 0.0%	0.26690 0.0%	-0.03781 7.8%	0.64327 0.0%	-0.45357 0.0%	-0.11776 0.0%	-0.12922 0.0%
<i>R & D probability</i>		1.00000 0.0%	0.01430 50.5%	0.00659 75.9%	-0.13104 0.0%	-0.19985 0.0%	-0.02230 29.9%
<i>Labor probability</i>			1.00000 0.0%	-0.01246 56.1%	0.12849 0.0%	-0.00418 84.6%	0.05215 1.5%
<i>Supp_{Man} probability</i>				1.00000 0.0%	-0.41463 0.0%	0.01225 56.8%	-0.08225 0.0%
<i>Supp_{Non} probability</i>					1.00000 0.0%	0.08064 0.0%	0.13880 0.0%
<i>Creditors probability</i>						1.00000 0.0%	-0.02473 24.9%
<i>Advertising probability</i>							1.00000 0.0%

Table 8, continued

Definition of Variables

Durable = 1 if SIC for durable products, 0 otherwise

R & D = R&D expense

Labor = number of employees / PP&E

Supp_{Man} = $Dummy_{Man} (COGS + \Delta inventory)$

Supp_{Non} = $Dummy_{Non} (COGS + \Delta inventory)$

Creditors = notes payable + long-term debt

Advertising = advertising expense

Dummy_{Man} = 1 if SIC indicates manufacturing firm, 0 otherwise

Dummy_{Non} = 1 if SIC indicates non-manufacturing firm, 0 otherwise

Table 9, Panel A: Results for HB₃ using a 3-day return window and the previous year's EPS as the proxy for market's EPS expectations

$$AbnRet = \alpha_0 + \alpha_1 MeetBoth + \alpha_2 Surprise + \alpha_3 MeetBoth * Durable + \alpha_4 MeetBoth * R\&D + \alpha_5 MeetBoth * Labor + \alpha_6 MeetBoth * Supp_{Man} + \alpha_7 MeetBoth * Supp_{Non} + \alpha_8 MeetBoth * Creditors + \alpha_9 MeetBoth * Advertising + \varepsilon \quad (3)$$

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either	2 zero	3 prior year	1 either	2 zero	3 prior year
<i>Intercept</i>	None	-0.00446 -1.48 93.0%	-0.00234 -0.51 69.4%	-0.00396 -1.03 84.8%	-0.00423 -1.40 91.9%	-0.00217 -0.47 68.1%	-0.00368 -0.95 83.0%
<i>MeetBoth</i>	+	0.00025 0.03 48.8%	0.00090 0.06 47.5%	-0.00172 -0.19 57.5%	0.00007 0.01 49.6%	-0.00011 -0.01 50.3%	-0.00149 -0.16 56.5%
<i>Surprise</i>	+	0.06140 14.45 0.0%	0.06157 12.84 0.0%	0.11628 0.57 28.4%	0.06135 14.42 0.0%	0.06153 12.81 0.0%	0.11372 0.56 28.8%
<i>MeetBoth * Durable</i>	+	-0.01129 -1.05 85.4%	-0.02551 -1.41 92.0%	-0.01073 -0.89 81.3%	-0.01111 -1.03 84.9%	-0.02388 -1.32 90.6%	-0.01161 -0.96 83.1%
<i>MeetBoth * R&D</i>	+	0.06718 1.47 7.1%	0.04409 0.73 23.3%	0.18748 2.74 0.3%	0.06416 1.40 8.1%	0.04117 0.68 24.8%	0.18373 2.68 0.4%
<i>MeetBoth * Labor</i>	+	0.00030 3.62 0.0%	0.00030 3.10 0.1%	0.00006 0.16 43.6%	0.00030 3.62 0.0%	0.00030 3.10 0.1%	0.00007 0.20 42.1%

Table 9, Panel A - continued

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1	2	3	1	2	3
Scenario		either	zero	prior year	either	zero	prior year
n		2,179	1,074	1,302	2,179	1,074	1,302
<i>MeetBoth</i> * <i>Supp_{Man}</i>	+	0.02230	0.04563	0.01021	0.02167	0.04539	0.00953
<i>t-value</i> probability		2.15 1.6%	2.56 0.5%	0.89 18.6%	2.09 1.8%	2.54 0.6%	0.83 20.3%
<i>MeetBoth</i> * <i>Supp_{Non}</i>	+	0.00693	0.00636	0.00851	0.00723	0.00670	0.00871
<i>t-value</i> probability		1.66 4.8%	0.64 26.1%	2.04 2.1%	1.73 4.2%	0.67 25.1%	2.09 1.9%
<i>MeetBoth</i> * <i>Creditors</i>	+	0.00969	-0.01623	0.02449	0.01025	-0.01515	0.02486
<i>t-value</i> Probability		0.49 31.2%	-0.49 68.9%	1.08 13.9%	0.52 30.2%	-0.46 67.8%	1.10 13.6%
<i>MeetBoth</i> * <i>Adv</i>	+	0.02475	0.34388	-0.00557	0.02322	0.34024	-0.00720
<i>t-value</i> Probability		0.35 36.5%	2.31 1.0%	-0.08 53.0%	0.32 37.3%	2.28 1.1%	-0.10 53.9%
Adjusted R ²		10.0%	15.1%	0.9%	9.9%	15.0%	0.8%

See Table 8 for description of implicit claims variables, and Table 7, Panel A for description of other variables and for the different scenarios.

Table 9, Panel B: Results for HB₃ using a 3-day return window and the previous year's EPS as the proxy for market's EPS expectations, firms with no forecast on First Call

$$AbnRet = \alpha_0 + \alpha_1 MeetBoth + \alpha_2 Surprise + \alpha_3 MeetBoth * Durable + \alpha_4 MeetBoth * R\&D + \alpha_5 MeetBoth * Labor + \alpha_6 MeetBoth * Supp_{Man} + \alpha_7 MeetBoth * Supp_{Non} + \alpha_8 MeetBoth * Creditors + \alpha_9 MeetBoth * Advertising + \epsilon \quad (3)$$

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either 1,690	2 zero 896	3 prior year 981	1 either 1,690	2 zero 896	3 prior year 981
<i>Intercept</i>	None	-0.00269	-0.00109	-0.00012	-0.00265	-0.00125	0.00014
<i>t-value</i> probability		-0.75 77.3%	-0.21 58.2%	-0.02 51.0%	-0.74 76.9%	-0.24 59.4%	0.03 48.8%
<i>MeetBoth</i>	+	-0.00230	-0.00189	-0.00709	-0.00250	-0.00222	-0.00733
<i>t-value</i> probability		-0.23 59.2%	-0.12 54.9%	-0.63 73.6%	-0.25 59.9%	-0.14 55.7%	-0.65 74.3%
<i>Surprise</i>	+	0.06656	0.06663	0.17894	0.06652	0.06662	0.17305
<i>t-value</i> probability		14.70 0.0%	13.34 0.0%	0.83 20.5%	14.69 0.0%	13.34 0.0%	0.80 21.3%
<i>MeetBoth * Durable</i>	+	-0.00558	-0.01446	-0.01057	-0.00510	-0.01375	-0.01052
<i>t-value</i> probability		-0.44 66.9%	-0.73 76.6%	-0.71 76.2%	-0.40 65.5%	-0.69 75.5%	-0.71 76.1%
<i>MeetBoth * R&D</i>	+	0.01450	-0.02633	0.15978	0.01027	-0.03213	0.15918
<i>t-value</i> probability		0.24 40.5%	-0.33 62.8%	2.07 1.9%	0.17 43.3%	-0.40 65.5%	2.07 1.9%
<i>MeetBoth * Labor</i>	+	0.00030	0.00028	0.00019	0.00030	0.00028	0.00020
<i>t-value</i> probability		3.46 0.0%	2.86 0.2%	0.47 31.9%	3.47 0.0%	2.87 0.2%	0.51 30.4%

Table 9, Panel B - continued

Dependent Variable	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either 1,690	2 zero 896	3 prior year 981	1 either 1,690	2 zero 896	3 prior year 981
N							
<i>MeetBoth</i> * <i>Supp</i> _{Man}	+	0.02131	0.04378	0.00977	0.02057	0.04396	0.00858
<i>t-value</i> Probability		1.76 3.9%	2.26 1.2%	0.71 23.8%	1.70 4.4%	2.27 1.2%	0.63 26.6%
<i>MeetBoth</i> * <i>Supp</i> _{Non}	+	0.00858	0.01259	0.00834	0.00873	0.01290	0.00830
<i>t-value</i> Probability		1.43 7.6%	1.18 11.9%	1.28 10.0%	1.46 7.3%	1.21 11.4%	1.28 10.1%
<i>MeetBoth</i> * <i>Creditors</i>	+	0.00776	-0.02483	0.02997	0.00883	-0.02414	0.03170
<i>t-value</i> Probability		0.33 37.2%	-0.69 75.5%	1.05 14.7%	0.37 35.5%	-0.67 75.0%	1.11 13.4%
<i>MeetBoth</i> * <i>Adv</i>	+	0.02165	0.37529	-0.01544	0.02263	0.37376	-0.01419
<i>t-value</i> probability		0.26 39.8%	2.28 1.1%	-0.18 57.1%	0.27 39.3%	2.27 1.2%	-0.16 56.5%
Adjusted R ²		12.4%	18.3%	0.3%	12.3%	18.4%	0.3%

See Table 8 for description of implicit claims variables, and Table 7, Panel A for description of other variables and for the different scenarios.

Table 10: Results of factor analysis on proxies for firm's dependence on the implicit claims of stakeholders

	<u>Final Communalities Estimate</u>	<u>Square Root</u>
<i>R & D</i>	0.01554	-0.12467
<i>Labor</i>	0.01325	0.11512
<i>Supp_{MAN}</i>	0.16272	-0.40339
<i>Supp_{NON}</i>	1.00459	1.00229
<i>Creditors</i>	0.00615	0.07842
<i>Advertising</i>	0.02221	0.14903

See Table 8 for definition of variables

Table 11: Results for HB3 using a 3-day return window, the previous year's EPS as the proxy for market's EPS expectations and using composite stakeholder proxy

$$AbnRet = \alpha_0 + \alpha_1 MeetBoth + \alpha_2 Surprise + \alpha_3 MeetBoth * Durable + \alpha_4 MeetBoth * SHI + e \quad (7)$$

Scenario	Expected Sign	Size portfolio adjusted return			Value adjusted return		
		1 either	2 zero	3 prior year	1 either	2 zero	3 prior year
<i>Intercept</i>	None	-0.00445 -1.47 93.0%	-0.00232 -0.50 69.2%	-0.00395 -1.02 84.7%	-0.00423 -1.40 91.9%	-0.00216 -0.47 67.9%	-0.00366 -0.95 82.8%
<i>MeetBoth</i>	+	0.00903 1.62 5.3%	0.00815 0.87 19.2%	0.00977 1.37 8.6%	0.00911 1.63 5.1%	0.00748 0.80 21.3%	0.00997 1.39 8.2%
<i>Surprise</i>	+	0.06133 14.46 0.0%	0.06113 12.74 0.0%	0.11997 0.59 27.7%	0.06129 14.43 0.0%	0.06111 12.72 0.0%	0.11714 0.58 28.2%
<i>MeetBoth * Durable</i>	+	0.00356 0.49 31.2%	0.00367 0.30 38.2%	-0.00048 -0.06 47.7%	0.00293 0.40 34.4%	0.00472 0.39 35.0%	-0.00197 -0.23 40.9%
<i>MeetBoth * SHI</i>	+	0.00277 3.99 0.0%	0.00281 3.47 0.0%	0.00364 1.72 4.3%	0.00279 4.01 0.0%	0.00282 3.48 0.0%	0.00379 1.79 3.7%
Adjusted R ²		9.9%	14.4%	0.5%	9.8%	14.4%	0.6%

See Table 7 for definition of *MeetBoth*, *Surprise*, and the different scenarios.

$$SHI = -0.12467R \& D + 0.11512Labor - 0.40339Supp_{Man} + 1.00229Supp_{Non} + 0.07842Creditors + 0.14903Advertising$$

Table 12: Pearson correlation coefficients between proxies for firm's capacity to manage earnings

	Primary Bad Debt Capacity	Depreciation Capacity	Primary Pension Capacity	Special Items	Primary Tax Capacity	Secondary Bad Debt Capacity	Secondary Pension Capacity	Secondary Tax Capacity
Primary Bad Debt Capacity	1.00000 0.0%	0.01818 39.1%	0.00909 66.8%	-0.02378 26.2%	0.01118 59.8%	0.89448 0.0%	-0.05564 1.2%	0.01326 53.2%
Depreciation Capacity		1.00000 0.0%	-0.00873 68.1%	-0.07209 0.1%	-0.00134 95.0%	0.01347 52.5%	-0.03025 17.0%	0.02362 26.5%
Primary Pension Capacity			1.00000 0.0%	0.02335 27.1%	0.00237 91.1%	0.01700 42.3%	0.04796 2.9%	-0.01446 49.5%
Special Items				1.00000 0.0%	0.00660 75.6%	-0.01969 35.3%	-0.00789 72.0%	0.00355 86.7%
Primary Tax Capacity					1.00000 0.0%	0.01470 48.8%	0.00427 84.7%	0.00583 78.3%
Secondary Bad Debt Capacity						1.00000 0.0%	-0.01330 54.6%	0.02003 34.5%
Secondary Pension Capacity							1.00000 0.0%	-0.01388 52.9%
Secondary Tax Capacity								1.00000 0.0%

Table 12, continued

Definition of variables:

Primary Bad Debt Capacity = Prior year's allowance for bad debt

Depreciation Capacity = Prior year's depreciation expense

Primary Pension Capacity = Prior year's pension benefit obligation

Special Items = Prior three years' income decreasing special items

Primary Tax Capacity = Σ Deferred Tax Expense / Σ Income Tax Provision

Secondary Bad Debt Capacity = firm's balance in allowance for doubtful accounts less three year industry average

Secondary Pension Capacity = firm's balance in pension benefit obligation less three year industry average

Secondary Tax Capacity = firm's propensity to use the ETR as an earnings management tool

Table 13: Results for HB₁ and HC for firms that meet both targets simultaneously

$$\begin{aligned}
 \text{prob}(\text{MeetBoth}) = & \alpha_0 + \alpha_1 \text{Durable} + \alpha_2 \text{R\&D} + \alpha_3 \text{Labor} + \alpha_4 \text{Suppliers}_{\text{Man}} + \alpha_5 \text{Suppliers}_{\text{Non}} + \alpha_6 \text{Creditors} + \alpha_7 \text{Adv} + \\
 & \alpha_8 \text{BadDebt} + \alpha_9 \text{Pension} + \alpha_{10} \text{Deprec} + \alpha_{11} \text{Tax} + \alpha_{12} \text{Splems} + \varepsilon
 \end{aligned}
 \tag{6}$$

Model	Expected Sign	Primary Capacity Measures				Secondary Capacity Measures			
		either	zero	prior year		either	zero	prior year	
n		2,179	1,074	1,302		2,019	994	1,205	
Intercept	None	-0.43450	-0.65857	-0.15910		-0.42649	-0.73081	-0.13467	
Wald X²		13.82	14.89	1.06		12.58	17.06	0.71	
probability		100.0%	100.0%	84.9%		100.0%	100.0%	80.0%	
Durable	+	-0.17360	0.05720	-0.36964		-0.16300	0.10823	-0.36974	
Wald X²		1.74	0.09	4.34		1.43	0.30	4.05	
probability		90.6%	38.2%	98.1%		88.4%	29.1%	97.8%	
R & D	+	-2.07718	0.06539	-3.83158		-2.16365	-0.02838	-3.97340	
Wald X²		15.04	0.01	19.91		15.47	0.00	20.18	
probability		100.0%	46.0%	100.0%		100.0%	100.0%	100.0%	
Labor	+	0.00147	0.00333	-0.00593		0.00206	0.01206	-0.00888	
Wald X²		1.06	3.35	1.64		1.49	10.53	2.80	
probability		15.2%	3.4%	90.0%		11.1%	0.1%	95.3%	
Supp_{Man}	+	0.17021	-0.07842	0.72761		0.35654	-0.08446	0.74998	
Wald X²		7.01	0.18	15.61		7.23	0.20	15.56	
probability		0.4%	66.6%	0.0%		0.4%	67.3%	0.0%	
Supp_{Non}	+	0.08044	-0.18020	0.25157		0.09274	-0.12837	0.22786	
Wald X²		1.80	3.16	8.00		2.14	1.48	6.06	
probability		9.0%	96.2%	0.2%		7.2%	11.2%	0.7%	

Table 13 - continued

Model	Expected Sign	Primary Capacity Measures				Secondary Capacity Measures				
		either	zero	prior year	either	zero	prior year	either	zero	prior year
n		2,179	1,074	1,302	2,019	994	1,205			
<i>Creditors</i>	+	-0.05795 59.2%	0.25939 0.56 22.7%	-0.27272 0.61 78.2%	-0.14349 0.30 29.1%	0.07952 0.05 41.3%	-0.33465 0.85 17.8%			
<i>Wald X²</i> probability										
<i>Advertising</i>	+	1.61531 4.7%	0.36999 0.08 38.8%	3.99575 6.36 0.6%	1.83632 3.36 3.3%	-0.03796 0.00 48.9%	4.80202 8.36 0.2%			
<i>Wald X²</i> probability										
<i>Bad Debt</i>	+	-1.61004 0.76 80.9%	-3.03191 1.05 84.7%	-0.62316 0.04 41.7%	-0.90643 0.19 33.1%	-1.21410 0.17 66.0%	-2.43084 0.60 78.0%			
<i>Wald X²</i> probability										
<i>Pensions</i>	+	2.92977	3.14438	2.14761	3.13159	4.22029	2.28720			
<i>Wald X²</i> probability		5.99 0.7%	3.47 96.9%	1.80 58.3%	6.39 0.6%	5.59 0.9%	1.89 8.4%			
<i>Depreciation</i>	+	0.60259	-3.39321	1.45370	0.02349	0.21276	-0.02827			
<i>Wald X²</i> probability		0.63 78.6%	3.73 97.3%	2.20 93.1%	1.02 15.6%	7.87 0.3%	0.60 78.1%			
<i>Special Items</i>	+	-0.07243	-0.87666	1.75364	-0.02089	-0.85710	1.66046			
<i>Wald X²</i> probability		0.05 59.1%	5.18 98.9%	6.76 0.5%	0.00 52.6%	4.62 98.4%	5.97 0.7%			
<i>Tax</i>	+	0.19689	0.19821	0.40135	-0.56324	-0.49108	-0.00450			
<i>Wald X²</i> probability		0.86 17.7%	0.67 20.7%	0.48 24.3%	4.36 98.2%	2.07 92.5%	0.00 50.4%			
Goodness of Fit		1.7%	1.8%	5.8%	1.8%	2.4%	6.0%			

CHAPTER 8: CONCLUSION

The purpose of this dissertation is to increase our understanding as to why firm management engages in the practice of managing reported earnings to meet an earnings target. Towards this end, I develop a signaling model to examine both the incentives and the disincentives associated with managing earnings to meet a specific earnings target. I look at the two related questions: What are the benefits that firms seek by managing earnings to meet an earnings target? What are the costs of managing earnings to meet an earnings target?

I argue that the achievement of an earnings target is a signal to the firm's stakeholders that their implicit claims with the firm are more likely to be fulfilled than if the firm had not met the earnings target. The firm benefits because the terms of trade with stakeholders are better than they would be if the firm failed to meet the earnings target. Four stakeholder groups (customers, employees, suppliers and creditors) are considered.

The costs of managing earnings include a penalty imposed on the firm, such as increased scrutiny of subsequent financial statements, a decrease in credibility and poorer terms of trade with stakeholders. Such penalties are imposed if the firm's earnings management is revealed, which communicates to the stakeholders that the firm's previous signal was false. I argue further, that the probability that a firm's earnings management will be revealed is a function of the firm's capacity to manage earnings before earnings are reported.

I find evidence consistent with the hypothesis that meeting or beating two earnings management targets, zero EPS and zero changes in EPS, simultaneously provides

information to stakeholders, which they use in assessing the probability that their implicit claims will be fulfilled by the firm. However, I am unable to predict whether a firm meets an earnings target based on my proxies for a firm's dependence on the implicit claims of stakeholders and its capacity to manage earnings.

There are differing views as to whether earnings management is a good thing or not. Arthur Levitt (1998) expressed a concern that earnings management was used to misrepresent the performance of a firm to the users of financial statements, and Healy and Wahlen (1999) state that firms manage earnings to “mislead some stakeholders...” On the other hand, the signaling model presented in Chapter 3 develops a theory that firms benefit when they manage earnings to meet an earnings target because they communicate their true type to stakeholders and not managing earnings to meet an earnings target would be misleading. In fact, these two positions can be reconciled because some firms misrepresent themselves by signaling falsely about their future abilities to meet the implicit claims of stakeholders. The expected costs of managing earnings were below the expected benefits of meeting an earnings target for these firms, and it is these firms that manage earnings to mislead the users of financial statements. They bear the costs of managing earnings only if and when the earnings management is revealed in the future.

If regulators want to limit the amount of earnings management that is used to signal a firm's type, regulators can develop means to increase the expected costs of managing earnings. This can be accomplished in two ways: increase the penalty on a firm when earnings management is revealed or impose more stringent accounting guidelines that

decrease a firm's capacity to manage earnings and therefore increase the firm's probability that earnings management will be revealed in the future. When developing means to increase the costs of managing earnings, regulators should be careful to increase the costs of signaling falsely and not the costs of signaling truly.

This study makes several other contributions. The finding that the market reacts to meeting two earnings targets simultaneously extends previous research that has looked at returns for firms meeting only one earnings target. I show that firms meeting both the zero EPS and zero changes in EPS targets have a higher abnormal return than firms that meet only one or neither EPS target. This provides an alternative approach for studies that compare firms that meet earnings targets to firms that do not meet earnings targets. Such studies may find more significant results if they consider the simultaneous meeting of two targets instead of only one target.

Current earnings are often considered an indicator of future earnings, and this dissertation provides an explanation as to why that may be true. The meeting of a current earnings target provides a signal that the implicit claims by stakeholders on the firm have a higher probability of being met than if the firm had not met the earnings target. The firm benefits from better terms of trade with stakeholders, which lowers the costs of doing business, which in turn means higher future earnings and expected cash flows. It is through this chain of events that the current earnings and the meeting of a current earnings target are indicators of future earnings.

Furthermore, this is one of the first studies that tries to measure a firm's ability to manage earnings before earnings are reported. Previous researchers have attempted to

detect earnings management only after earnings are reported.

Though identifying the difference between firms that are followed by security analysts and those that are not was not my central focus, I do provide evidence that reported earnings relative to earnings targets convey more information to the stock market for firms not followed by security analysts than similar information does for firms that are followed by security analysts. Finding additional evidence and explaining why the market reacts differently for these two types of firms is an area for further research.

There are several limitations to this study. The first is that earnings management is difficult to detect and separating firms into earnings managers and non-earnings managers based on their proximity to a reported earnings target is not perfect. As discussed in Chapter 5, some firms that do not manage earnings to meet an earnings target are included in my sample of firms that manage earnings to meet an earnings target, and firms that manage earnings yet still miss an earnings target are included in my sample of firms that do not manage earnings and miss an earnings target. This miscategorization of earnings managers and non-earnings managers goes against finding results.

A second limitation to this analysis is my ability to measure the capacity of a firm to manage earnings before earnings are reported. Firm capacity for a given earnings management tool is a function of the quality of the firm's net assets. Firm management has inside information about that quality and the ability of those assets to generate future cash flows, which are used to meet the implicit claims of stakeholders. I attempt to measure the quality using publicly available information even though such information may not be an accurate measure of quality.

As discussed in Chapter 4, one of the basic criteria of an earnings management tool is that its use is not apparent to the users of financial statements; otherwise its impact would be unraveled and an unmanaged earnings number estimated. Trying to detect the use of an earnings management tool when the preparers of financial statements are trying to conceal the use of the earnings management tool is a difficult task and prone to error.

A further limitation to this study is in the proxies used to measure a firm's dependence on stakeholders. A firm's dependence on the implicit claims of its stakeholders is an intangible concept and difficult to measure using financial constructs. My comparison of firms that do not manage earnings to those that do is subject to further error because it is not clear how to find an appropriate proxy for the firm's dependence on the implicit claims of stakeholders.

In conclusion, I have presented a theory as to why firms seek to meet or beat an earnings target and the decision process that a firm's management goes through regarding managing earnings sufficiently to meet or beat an earnings target. I provide evidence that they are signaling to stakeholders about the probability that the stakeholders' implicit claims on the firm will be fulfilled.

REFERENCES

- Ali, Ashiq, and Krishna R. Kumar. 1993. Earnings Management under Pension Accounting Standards: SFAS 87 versus APB 8. *Journal of Accounting, Auditing and Finance* 8, no. 4: 427-56.
- Amir, Eli, and Shlomo Benartzi. 1998. The Expected Rate of Return on Pension Funds and Asset Allocation as Predictors of Portfolio Performance. *The Accounting Review*.
- Bauman, Christine C., Mark P. Bauman, and Robert F. Halsey. 2001. Do Firms Use the Deferred Tax Asset Valuation Allowance to Manage Earnings? *Journal of American Tax Association* 23, no. Supplement: 27-48.
- Bernard, Victor L, Jacob K. Thomas, and James Wahlen. 1997. Accounting-Based Stock Price Anomalies: Separating Market Inefficiencies from Risk. *Contemporary Accounting Research* 14, no. 2: 89-136.
- Bhattacharya, Neil. 2001. Investors' Trade Size and Trading Responses Around Earnings Announcements. *The Accounting Review* 76, no. 2: 221-44.
- Bowen, Robert M., Larry DuCharme, and Shores D. 1995. Stakeholders' Implicit Claims and Accounting Method Choices. *Journal of Accounting and Economics* 20: 225-95.
- Boynton, Charles E., Paul S. Dobbins, and George A. Plesko. 1992. Earnings Management and the Corporate Alternative Minimum Tax. *Journal of Accounting Research* 30, no. Supplement: 131-53.
- Brennan, Michael J., and Thomas E. Copeland. 1988. Stock Splits, Stock Prices and Transaction Costs. *Journal of Financial Economics* 22: 83-101.
- Brown, Lawrence D. 1997. Earnings Surprise Research: Synthesis and Perspectives. *Financial Analysts Journal*: 13-19.
- Brown, Stephen. 2000. The impact of pension assumptions on firm valuation. *Working Paper*.
- Bull, Clive. 1983. Implicit Contracts in the Absence of Enforcement and Risk Aversion. *The American Economic Review* 73, no. 4: 658-71.
- Burgstahler, David. 1998. Incentives to Manage Earnings to Avoid Earnings Decreases and Losses: Evidence from Quarterly Earnings. *Working Paper*.

- Burgstahler, David, and Ilia Dichev. 1997. Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting and Economics* 24, no. 1.
- Burgstahler, David, and Michael Eames. 1999. Management of Earnings and Analyst Forecast. *Working Paper* UW.
- Callaway, Jackie. 1997. Clearing the Murky Waters of 'Big Bath' Accounting. *Accountancy* 120, no. 1247: 67.
- Coase, R. H. 1937. The Nature of the Firm. *Economica*: 386-405.
- Cornell, Bradford, and Alan C. Shapiro. 1987. Corporate Stakeholders and Corporate Finance. *Financial Management* Spring: 5-14.
- Dechow, Patricia M., Richardson Scott A., and A. Irem Tuna. 2000. Are Benchmark Beaters Doing Anything Wrong? *Working Paper*.
- Degeorge, Francois, Jayendu Patel, and Richard Zeckhauser. 1999. Earnings Management to Exceed Thresholds. *Journal of Business* 72, no. 1: 1-33.
- Demski, Joel S. 1980. *Information Analysis*.
- Doran, David T. 1995. Stock Splits and False Signaling Costs within a Management Reputation Framework. *Journal of Applied Business Research* 11, no. 3: 115-26.
- . 1994. Stock Splits: Tests of the Earnings Signaling and Attention Directing Hypotheses Using Analyst Forecasts and Revisions. *Journal of Accounting, Auditing and Finance* 9, no. 3: 411-22.
- Dye, Ronald. 1988. Earnings Management in an Overlapping Generations Model. *Journal of Accounting Research* 26, no. 2: 195-235.
- Elliott, John A., and J. Douglas Hanna. 1996. Repeated Accounting Write-offs and the Information Content of Earnings. *Journal of Accounting Research* 34, no. Supplement: 135-55.
- Freeman, Robert N., and Senyo Tse. 1992. A Nonlinear Model of Security Price Responses to Unexpected Earnings. *Journal of Accounting Research* 30, no. 2: 185-209.
- Gibbons, Robert. 1992. *Game Theory for Applied Economists*. Princeton, NJ: Princeton University Press.
- Greene, William H. 1997. *Econometric Analysis*. New Jersey: Prentice Hall.

- Guenther, David A. 1994. Earnings Management in Response to Corporate Tax Rate Changes: Evidence from the 1986 Tax Reform Act. *The Accounting Review* 69, no. 1: 230-243.
- Harrison Jr., Walter T., and Charles T. Horngren. 1998. *Financial Accounting*. New Jersey: Prentice-Hall.
- Healy, Paul M., and James M. Wahlen. 1999. A Review of the Earnings Management Literature and its Implications for Standard Setting. *Accounting Horizons* 13, no. 4: 365-83.
- Holder, Mark E., Frederick W. Langrehr, and J. Lawrence. 1998. Dividend Policy Determinants: An Investigation of the Influence of Stakeholders. *Financial Management* 27, no. 3: 73-82.
- Hughes, Patricia J. 1986. Signaling by Direct Disclosure under Asymmetric Information. *Journal of Accounting and Economics* 8: 119-42.
- Hunt, Alister, Susan E. Moyer, and Terry Shevlin. 1996. Managing interacting accounting measures to meet multiple objectives: A study of LIFO firms. *Journal of Accounting and Economics* 21, no. 339-374.
- Jennings, Ross, Marc J. LeClere, and Robert B. Thompson. 1997. Evidence on the Usefulness of Alternative Earnings per Share Measures. *Financial Analysts Journal*: 24-33.
- Jensen, Michael C. 1983. Organization Theory and Methodology. *The Accounting Review* 58, no. 2: 319-39.
- Jensen, Michael C., and William H. Meckling. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*: 305-60.
- Jones, Thomas M. 1995. Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics. *Academy of Management Review* 20, no. 2: 404-37.
- Keating, A. Scott, and Jerold L. Zimmerman. 1999. Depreciation Policy Changes: Tax, Earnings Management and Investment Opportunity. *Journal of Accounting and Economics* 28, no. 3: 359-89.
- Kim, Jae-on, and Charles W. Mueller. 1978. *Introduction to Factor Analysis*. London: Sage University Press.

- La Porta, Rafael, Josef Lakonishok, Andrei Shleifer, and Robert Vishny. 1997. Good news for value stocks: Further evidence on market efficiency. *Journal of Finance* 52, no. 2: 859-74.
- LaPorta, Rafael. 1996. Expectations and Cross-Section of Stock Returns. *Journal of Finance* 51, no. 5: 1715-42.
- Levitt, Arthur. 1998. The Numbers Game. *Presentation to NYU Center for Law and Business*.
- . 1999. Quality Information: The Lifeblood of Our Markets. *Presentation to the Economic Club of New York*.
- Matsumoto, Dawn. 1998. Management's Incentives to Influence Analyst's Forecasts. *Working Paper* workshop.
- Matsunaga, Steven R., and Chul W. Park. 1999. Does the CEO Bear a Cost from Missing an Earnings Target. *Working Paper*.
- Maydew, Edward L. 1997. Tax-Induced Earnings Management by Firms with Net Operating Losses. *Journal of Accounting Research* 35, no. 1: 83-96.
- Mitroff, Ian I. 1983. *Stakeholders of the Organizational Mind*. San Francisco: Jossey-Bass Publishers.
- Myers, Linda A., and Douglas J. Skinner. 1999. Earnings Momentum and Earnings Management. *Working Paper*.
- Piotroski, Joseph D. 2001. Management Forecasts, Short-term Stock Return Volatility and the Market Reaction to Imprecise Information. *Working Paper*.
- Schipper, Katherine. 1989. Commentary on Earnings Management. *Accounting Horizons*: 91-102.
- Scholes, Myron S., G. Peter Wilson, and Mark A. Wolfson. 1992. Firm's Responses to Anticipated Reductions in Tax Rates: The Tax Reform Act of 1986. *Journal of Accounting Research* 30, supplement: 161-185.
- Skinner, Douglas J., and Richard G. Sloan. 1999. Earnings Surprises, Growth Expectations, and Stock Returns or Don't Let an Earnings Torpedo Sink Your Portfolio. *Working Paper*.
- Spence, Michael. 1973. Job Market Signaling. *Quarterly Journal of Economics*: 355-74.
- Spiceland, J. David, James A. Sepe, and Lawrence A. Tomassini. 2001. *Intermediate Accounting*. Boston: Irwin McGraw-Hill.

- Subramanyam, K. R. 1996. The pricing of discretionary accruals. *Journal of Accounting and Economics* 22: 249-81.
- Thomas, Jacob K. 1989. Unusual Patterns in Reported Earnings. *The Accounting Review* 64, no. 4: 773-87.
- Tiras, Samuel L., Bernadette Ruf, and Robert M. Brown. 1998. The Relation Between Stakeholders' Implicit Claims and Firm Value. *Working Paper*.
- Walther, Beverly R. 1997. Investor Sophistication and Market Earnings Expectations. *Journal of Accounting Research* 35, no. 2: 157-79.

Appendix I – Three dimensional presentation of EPS and changes in EPS distributions

Previous earning management literature provided evidence of earnings management by looking at the distribution of earnings or changes in earnings and identifying an anomaly in the distribution around zero. Since the evidence presented in Chapter 3 supports the premise that firms manage earnings to meet two targets simultaneously, an anomaly in the joint distribution of EPS and changes in EPS should exist around zero.

With this in mind, I created a table of frequencies for firm-year observations between EPS of $-\$0.04$ and $\$0.03$, and changes in EPS from $-\$0.03$ and $\$0.02$. This incorporates my sample of earnings managers and non-earnings managers for both targets. This table is shown in Table A-1 and plotted in Figures A-1, A-2 and A-3.

Figure A-1 shows the joint frequency distribution of EPS and changes in EPS from slightly above and to the right of the distribution. If EPS and changes in EPS were independent, the frequency of EPS values would have no relationship to the frequency of the different changes in EPS values. This is not the case, since more firms appear with both EPS greater than or equal to zero and changes in EPS greater than or equal to zero than would be expected. In fact, more firms appear with EPS and changes in EPS equal to zero than any other EPS, changes in EPS combination.

Figure A-2 shows the three dimensional graph in Figure A-1 as viewed from the EPS side; the columns for each change in EPS level are shown one in back of the other. The column at zero EPS and zero changes in EPS is quite pronounced. There are more firm-year observations above zero than below in a manner similar to the distribution shown in

Figure 2, Panel A.

Figure A-3 shows the three dimensional graph in Figure A-1 as viewed from the changes in EPS side; again the column at zero EPS and zero changes in EPS is pronounced. There are more firm-year observations above zero changes in EPS than below, in a manner similar to the distribution shown in Figure 2, Panel B.

I take the three dimensional distributions as additional evidence that firms manage earnings to meet both targets simultaneously. This provides additional support for HB₂.

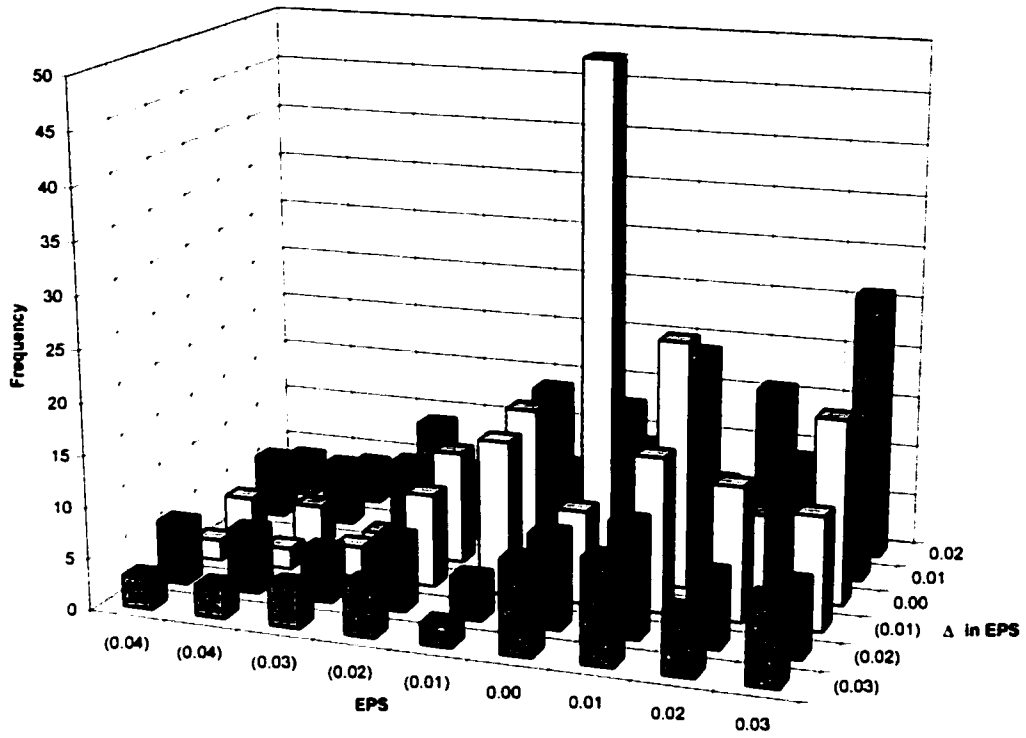


Figure A-1: Frequencies of firms reporting EPS between -\$0.04 and \$0.03, and changes in EPS between -\$0.03 and \$0.02 – viewed from slightly above and to the right

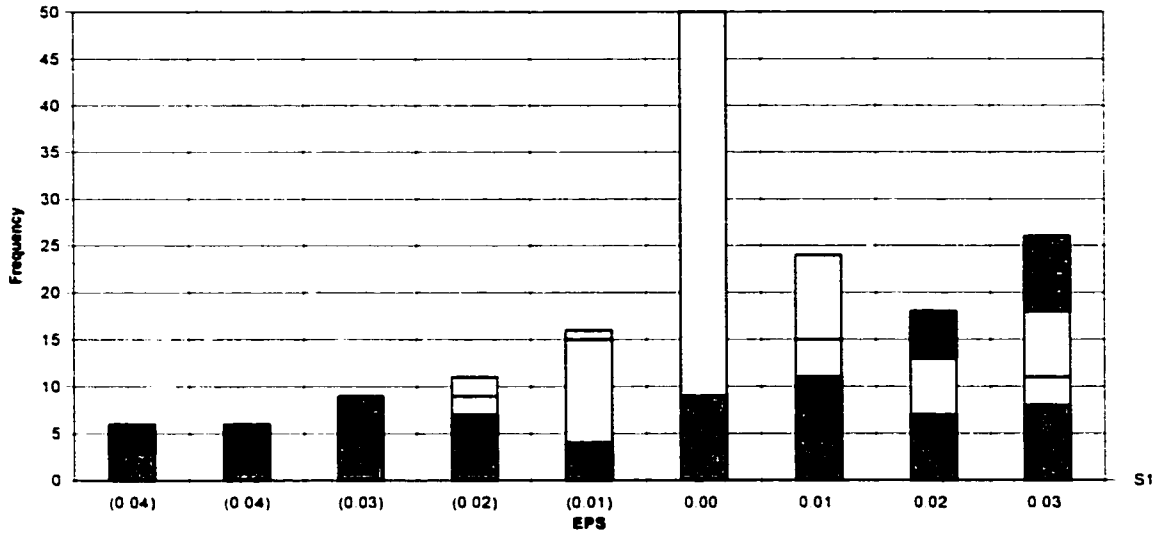


Figure A-2: Frequencies of firms reporting EPS between -\$0.04 and \$0.03, and changes in EPS between -\$0.03 and \$0.02 – viewed from EPS axis

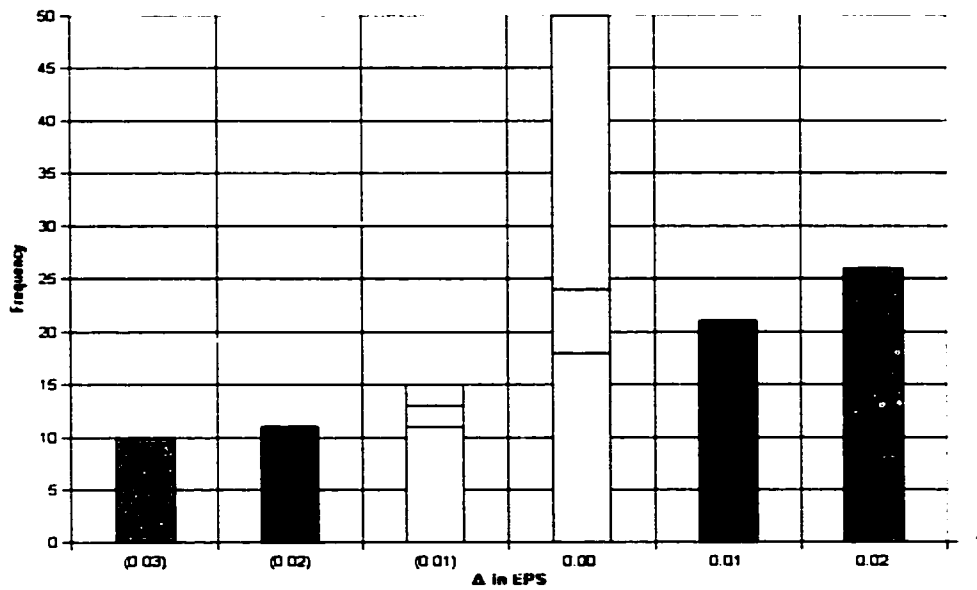


Figure A-3: Frequencies of firms reporting EPS between -\$0.04 and \$0.03, and changes in EPS between -\$0.03 and \$0.02 – viewed from changes in EPS axis

Table A-1: Frequencies of firms reporting EPS between -\$0.04 and \$0.03, and changes in EPS between -\$0.03 and \$0.02

<u>Δ in EPS</u>	<u>EPS</u>									<u>Total</u>
	(0.04)	(0.04)	(0.03)	(0.02)	(0.01)	0.00	0.01	0.02	0.03	
(0.03)	3	3	4	5	2	9	10	6	8	50
(0.02)	6	6	5	7	4	9	11	7	7	62
(0.01)	2	2	3	9	15	9	15	13	11	79
0.00	4	4	2	11	16	50	24	8	18	137
0.01	6	6	7	7	16	15	21	18	14	110
0.02	4	4	9	3	6	9	6	9	26	76
Total	25	25	30	42	59	101	87	61	84	514

FERN ZABRISKIE
1321 N. Highlands Parkway, Apt. 3
Tacoma, WA 98406
253-761-7827
zabrisfh@plu.edu

SUMMARY: *Credentials:* Ph.D. in Accounting (Expected Autumn 2001), M.B.A., C.P.A., C.M.A. *Teaching Experience:* Managerial and Financial Accounting. *Corporate Experience:* Over twenty years of strong finance, accounting, planning and management experience in domestic and international operations.

EDUCATION:

University of Washington - Ph.D. in Business Administration (Expected Autumn 2001) – major in accounting; minors in finance, economics and econometrics
Pace University - Advanced Certificate, Accounting (1991)
The Wharton School, University of Pennsylvania - M.B.A. in Finance (1975)
Connecticut College - B.A. in Mathematics and Psychology (1974)

TEACHING INTERESTS:

General Business
Financial and Managerial Accounting
Finance

RESEARCH INTERESTS:

Pedagogical focus – interactive and cross-discipline teaching methods, case studies, accounting education

Discipline focus – capital budgeting decisions, participative budgeting, earnings management, and applications to the business community

DOCTORAL DISSERTATION:

"The Costs and Benefits of Managing Earnings to Meet an Earnings Target"
Chairwoman: Professor D. Shores

TEACHING EXPERIENCE:

Pacific Lutheran University (as Zulauf Distinguished Visiting Professor) Managerial Accounting Value Creation in the Global Environment	Tacoma, WA	9/01-Current
University of Washington Principles of Managerial Accounting (Quiz Section Instructor Rating: 4.2 out of possible 5.0, Large Lecture Instructor Rating: 3.5 out of possible 5.0)	Seattle, WA	7/97- 12/00

FERN ZABRISKIE**TEACHING EXPERIENCE, continued:**

Oregon State University	Corvallis, OR	4/97-6/97
Principles of Managerial Accounting (Section Instructor Rating: 3.9 out of possible 5.0)		
Portland Community College	Portland, OR	1/97-3/97
Principles of Financial Accounting		

PROFESSIONAL EXPERIENCE:

Pitney Bowes Inc.		5/85-12/96
Vice President, Controller -		
Colonial Pacific Leasing Corporation	Tualatin, OR	5/94-12/96
Director - Corporate Financial Planning	Stamford, CT	4/89-4/94
Director - Finance and Administration - Venture Support	Stamford, CT	2/88-3/89
Manager - Corporate Budgets	Stamford, CT	4/86-1/88
Senior Corporate Financial Planner	Stamford, CT	5/85-3/86
Exxon Office Systems Company		6/80-4/85
Program Manager - Financial Plans	Stamford, CT	6/82-4/85
Manager - Forecasts and Budgets	Geneva, Switzerland	2/81-5/82
Senior Planning Advisor	Altamonte Springs, FL	6/80-1/81
Great Northern Nekoosa	Stamford, CT	4/77-5/80
Senior Planning Analyst		
LeCroy Research Systems	Spring Valley, NY	6/75-3/77
Financial Systems Analyst and Assistant to Controller		

COMMUNITY SERVICE

KPLU – volunteer consultant on special project (summer, 2001)
 Doctoral Business Student Association – President (1998 – 1999)
 Stamford Student Health Services (1 year)
 Stamford United Way – corporate liaison (2 years)
 Stamford Girls' Club, Stamford, CT - President and Board member (10 years)
 Halloween Yacht Club, Stamford, CT - Chairman of Finance Committee (1 year)
 Woodland Terrace Condominium Association - President and Board member (10 years)
 U.S. Power Squadron - Basic Boating Skills Instructor (2 years)

FERN ZABRISKIE

CREDENTIALS and AWARDS:

American Institute of Certified Public Accountants - recipient of AICPA Doctoral Fellowship (1997, 1998, 1999)

Institute of Management Accounting - recipient of Seattle Chapter Scholarship (1999)

Certified Public Accountant - Maryland (1992)

Stamford United Way - Outstanding Volunteer of the Year (1987)

Certified Management Accountant (1981)