National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

NL-339 (r. 88/04) c

Canada

INSIDER TRADING AS A RESPONSE TO CHANGES IN ACCOUNTING STANDARDS : AN EMPIRICAL STUDY OF STATEMENT OF FINANCIAL ACCOUNTING STANDARD NUMBER 52.

by

Christopher Williams Kitaali Lubwama

B. A. (Hons.), Makerere University (Uganda), 1971

M. B. A., University of Alberta (Canada), 1973

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
in the Department
of
Economics

© Christopher Williams Kitaali Lubwama 1988

SIMON FRASER UNIVERSITY

December 1988

All rights reserved. This book may not be reproduced in whole or in part, by photocopy or other means, without permission of the author.

Permission has been granted to the National Library of Canada to microfilm this thesis and to lend or sell copies of the film.

The author (copyright owner) has reserved other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without his/her written permission.

L'autorisation a été accordée à la Bibliothèque nationale du Canada de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur (titulaire du droit d'auteur) se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation écrite.

ISBN 0-315-48786-0

6

APPROVAL

Name: Christopher W. K. Lubwama

Degree: Ph.D. (Economics)

Title of Thesis: Insider Trading as a Response to Changes in Accounting Standards: An Empirical Study of SFAS #52.

Examining Committee:

Chairman: John Chant

Joseph K. Cheung
Associate Professor
Senior Supervisor

Peter Mackay Clarkson
Associate Professor

William John Heaney
Professor

Dennis R. Maki
Professor

Daniel L. McDonald
Professor

Nabil J. Elias
Professor
Faculty of Accounting and Finance
University of Manitoba
External Examiner

Date Approved: December 2, 1988

PARTIAL COPYRIGHT LICENSE

I hereby grant to Simon Fraser University the right to lend my thesis, project or extended essay (the title of which is shown below) to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users. I further agree that permission for multiple copying of this work for scholarly purposes may be granted by me or the Dean of Graduate Studies. It is understood that copying or publication of this work for financial gain shall not be allowed without my written permission.

Title of Thesis/Project/Extended Essay

Insider Trading as a Response to Changes in Accounting Standards: An Empirical Study of SFAS #52

Author:

(signature)

Christopher Lubwama

(name)

December 2, 1988

(date)

ABSTRACT

This study examines management reaction to the exposure draft to Statement of Financial Accounting Standard No. 52 (SFAS No. 52), Foreign Currency Translation. Many managers had associated Statement of Financial Accounting Standard Number 8 (SFAS No. 8) Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements, with increased volatility in reported earnings. These managers believed that the increase in volatility lowered stock prices. The exposure draft to SFAS No. 52 was issued by the Financial Accounting Standards Board (FASB) as a direct response to the outcry against SFAS NO. 8. Capital market participants thus expected the new Standard to reduce this alleged volatility in reported earnings and improve stock prices. However, company-specific financial implications and the timing of the switch (from SFAS No. 8 to SFAS No. 52) remained private information possessed by the managers and other insiders.

If managers believed that increased stability of reported earnings would lead to higher stock prices, then they had the incentive to be net-buyers of their firm's stock. The primary hypothesis thus states that insiders of multinational corporations (MNCs) which in 1981 switched from the temporal to the Current rate method of translation engaged in abnormal net buying upon the release of the exposure draft.

This analysis is an event study using a sample size of 180 MNCs and using daily volume data. The event is the release date of the revised exposure draft of SFAS No. 52. A cross-sectional analysis is then performed to determine the extent to which the observed insider trading behavior could be explained by the firms' characteristics (size, leverage, and control-type).

The results of the event-study provide support for the net-buying hypothesis. They show that insiders of the MNCs that adopted SFAS No. 52 in 1981 engaged in unexpectedly higher levels of stock volume trading upon the release of the exposure draft. The results of the cross-sectional analysis are mixed. While the variables Leverage and Control-type enter with the predicted signs, the variable Size does not. The overall association between company variables and detected trading volume is not statistically significant.

ACKNOWLEDGEMENTS

Many individuals have contributed to the completion of my doctoral studies and to this dissertation. My gratitude goes to those mentioned here and to many whom I have not mentioned.

I wish to express special gratitude to Dr. Joseph K. Cheung, senior supervisor of my dissertation, for his untiring guidance and support; Dr. Daniel L. McDonald, program coordinator and committee member, for his continued support and advice; Dr. Dennis Maki and Dr. Peter M. Clarkson, committee members, for their support and advice.

My gratitude also goes to my friends Dr. Steve D. Ugbah and Dr. Harry Waters for their support in completing this study.

DEDICATION

To Molly, Juliet, Miriam, Bryan, and Michael
with all my love.

TABLE OF CONTENTS

Page

ABSTRACT... iii

ACKNOWLEDGEMENTS................................... v

DEDICATION... vi

LIST OF TABLES..................................... xii

LIST OF FIGURES.................................... xiii

CHAPTER

I. INTRODUCTION 1

OVERVIEW OF THE STUDY 1

Efficient Market Hypothesis (EMH) and Foreign Currency Translation Information............... 4

Price Reactions and Average Results 5

Managers as Passive Market Participants 6

SFAS No. 8 and Earnings Volatility 8

SFAS No. 52 and Insider Trading 10

MOTIVATION FOR THE STUDY 12

STATEMENT OF THE PROBLEM.......................... 13

ORGANIZATION OF THE STUDY 14

II. REVIEW OF THE LITERATURE........................ 15

INTRODUCTION...................................... 15

TRANSLATION AND REPORTING PROBLEMS PRIOR TO SFAS No. 8 15

SFAS No. 8 STUDIES................................ 16

Capital Market Reactions to SFAS No. 8........ 17

Corporate Management Reactions to SFAS No. 8 20

SFAS No. 52 STUDIES 24

Capital Market Reaction To SFAS No. 52 25

Corporate Management Reactions to SFAS No. 52 26

Capital Market Reaction to SFAS No. 8 and SFAS No. 52 29

Corporate Management Reaction to SFAS No. 8 and SFAS No. 52 30

INSIDER TRADING STUDIES 31

General Insider Trading Studies 31

Insider Trading Studies in Accounting 36

The Trading Volume Reaction to the Exposure Draft to SFAS No. 52 41

COMPANY CHARACTERISTICS 43

Firm Size 44

Leverage 45

Control Type 47

SUMMARY OF HYPOTHESES 49

III. RESEARCH DESIGN AND METHOD 51

INTRODUCTION 51

EVENT SELECTION 51

SAMPLE SELECTION 53

DATA COLLECTION 55

Insider Trading Data 55

Company Data 56

THE EVENT-STUDY ANALYSIS........................... 56

The Critical Event.............................. 56

Measurement of Net Insider Trading............ 57

Company Net Insider Trading.............. 58

Market Net Insider Trading................ 59

Testing Procedures for the Event Study Hypothesis.. 63

Market-Adjusted Model Sub-hypotheses....... 64

Mean-Adjusted Model Sub-hypotheses......... 64

Test of the Statistical Significance.......... 65

Computation of DAVR and CDAVR............. 65

Computation of the t-Statistic........... 66

THE CROSS-SECTIONAL ANALYSIS...................... 69

Measurement of the Independent Variables...... 69

Firm Size.................................. 70

Leverage 70

Control-Type.............................. 71

Measurement of the Dependent Variable......... 71

Testing Procedures for the Cross-Sectional Hypotheses.................................... 72

Hypothesis 2.............................. 72

Hypothesis 3.............................. 72

Hypothesis 4.............................. 73

The Multiple Regression Model................. 74

Some Statistical Considerations............... 74

The Constant Variance of Residuals............ 75

Normality of the Error Terms.................. 76

Multicollinearity Correction.................. 76

IV. TEST RESULTS AND ANALYSES 77

EMPIRICAL RESULTS OF THE EVENT-STUDY ANALYSIS....... 77

Hypothesis 1.................................. 77

The Market-Adjusted Model Results............. 77

Analyses of Results of the Market-Adjusted Model.......................... 83

Timing of the Significant Results........... 83

The Mean-Adjusted Model Results.............. 86

Analyses of Results of the Mean-Adjusted Model...................................... 92

Timing of the significant Results........... 92

EMPIRICAL RESULTS OF THE CROSS-SECTIONAL ANALYSIS.. 93

Interdependence Among the Independent Variables.................................. 93

Interpretation of the Results of the Cross-sectional Analysis...................... 98

Size...................................... 98

Leverage Effects.......................... 99

Control-Type Effects...................... 99

Results of the Specification Tests............ 100

Normality of the Error Terms.................. 100

The Constant Variance of Residuals............ 100

V. SUMMARY, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS.................................. 106

SUMMARY.. 106

LIMITATIONS.. 109

CONCLUSIONS AND RECOMMENDATIONS..................... 110

REFERENCES... 113

APPENDIX A: Translation Methods Prior To SFAS No. 8...... 123

APPENDIX B: List Of MNCs Used In The Study............... 125

LIST OF TABLES

Table	Page
1 Market-Adjusted Volume Model Statistics For Each Day Of The 21-Day Test Period (-10 to +10)	78
2 Market-Adjusted Average Cumulative Daily Average Volume Residuals (ACDAVR) Abnormal Insider Trading Statistics For The Periods (0 to +10) And (-10 to +10)..........	80
3 Mean-Adjusted Volume Model Statistics For Each Day Of The 21-Day Period (-10 to +10).....	87
4 ACDAVR Of The Mean-Adjusted Model For The Test Periods(0 to +10) and (-10 to +10)....	89
5 Summary Statistics Of All Cross-Sectional Analysis Variables and their Intercorrelations. (N = 178)..................	94
6 Estimates of parameters from Cross-Sectional regression test on daily average volume residuals, DAVRi for the 21-day test period. (N = 178)............	96

LIST OF FIGURES

Figure Page

1 Non-event And Test Periods Used In The Event-Study Analysis 57

2 Market-Adjusted Daily Average Volume Residuals 81

3 Market-adjusted Cumulative Average Residuals 82

4 Mean-Adjusted Daily Average Volume Residuals 90

5 Mean-Adjusted Cumulative Average Residuals 91

6 Normal Probability (P-P) Plot Standardized residual 101

7 Histogram of Standardized residual 102

8 Size Standardized Partial Residual Plot 103

9 Leverage Standardized Partial Residual Plot 104

10 Control-Type Standardized Partial Residual Plot 105

CHAPTER I

INTRODUCTION

This study is an empirical investigation of insider reactions to the change in the foreign currency translation standards from SFAS No. 8 to SFAS No. 52. Specifically, it (1) analyzes the volume of securities traded by corporate insiders to determine if they engaged in abnormal trading activities upon the release of the revised exposure draft to SFAS No. 52, and (2) examines the extent to which the detected insider trading behavior could be explained by firm characteristics (firm size, leverage, and control-type).

The balance of this chapter is divided into the following sections: (1) Overview of the Study, (2) Motivation for the Study, (3) Statement of the Problem, (4) Significance of the Study, and (5) Organization of the Study.

OVERVIEW OF THE STUDY

The major revisions in the international monetary system in the early 1970s, together with the existence of a variety of translation practices in the U.S., highlighted the need to have a single method of foreign currency translation. Multinational corporations (MNCs) engage in transactions in different countries where they hold assets and have financial obligations. In order to consolidate financial statements from foreign countries, MNCs first have to convert the statements into

American dollars using a given rate of exchange. However, since a major purpose of financial reporting is to provide comparable information to investors, a single translation method would be required of all MNCs. Realizing such a need for a common foreign currency translation method, the Financial Accounting Standards Board (FASB) earlier issued Statement of Financial Accounting Standard (SFAS) No. 8, Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements (1975).

SFAS No. 8 required that MNCs use the temporal method of translation and include translation gains and losses in determining their operating income. However, SFAS No. 8 was severely criticized by management who had to adopt it (Griffin, 1982). They believed that implementing SFAS No. 8 caused volatility in reported earnings (Kelly, 1985), which led to lower stock prices (Choi, Love, & Worthley, 1978; Stanley & Stanley, 1978).

Subsequently, as a direct response to the criticisms, the Board issued the exposure draft to Statement of Financial Accounting Standard (SFAS) No. 52, Foreign Currency Translation on August 28, 1980. Among other things, the exposure draft allowed: (1) foreign subsidiary financial statements to be stated in the subsidiary's "functional currency" and then translated into U.S. dollar using the current rate, and (2) MNCs not to report translation gains and losses in current income.

The concept of functional currency was not adequately defined in the exposure draft of August 28, 1980. In most cases it was erroneously presumed to be the currency of the country where a subsidiary is located and the books of record are maintained. This led to confusion and frustration among managers, many of whom maintained their books away from the site of their operations. The Board responded by issuing the Revised Exposure Draft to Statement of Financial Accounting Standard No. 52, on June 30, 1981.

The revised exposure draft (the exposure draft to SFAS No. 52, hereafter) defined functional currency as "the currency of the primary environment in which an entity operates and generates net cash flows". In addition, several factors to be considered in determining a functional currency were listed. However, management was left with the authority to decide on a subsidiary's functional currency.

After deciding on a subsidiary's functional currency, it was easy for managers to estimate the likely company-specific financial impact of the standard change. However, it remained difficult for non-insiders to figure out the relevant functional currency and thereby the possible financial implications. Thus, insiders could benefit from their advance knowledge of the relevant functional currency and when their particular companies would adopt SFAS No. 52. Moreover, managers had the discretion to adopt SFAS NO. 52 early in 1981 (in non-inflationary areas) or to wait until 1982 or 1983 when it became mandatory. Finally, their easy access to company records provides them with the details of the specific financial implications of the adoption when it happened. In sum, to the extent that an early knowledge of translated financial statements of foreign subsidiaries constitute tradable information insiders definitely had an advantage in connection with SFAS No. 52. The question is to what degree can one detect insiders' use of such information. We propose to study their trading activities as a source of signal.

It has been shown that insiders act to maximize their personal wealth (Griffin, 1983; Watts & Zimmerman, 1978), and are known to trade on their inside accounting information (Larcker, Reder, & Simon, 1983; Penman, 1985). Also, MNCs which adopted SFAS No. 52 in 1981 generally did so for profit motives (Ayers, 1986; Gray, 1984; Griffin, 1983). Thus it is possible that insiders might have traded on the potential implications of SFAS No. 52. Specifically, since No. 52 implies more favorable financial ratios as a whole, its announcement could be associated with net buying behavior. This study empirically investigates that possibility by examining the insiders' stock trading behavior upon the release of the exposure draft to SFAS No. 52 on June 30, 1981.

Efficient Market Hypothesis (EMH) and Foreign Currency Translation Information

In the last two decades, most empirical studies of foreign currency translation have examined either stock-market or management reaction to accounting standard changes. Stock-market reaction studies investigate the association between the release of actual or proposed accounting standards (eg. SFAS No.8 and SFAS No. 52) and changes in stock prices. These studies are based on the semi-strong form of the Efficient Market Hypothesis (EMH) which states that the stock market reacts quickly to publicly available information, more quickly than to privately held information (the strong-form of the hypothesis) (Hillmer & Yu, 1979). According to Fama (1970), an efficient capital market is one in which (1) security prices fully reflect all relevant available information, (2) security prices react instantaneously and unbiasedly to new information, and (3) no one earns unexpected high returns consistently. That is, if the change in the standard carries any new information, the market will, quickly and unbiasedly, impound it in security prices.

Unfortunately, there have been conflicting price-related results with regard to foreign currency translation. For example, using non-standardized residuals, Dukes (1978), found no significant price reaction to SFAS No. 8. Zeibart and Kim (1987), on the other hand, using standardized cumulative average residuals, found statistically significant market reaction to the same standard change. Zeibart and Kim have attributed the conflict in the results to differences in the methods used. Nevertheless, this conflict casts some doubt on the efficiency of the capital market (even in the semi-strong-form) when it comes to impounding information from foreign currency translation.

Price Reactions and Average Results

An important aspect of these market reaction studies is that only average market reactions are reported. Studies which use the EMH to predict market reaction (e.g., Dukes, 1978; Markin, 1978; Shank, Dillard, & Murdock, 1979; Zeibart & Kim, 1987) primarily look at how various capital market participants (professional security analyst, company insiders, one-time naive investor, etc.) react to a change in accounting rules. These studies do not provide insights into the reaction of individual investors to changes in accounting standards. Individual investor reaction can be gauged by changes in security trading volume. Beaver (1968) clarified this point as follows:

> An important distinction between the price and volume tests is that the former reflects changes in the expectations of the market as a whole while the latter reflects changes in the expectations of individual investors (p. 69).

Insiders' investment decisions influence those of non-insiders (Baesel & Stein 1979; Givoly & Palmon, 1985, Penman, 1982, 1985). Consequently, examining the trading behavior of insiders would thus provide further insights into how a change in the accounting rule would affect price structure. For the present study, "insiders" consist of corporate officers, directors, and large stockholders (Givoly & Palmon, 1985).

Managers as Passive Market Participants

The reactions of management to SFAS No. 8 and SFAS No. 52 have been studied previously. Available results show that management either lobbied SFAS No. 8 to influence it before its implementation (Kelly, 1982, 1985), and/or carried out changes in their financing or operating practices to counteract the anticipated negative impact of the Standard (Evans, Folks, & Jilling, 1978; Shank, Dillard, & Murdock, 1979). Studies examining management reaction to SFAS No. 52 have generally focused on the determinants of managements' choices between early adoption of the Standard in 1981 and adoption when the rule became mandatory in 1983. Maximization of reported earnings, and therefore the value of the firm, has been found to be the major driving force behind the managers' choices (see for example, Ayers, 1986; Gray, 1984; Griffin, 1983).

But maximizing the value of the firm leads to maximization of the wealth of all common stockholders. While the manager is hired to do just that, he/she has also been reported to act so as to maximize his/her personal wealth (See Griffin, 1982; Watts & Zimmerman, 1978).

Thus, earlier studies have looked at the manager as a passive participant in the capital market, one who indirectly influences the market by providing financial statements. Later studies have incorporated the assumption that managers operate to maximize their personal wealth. Managers, therefore, need to be viewed as direct, active, and selfish participants of the capital market.

The purpose of this study is to examine the reaction of insiders to the foreign currency translation accounting standard change.

SFAS No. 8 and Earnings Volatility

On December 31, 1974, the Financial Accounting Standards Board issued the exposure draft to Statement of Financial Accounting Standard No. 8, Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements. The new Standard recommended the temporal method of translation with the following major provisions:

1. Fixed assets, inventory, and other non-monetary assets be translated at the historical rates prevailing at the time of their acquisition.
2. Monetary assets and monetary liabilities (including the long-term debt) be translated using the rate prevailing on the financial statement date.
3. Any gains or losses derived from the above translation process must be included in the current income statement (i.e. be recognized immediately whether realized or not).

Translating inventory and facilities at the historical rate, and the long-term debt at the current rate, would typically lead to a net monetary liability position (an accounting exposure). A net monetary liability position was a major issue for those companies which had debts contracted when the exchange rates were substantially lower. The foreign debt could be a huge figure in currencies such as Swiss francs. Fortunately, the significance of translating the inventory and the fixed assets at the different rates was significantly reduced in 1975 when the U.S. dollar strengthened against most foreign currencies

(Rodriguez, 1977). With a strong dollar against other currencies, it became relatively cheaper to finance a net monetary liability resulting from a foreign currency translation.

What turned out to be a more serious criticism against SFAS No. 8 was the requirement to include the exchange gains and losses in the determination of current income. Prior to the new rule, many MNCs used to recognize exchange gains only when realized. Others netted the gains against the losses and deferred the remainder (using reserve accounts). For such companies, implementing SFAS No. 8 increased volatility of reported earnings (Griffin, 1982; Kelly, 1985). James Sherwood (1976), President of Sea Containers Inc., illustrated the problem of earnings volatility as follows:

> Our first quarter 1975 pre-tax earnings from operations were up 17% over the year earlier period, but our net earnings after exchange gains and losses were up a staggering 192%; we are obliged to report earnings and losses that don't exist (p. 30).

By the same token, the increased volatility in reported earnings was alleged to lead to a negative effect on the value of stock of those firm required to adopt the Standard (Choi et al., 1978, p. 81; Stanley & Stanley, 1978). According to Griffin's (1982) empirical study, adopting SFAS No. 8 met with much opposition from "corporate managers and others from industry who...were unanimously critical of the standard, and called for major changes in foreign currency practices" (p. 51).

Even if the inclusion of the translation gains and losses in determining current income might not have affected the companies' cash flows per se, managers had reasons to be concerned about volatility in reported earnings. First, managers were not sure that investors would be able to distinguish earnings variability caused by economic conditions from variability caused by the change in Accounting Standard. Secondly, management compensation contracts are often tied to reported earnings. Fluctuation of reported earnings would thus imply fluctuation of management compensation. Volatility of reported earnings would thus affect managers, not only as active participants in the stock market (by lowering their capital gains), but also as employees of their companies.

SFAS No. 52 and Insider Trading

Statement of Financial Accounting Standard No. 52 Foreign Currency Translation was later issued to replace SFAS No. 8. This new Standard prescribed the Current rate method where the functional currency of a subsidiary was a foreign currency and the temporal method where the functional currency was the U.S. dollar. Under the Current Rate method:

1. All balance sheet items are translated at the current rate and;
2. Translation gains and losses are not to be included in the determination of income. They are accumulated in an adjustment account in the owners' equity section on the

balance sheet.

A popular belief was that the adoption of SFAS No. 52 would (a) reduce the volatility of reported earnings and, therefore, (b) lead to a favorable impact on the stock of the firms affected (Dukes, 1981; Largay, 1983). Kelly (1982) argued that management's reaction to an accounting standard that increases the variability of reported earnings depends on management's attitude towards risk. Also, Kelly asserted that, while a risk-averse manager is likely to oppose it, a risk-seeking manager is likely to support it. This study therefore assumes that all managers are risk-averse for the following reasons: (1) the research cited earlier in the study provides evidence that managers in general were opposed to SFAS No. 8 mainly because it increased the volatility of reported earnings allegedly leading to negative evaluations of the firm; and (2) volatile earnings affect the compensation contracts of managers.

Generally, insiders of firms have been found to possess and trade on company inside information in general (Baesel & Stein, 1979; Finnerty, 1976a, 1976b; Jaffe, 1974), and on accounting information in particular (Larcker, Reder, & Simon, 1983; Penman, 1980, 1982). Penman (1985) argues that while "there is little theory to indicate what aspect of insiders' trades relates to the information they possess, ... (they) ostensibly ... buy when they have 'favorable' information and sell when they have 'unfavorable' information" (p. 5). Company officials are presumed to have superior information-gathering opportunities and easier access to funds to process that information than outside investors (Morse, 1980). This assumption has stimulated interest of non-insiders in the trading activities of insiders. Givoly and Palmon (1985) confirm the existence of such interest as follows:

> It is widely accepted that insiders' activities generate interest and increase the trading volume of their market participants. Most financial analysts keep track of insider trading, and some advisory services specialize in gauging insiders' transactions. Financial journals and newspapers are preoccupied with trends in insider trading. The Wall Street Journal alone published not less than 50 articles and reports dealing with insider trading during 1979 and 1980 (p. 70).

MOTIVATION FOR THE STUDY

According to the FASB's Statement of Financial Accounting Concepts No. 1, Objectives of Financial Reporting by Business Enterprises, (1978), a major objective of financial accounting is to provide information that may help investors make their investment decisions. Because some investors base their investment decisions on the trading activities of insiders, a study of insiders provides a step toward improving investment information for investors.

By influencing the investment decisions of non-insiders, insider trading activities affect the allocation of capital and income, the integrity of the security market, and social welfare. Thus, the accounting profession, the investment community, and public policy makers all stand to benefit from a better understanding of the trading reactions of insiders to an accounting standard change such as the proposed switch from SFAS No. 8 to SFAS No. 52.

Another motivation for this study is to deviate from the past trend of research on foreign currency translation where managers have been treated as inactive participants in the market. This study treats managers as active, selfish participants in such market.

The last purpose of this study is to find out if the magnitude of insider trading volume during the test period was associated with selected company attributes (size, leverage,and control-type) commonly hypothesized in the literature. Identification of such a relationship between ex ante variables and the magnitude of the trading volume associated with an accounting standard change may enable accounting regulators to anticipate how the impact of such a standard change will differ across MNCs in the future.

STATEMENT OF THE PROBLEM

This study views corporate managers as acting in a self-interested manner and investigates whether the switch from SFAS No. 8 to SFAS No. 52 provided the impetus for insiders to engage in any abnormal net buying behavior. As stated earlier, managers could use their advance knowledge of the relevant functional currency, when their particular companies would adopt the Standard, together with their easy access to the details of the specific financial implications of the adoption to their personal advantage. That hypothesis is tested here. Specifically, the study investigates (1) whether the proposed change from SFAS NO. 8 to SFAS No. 52 provided insiders with enough motivation to engage in abnormal insider trading, and (2) the extent to which some firm characteristics (firm size, leverage,and control-type) could explain the detected insider trading behavior during the test dates.

ORGANIZATION OF THE STUDY

The rest of this study is divided into four chapters. Chapter II reviews the relevant literature and develops the research hypotheses to be tested. Chapter III discusses the research design and methods used to test the hypotheses. Chapter IV presents and analyzes the empirical results, and Chapter V discusses the results and their implications.

CHAPTER II

REVIEW OF THE LITERATURE

INTRODUCTION

This chapter reviews the empirical research and the theoretical development relevant to the issues discussed in Chapter I. It is divided into the following five main sections: (1) Translation and Reporting Problems Prior to SFAS No. 8, (2) SFAS No. 8 Studies, (3) SFAS No. 52 Studies, (4) Insider Trading Studies, and (5) Company Characteristics and Management Behavior. Each of these sections reviews relevant previous research and based on those reviews, testable hypotheses are developed. The final section summarizes the hypotheses generated.

TRANSLATION AND REPORTING PROBLEMS PRIOR TO SFAS No. 8

Prior to introduction of SFAS No. 8 by the Financial Accounting Standards Board in October 1975, there were two controversial issues: the best method for translating foreign currency financial statements and how to report the resulting translation gains and losses.

The following four methods of foreign currency translation were used at the time: (1) current/non-current, (2) monetary/non-monetary, (3) temporal, and (4) current rate method (Rezaee, 1985). MNCs had the option of reporting translation gains or losses in the balance sheet or in the income statement. Appendix A provides more details about these translation methods. Thus, studies in foreign currency translation prior to SFAS No. 8 primarily analyzed the problems associated with the existing translation methods, and suggested alternative ways of overcoming such problems. Connor (1972) compared the different methods of translation at the time, and expressed concern over MNCs' potential manipulation of earnings with the use of different translation methods. Connor proposed the adoption of a single current rate method of foreign currency translation as a means of solving the problem.

Combes and Houghton (1973) summarized a survey by the Financial Executives Institute of 45 MNCs based in the U.S. The results of the survey showed that MNCs did not comply with the prevailing translation standards. Combes and Houghton recommended that a new standard be introduced. It was such discontent with the existing translation and reporting conditions that led to the introduction of SFAS No. 8 in 1975.

SFAS No. 8 STUDIES

The major empirical studies on SFAS No. 8 have examined market reaction and/or corporate management reaction to the standard. While capital market reaction has been studied through security price changes, corporate management reaction has been gauged through the various steps that managers take to influence the impact of the Standards before or after they are adopted. For example, lobbying was used to influence or prevent the enactment of the Standard while changes in exchange risk management practices were used to neutralize the impact of the implementation of SFAS No. 8 on the value of the firm.

Capital Market Reactions to SFAS No. 8

Dukes (1978) investigated whether, in general, the common stock security returns of MNCs were significantly affected by the issuance and implementation of SFAS No. 8. He compared the monthly returns of MNCs with those of similar domestic firms. He carried out three different tests covering different stability levels of exchange rates: (1) January 1968 to December 1969-a period of relative stability in foreign exchange rates; (2) January 1970 to December 1974-a period of wide variability in foreign exchange rate; and (3) January 1975 to December 1976-a period during which the standard was issued and first implemented. Although Dukes' study did not directly examine the informational content of any specific accounting numbers resulting from the new standard, the results of the study showed no significant difference in returns between the multinational firms and the domestic firms. The study concluded that SFAS No. 8 had no statistically significant impact.

Markin (1978) examined whether the issuance of SFAS No. 8 led to any abnormal returns to common shares. He studied three groups of firms over five periods in time. The first group were the MNCs which were particularly sensitive to the impact from SFAS No. 8; the second group were those firms that were moderately sensitive to the impact of SFAS No. 8; and the third was a control group of tracking firms. Observed behavior of these firms' securities were tested during five periods of varying degrees of floating intensity: (1) January 7, 1970 to August 11, 1971 was a period of "fixed" exchange rates; (2) August 25, 1971 to March 21, 1973 was a "transition" period; (3) April 4, 1973 to October 15, 1975 was a "floating without SFAS No. 8" period; (4) October 22, 1975 to March 31, 1976 was a "floating with SFAS No. 8" expected period; while (5) April 7, 1976 to March 1977 was a floating "after SFAS No. 8" period. Using weekly data and the market model, Markin found that SFAS No. 8 had an impact on the prices of MNCs' shares in the "sensitive" group during the "after SFAS No. 8" period. These findings led him to conclude that the share prices in the sensitive group were depressed by an increase in their perceived risk.

Shank, Dillard, and Murdock (1979) investigated, among other things, whether the adoption of SFAS No. 8, in the absence of any change in the underlying economic factors, had an impact on the security prices of those MNCs which adopted the Standard. They defined change in underlying economic factors as managements' change in their deferral practices from pre-SFAS No. 8 practices. In other words, they attempted to measure market reaction due to the adoption of SFAS No. 8 (and no change in economic factors) by holding constant any change in deferral practices. Their design classified firms into four categories: (1) SFAS No. 8 required change of translation (from current/non-current or C/NC to temporal) and change of deferral practices; (2) SFAS No. 8 required a change of translation method only (from C/NC to temporal); (3) SFAS No. 8 required change of deferral practices only; and (4) SFAS No. 8 did not require a change of either translation method or deferral practices.

Firms in the first three categories were experimental firms and were matched with control firms in category four by industry, size and risk class. They formed experimental and control portfolios and performed three different tests around the release date of SFAS No. 8 for differences in reaction to SFAS No. 8 between experimental and control firms. The authors examined (1) how betas changed before and after the release of SFAS No. 8, their hypothesis being that the higher the beta, the higher the stock price (to compensate the high risk associated with the stock); (2) levels of change in average sample variance of beta, the hypothesis being that the more the dispersion the more the impact; (3) any "abnormal performance" in the security prices; and (4) any change in the price-earnings ratios. They reported the following results: (1) all post-SFAS No. 8 betas were higher than the pre-SFAS No.8 betas. However, the differential increases were not significantly different at the 5% level. (2) the dispersion of the average beta of experimental firms declined as much as that of the control firms. (3) The returns of firms affected by SFAS No. 8 were not significantly lower than those of control firms. (4) The price-earning ratios of the experimental firms declined as much as did those of the control firms. Based on these results, they concluded that the market reaction observed was triggered by general economic factors rather than by implementation of SFAS No. 8.

Ziebart and Kim (1987) used standardized abnormal returns to evaluate the results of past studies which had generally failed to detect significantly negative market price reaction to the issuance of SFAS No. 8. Working with a sample of 286 MNCs, they classified those firms into nine groups based on the method of foreign currency reporting used prior to SFAS No. 8. They also identified ten events which preceded the issuance of both SFAS No. 8 and SFAS No. 52 (the first 3 being directly related to SFAS No. 8 and the last seven to SFAS No. 52). To test the market reaction to SFAS No. 8, they computed the average standardized cumulative abnormal returns (SCAR) for each of the three test periods over a period of six weeks prior to the week of the event?(i.e., week -6 through week +1). For the three event periods, a combined SCAR across all three test periods was -3.3557 and was significant at .001 level for a one-tailed t-test. They concluded that SFAS No. 8 had a negative stock price reaction.

Corporate Management Reactions to SFAS No. 8

Evans, Folks, and Jilling (1978) used a questionnaire to study managements' reaction to the enactment of SFAS No. 8. Using a sample of 156 multinational firms, the authors found that managers reacted to SFAS No. 8 by changing their exchange risk management practices as a means of counteracting the negative impact of the standard. Specifically, 45 of the 156 admitted to having refrained from at least one overseas investment that they would otherwise have undertaken.

Generally, MNCs changed their dividend policies by adopting a policy that accelerated dividends from weak-currency subsidiaries so as to minimize the exposure. In addition, financial managers are reported to have reacted by overemphasizing the reported earnings impact of foreign exchange gains and losses as compared to other financial matters. Managers also generally tended to be convinced that exchange risk could best be dealt with by making use of a foreign exchange reserve account.

Shank, Dillard, and Murdock (1970) examined the reaction of managers of firms which had been affected by the enactment of SFAS No. 8. Using field interviews and questionnaires, the authors interviewed 25 senior financial managers of large MNCs which were likely to have been affected by the implementation of SFAS No. 8. Results of their study showed that managers had reacted to the enactment of the standard by making changes in their investment, financing, and management decisions. For example, (1) 52% of the firms changed the proportion of foreign debt in their debt capital structures to reduce their exposure, (2) 68% of the firms used forward markets transactions to cover translation exposure, and (3) another 16% considered active hedging of their earnings per share changes.

Kelly (1982) examined two issues related to management reaction to SFAS No. 8: (1) Whether managers who lobbied against the standard before its enactment also changed their financing or operating practices; (2) Whether the economic variables which measure the effect of an accounting change on managements' wealth are the ones which determined their (managers') decision to lobby and change their financing or operating activities in response to SFAS No. 8. The results of the test showed no statistically significant association between the two types of management reaction to SFAS No. 8. The economic variables identified to test the second relationship included (a) the incentive remuneration percentage, (b) leverage, (c) asset size, and (d) managements' proportional ownership. The association between these factors and managements' response to SFAS No.8 by either lobbying and/or changing financing or operating practices was studied using t-tests and probit analysis. The results on lobbying activities showed that only the differences in group means for asset size and stock ownership were statistically significant. On the one hand, firms that lobbied against SFAS No. 8 were characterized by large asset size and lower management stock ownership. On the other hand, only the differences in group means of incentive remuneration percentage and asset size were statistically significant. Firms that changed financing or operating activities were characterized by lower proportional incentive remuneration and larger asset size. Finally, firms which both lobbied and changed their financing or operating practices were characterized by greater leverage, large asset size, and lower management stock ownership. The author concluded that economic factors were important to lobbying positions and, when strong enough, to both lobbying and financing or operating changes in reaction to SFAS No.8.

In another study, Kelly (1985) examined the extent to which management's decision to lobby the exposure draft to SFAS No. 8 in the form of comment letters was associated with management's ownership in their companies and their firm's leverage. Kelly argued that the anticipation of increased volatility in the firm's reported earnings due to implementation of SFAS No. 8 could have resulted in higher debt-related costs and/or negative share price reactions. Both effects would decrease the value of managements' wealth held in form of their stock. The author found that neither the leverage nor the management ownership variable was statistically significant. He obtained similar results even after controlling for firm size. Comparing this study with his earlier (Kelly, 1982) study, Kelly found that the results were consistent as far as management ownership was concerned but differed with regard to leverage. He concluded that this difference was due to the fact that he controlled for firm size in the second study but not in the first one.

Griffin (1982) investigated whether the managers who had reacted to SFAS No. 8 by sending in letters of comment had suffered any greater swings in their pre-tax income than did those who did not respond. By comparing the reported exchange gains and losses (standardized by pre-tax income) of those companies which had been affected by SFAS No. 8 with the same financial variable of a broad sample of MNCs that did not react, the author concluded that there was limited evidence that the managers who reacted to SFAS No. 8 suffered greater swings in their pre-tax income than did those managers that did not react. Griffin further tested for company characteristics of the managers who reacted. He found that firm size and leverage were important explanatory factors of managers' propensity to react in the form of submitting comment letters.

Wilner's (1982) study examined the information inductance of SFAS No. 8. Using a controlled behavioral experiment, he investigated management response to SFAS No. 8. He used an accounting variable and an organizational climate variable as independent variables to explain a dependent variable which was a trade-off between cash flow consequences to the firm and net income effect to the firm. The results of his test led him to conclude that managers would sacrifice cash flows in making decisions if the net income effects are disadvantageous to their own position.

SFAS No. 52 STUDIES

Statement of Financial Accounting Standard (SFAS) No. 52 was pronounced in 1981, but it did not become mandatory until 1983. Companies were left the option of applying the Standard either to their 1981 or to their 1982 annual reports. The major empirical work about this regulation has taken two forms (1) those investigating the market reaction to the rule, and (2) those focusing on managements' responses to the standard, especially to the option of an early or late adoption during the phase-in period.

Capital Market Reactions to SFAS No. 52

Brown and Brandi (1986) addressed the question of whether an early adoption of SFAS No. 52 led to any statistically significant stock price reaction. They used a sample of 190 multinational firms of which 87 adopted the new standard in 1981 and 103 did not. They computed cumulative average residuals for 40 weeks around the year-end in order to test whether there were any significant differences in the cumulative average residuals of the two groups of companies. The cumulative average residuals for the adopt-early group steadily increased from mid-August through the third quarter, indicating the anticipation of higher earnings. The cumulative average residuals for the non-adopt-early group remained negative for the entire 43-week period. Comparison of the CAR of the two groups over the period of forty-three-weeks indicates both a long-term and a short-term reaction to the change in accounting standards. These results led the authors to suggest that the market did not recognize the increased earnings due to an accounting change.

Ziebart and Kim (1987) re-examined the issue of whether the issuance of SFAS No. 52 led to any stock price reaction. Identifying seven of the ten events that had preceded the issuance of the standard, they used the average standardized cumulative abnormal return across all the sample firms. For the seven events there was an overall positive reaction which was significant. They concluded that the market reacted positively to SFAS No. 52.

Corporate Management Reactions to SFAS No. 52

An increasing number of empirical studies on the new rule have attempted to explain and/or predict management's response to the rule's phase-in period (1981-1983) when companies had the option of either adopting the new standard (ie. to be "early adopters, " or not to adopt it and be "not-early-adopters") until it became mandatory.

Griffin (1983) addressed the issue of what motivates managers to respond to an accounting standard change proposal such as SFAS No. 52. Hypothesizing that managers act in a self-interested manner, preferring accounting proposals which increase rather than diminish their wealth, he identified factors which affect a manager's welfare and tested them empirically. Specifically, he selected foreign currency adjustment and three financial variables (size, return, and leverage) as possible determinants of managements' interest in foreign currency accounting rules. He worked with a sample of 452 firms with 156 which submitted comments to FASB regarding SFAS No. 52, the "respondents", and 296 which did not respond, the "non-respondents". The results of the univariate analysis showed that, relative to other multinationals, SFAS No. 52 respondents appeared to be large, less profitable, and responded earlier compared with SFAS No. 8. These results were statistically significant and consistent with the hypothesis outlined at the outset. However, the results of the discriminant analysis of the predictive ability of the model showed only a modest incremental ability to predict those firms likely to respond to SFAS No. 52 in the form of submitting letters of comment.

Gray (1984) evaluated managements' choices between implementation of SFAS No. 52 and continuing to apply SFAS No. 8 during the period (1981-83) when the adoption of SFAS No. 52 was still optional. He examined the annual reports of the 40 largest industrial and the 27 largest commercial banking corporations. His conclusion was that the majority of the firms studies selected that method of translation which increased their reported income. Gray's conclusion was consistent with Griffin's hypothesis that managers would prefer accounting rules that enhance rather than diminish their utility.

Ayres (1986) examined the characteristics of firms that chose to adopt SFAS No. 52 early (i.e. in 1981) given that they had the option of a later adoption (i.e. in 1982 to 1983). Hypothesizing (in alternate) that firms adopted SFAS No. 52 early so as to increase their reported earnings, he tested for the existence of systematic differences among firms which chose different adoption dates for SFAS No. 52. He specifically examined the relationship between adoption date and (1) earnings before adoption of SFAS No. 52, (2) percentage of stock held by management, (3) firm size, (4) interest coverage, and (5) dividend payout restrictions. His sample of 243 firms consisted of 103 firms adopting in 1981, 91 firms adopting in 1982, and 38 firms adopting in 1983. A Mann-Whitney U-test was conducted to measure the relationship between the explanatory variables and the adoption year. All variables were significantly different except the percentage of stock held by management. In a multivariate analysis, a logistic model was used to test the overall significance of the variables in the model. The results were consistent with those of the univariate analysis. All the coefficients had the predicted sign. The author concluded that firms choosing to adopt SFAS No. 52 at the earliest possible date (1) had a lower percentage of stock owned by directors and officers (i.e. manager-controlled firms), (2) had smaller percentage earnings increases from the previous year, (3) were small, and (4) were closer to debt and dividend constraints than those that adopted the standard later.

Benjamin et al. (1986) investigated the question of whether the adoption of SFAS No. 52 during the phase-in period (1981-1983) had any impact on foreign currency reporting for multinationals. The study analyzed the annual reports of 400 Fortune 1,000 companies for each year of the adoption period. The analysis was carried out in two phases. In the first phase, they assessed the impact of SFAS No. 52 on three financial measures: (1) earnings per share, (2) income from continuing operations, and (3) stockholders' equity. The second phase examined the effect of the standard on the rankings of adopting companies with respect to two rates of return measures: (1) earnings per share, and (2) rate of return on assets. The results of the first phase of the analysis revealed that the mean change in EPS was 7.8% in 1981, 6.0% in 1982, and -1.4% in 1983. The results were not surprising since the adoption was optional in the first two years. The impact on stockholders' equity was negative in 1981 and 1982 and positive in 1983, with most of the changes being between -5 and +5 percent. These results provided evidence consistent with the expected small magnitude of the cumulative translation adjustment in relation to the total Stockholders' equity for most adopting firms. As for the impact on net income, companies which voluntarily adopted the standard in 1981 and 1982 had an impact of 9% and 5% respectively for the sample.

The second phase of the analysis assessed the impact of the adoption of SFAS No. 52 on relative performance rankings of firms that adopted the standard. The results were as follows. The rho values were all in excess of 98% and significant. These led the authors to conclude that the adoption of SFAS No. 52 had a negligible impact on the relative performance rankings of the firms that adopted the standard.

Capital Market Reaction to SFAS No. 8 and SFAS No. 52

Studies which examined whether SFAS No. 8 and SFAS No. 52 was associated with any market reaction generally investigated the performance of the stock of their sample around the date of the exposure drafts and/or the dates of the release of the standard. Unfortunately, these studies have produced conflicting results, leading to doubts about the efficiency of the capital market (even in the semi-strong-form). Moreover, these market studies report average market reactions. Obviously the reaction of a professional financial analyst and that of a naive occasional investor to the same information are unlikely to be the same. And since the reaction of some of these groups has been said to influence future decisions of other groups, this lays ground for a need to focus on the trading behavior of smaller, more homogeneous groups such as that of corporate insiders. So, while market reaction studies reviewed above are not directly related to this study, they provide ground for it.

Corporate Management Reaction to SFAS No. 8 and SFAS No. 52

The second group of studies reviewed is that of management reaction to SFAS No. 8 and SFAS No. 52. In these studies, management reaction took the form of either lobbying a standard to try to influence it before its enactment, or by carrying out changes in their financing or operating practices with a view to counteract the anticipated negative impact of the new standard on the value of the firm. This management behavior has been reported particularly in connection with the introduction and implementation of SFAS No. 8. Studies examining management reaction to SFAS No. 52 have generally focused on investigating the determinants of managements' choice between adopting the standard early (in 1981) and later (in 1982 or 1983). The majority of these studies have reported maximization of reported earnings (and therefore the value of the firm) as having been the major driving force behind the managers' choices. But maximizing the value of the firm leads to maximization of the wealth of all common stockholders of the firm. While the manager is hired to do just that, he has also been reported to have acted to maximize his wealth rather than the investors' wealth.

It is evident that these studies have contributed to the understanding of management behavior as it relates to foreign currency translation regulation. However, they have failed to examine the manager as an active and direct participant in the capital market. Rather, they have looked at the manager as a behind-the-doors power, influencing the capital market through the information provided in the financial statements (for instance, after changing the financing or operating decisions; or by adopting SFAS No. 52 early). Thus, prior research has necessitated the need to study management behavior as an active and selfish participant of the capital market.

INSIDER TRADING STUDIES

Empirical studies on insider trading can be divided in two categories, (1) those providing evidence that insiders do indeed have superior information and trade on it, and (2) those that have applied the "insider trading theory" to accounting.

General Insider Trading Studies

Lorie and Niederhoffer (1968) investigated the question of whether insiders profited from exploiting their special knowledge; and if information on insider trading was of any value to outsiders. They broke their analysis into three questions: (1) Do insiders buy before the announcement of good news and sell before bad news? (2) Is there a relationship between intensive insider trading and subsequent price movements in stocks? (3) Does insider trading profitability differ among companies? They addressed the first question by conducting three analyses of insider trading before large price changes in stock (defined as 8% or more). In one of these analyses, they compared the number of purchases with the number of sales in the six months prior to the large price change. The odds in favor of a large increase were about 2.2 times as great when the number of purchases was greater. In another analysis they used the volume of purchases and sales in the six months following a large price change. They obtained some weak evidence in support of their first question. The second question of a relationship between intensive insider trading and subsequent price movements was tested as follows. They chose 30 stocks at random and calculated month-end prices for the period January 1961 to June 1964 for those stocks and for the Dow Jones Industrial on all occasions on which there were two or more insiders buying or selling. The results of the analysis indicated a strong relationship between intensive insider trading and price movements. The last question of insider profitability among companies was approached by comparing insider profitability between-sample and within-sample during two periods. Their conclusion on this question was that insiders of a given company do not tend to trade with superior success during consecutive time periods.

Jaffe (1974) investigated the question of whether insiders possessed superior information and if they traded on it. He initially worked with a sample of 952 securities undergoing specific insider trading events. He calculated the average residuals for month 1, the cumulative residual for month 1 to 2, and the cumulative residual of month 1 to month 8. The cumulative residuals rose within the eight months, half of which occurred in the first month. These results led him to conclude that insiders can predict short-term movements in stock prices better than they can predict long-term movements. He then broke the initial sample into two sub-samples to test for finer results. Using 370 securities of the original sample, he tested whether insiders traded larger blocks of stocks. The cumulative average residual and the t-values provided no support for the hypothesis. The third sample was used to further address Lorie and Niederhoffer's findings that intensive insider trading activity precedes significant stock price movements. He found that the residuals rose approximately 5% in eight months, 3% of which occurred in the last six months. The statistical tests were significant. Based on these results he concluded that insiders earned abnormal profits and that intensive insider trading preceded movements in stock prices.

Finnerty (1976b) addressed the question of whether an "average" insider (as opposed to an intensive insider) earned any abnormal profits. He tested the entire population of insiders on the NYSE for the period of January 1969 to December 1972. Using the market model, he compared the risk adjusted rates of return for the insider portfolios with the risk-adjusted rates of return for the market. The monthly insider abnormal returns for the "buy" portfolios were positive and significant, implying that insiders earned excess returns.

However, most of the abnormal returns occurred in the first and succeeding five months, implying that the information upon which insiders traded became public. On the other hand, the "sell" portfolios were negative and significant (except for two months) implying that insiders can outperform the market in selecting stocks. Based on these results, he concluded that the average insider performed better than the market.

Finnerty (1976a) used factor analysis and discriminant analysis to search for the existence of relationships between insiders' trading and the subsequent announcement of financial and accounting results. He used NYSE company data from the COMPUSTAT and insider trading data from the Official Summary. The factor analysis identified six financial and accounting variables which explained 67.4% of the variation in insiders' trading and the subsequent announcement of financial and accounting results. The discriminant analysis classified insiders either as buyers or as sellers. He found an association between insider selling and financial variables of large size, smaller earnings, and smaller dividends on one hand; and insider buying and smaller size, larger earnings, and larger dividends on the other. Based on these results, he concluded that, in their decisions to buy or sell, insiders rely on both the nature and magnitude of future financial and accounting information.

Baesel and Stein (1979) investigated the profitability of insider trading using the Canadian Toronto Stock Exchange data. They worked with three samples: (1) a randomly selected set of trades, (2) a set of trades by ordinary insiders, and (3) a set of insider trades by bank directors. They tested for abnormal returns among the trades of the directors and the ordinary insiders were positive over the 12-month holding periods. Over the period, the CAR for the bank directors was 7.8%, that of the ordinary insiders was 3.8%, while that of the control sample was near zero. The relative performance of the three groups was tested using normalized residuals. The normalized residuals were significantly different from zero. These results suggest that bank directors did better than ordinary insiders and that insiders in general outperformed the market. Their results also showed that most of the abnormal returns occurred after the trade and subsequent to when the data should have been made available to the public. This led them to question the efficiency of the market in the semi-strong form.

Givoly and Palmon (1985) examined the argument that the occurrence of insider trading (regardless of the cause) may lead to abnormal returns to the insiders in the period following their trades. Working with a sample of 68 relatively small companies from the American Stock Exchange (AMEX) for the period 1973-1975, they used the market model to test for the association between insider transactions and subsequent insider trading news disclosure. The cumulative abnormal returns over a period of 240 days following the transaction was 8.6%; the sell transaction yielded a cumulative average return of 11.53% over the same period. These abnormal returns were different from zero at the 5% level during the first 60 days. While these results were consistent with past findings that insiders earned abnormal returns, the authors found no association between insider trading activity and the subsequent disclosure of news.

Insider Trading Studies in Accounting

The previous subsection reviewed insider trading in general. This subsection reviews studies which have investigated insider trading on accounting information.

Keown and Pinkerton (1981) addressed two issues: (1) whether insiders traded on unannounced merger plans, and (2) whether regulation associated with an organized exchange acts as a deterrent to trading on insider information. They worked with a sample of 194 successfully acquired firms during the period 1975 to 1978, prior to the first public announcement of their proposed mergers. The sample of 194 was composed of 101 stocks listed on the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX), and 93 stocks traded on the Over-the-Counter Market. They calculated abnormal returns using the market model and daily data. The cumulative average residuals became positive 25 trading days prior to the announcement of the merger date. The daily average residuals were positive on 26 of the 27 days prior to the announcement day and were significantly different from zero on ten of the final eleven days prior to the announcement day. Based on those results, they concluded that there was substantial trading on insider information concerning the prospective merger, beginning about one month before the announcement date. Evidence of the existence of insider trading during the period preceding the announcement of mergers was further provided by a dramatic increase in the insider trading volume one, two, and three weeks prior to the announcement date. They finally examined the question of whether regulation of stock exchanges deters insider trading activities by comparing insider trading activities in stocks traded on regulated stock exchanges (NYSE and AMEX) with insider trading in stocks traded on the Over-the-Counter Market. The comparison revealed only minor movements in prices of either stock, and the movements were not statistically significant. The overall conclusion drawn by the authors was that insiders trade on non-public merger plans with or without stock exchange regulation.

Penman (1982) examined the links (1) between observed insider information and insider trading, and (2) between insider trading and information-dissemination activities. In particular, he investigated the security trading of corporate insiders around the time they made public announcements about their forecasts of annual earnings. He examined the links between observed insider information and insider trading by calculating the abnormal security returns associated with announcements of corporate earnings. Two major results emerged. (1) The abnormal returns associated with the publication of the forecasts were, on average, positive. (2) The values of the average residuals on days close to the Wall Street Journal date were significantly different from zero, and the dissemination of earnings forecasts by corporate managers appeared to be associated with significant revision in stock prices. On average, trading patterns were consistent with the direction of the effect of the announcement. Together, these results led the author to suggest that insiders use their inside forecast information in trading and time their trades relative to the forecast date.

In the same study, Penman (1982) gauged the link between insider trading and information dissemination by measuring abnormal returns to insiders from trading around a forecast disclosure. He assessed the abnormal returns earned by insiders on average from their trading and information dissemination activities by a (real-time) simulation of insiders trades using the cross-sectional data on abnormal returns and insider trading. His test of the relationship between abnormal returns and insider trading was a test of the hypothesis that the systematic risk (beta) equals zero. The estimate of the beta in all cases was positive and significantly different from zero, suggesting that within firms of similar sizes there was a positive relationship between the trading measures and abnormal returns associated with the forecast announcement. The overall evidence suggested that corporate insiders time their trades relative to announcements of their firms' earnings prospects. By trading to take advantage of the price revision resulting from those announcements, insiders earn abnormal returns to their information.

In a subsequent study, Penman (1985) compared the information content of insider trading and management earnings forecasts. The study viewed insider trading as a signal about managements' assessment of their firms' prospects just like earnings forecasts are. He worked with a sample of 737 management forecasts of annual earnings forecasts obtained from the Wall Street Journal for the years 1968-1973. Insider trading information of those firms were gathered from the Official Summary. Sorting firms into portfolios on the basis of the forecast and insider trading measures, he calculated estimates of realized returns on those portfolios as well as on a control portfolio of equivalent risk. The control portfolio was chosen with no consideration given to either earnings forecasts or insider trading. Results of the comparisons of realized returns on the three portfolios suggest that investment on the basis of knowledge of the signals (earnings forecast or insider information) is abnormally profitable. However, the comparison of insider trading measures and earnings forecast showed that insider trading measures do not have the discriminating power of the forecast in terms of ordering firms' realized returns.

Larcker, Reder, and Simon (1983) examined trades by insiders to investigate whether mandated accounting standards lead to economic consequences. Their empirical study focused on the exposure draft for Financial Accounting Standards Board (FASB) Statement No. 19, which was issued on July 18, 1977. The exposure draft required the successful effort (SE) method of accounting for exploratory oil and gas drilling. Their sample was made up of 83 of Lev's (1970) 86 firms. For each of these firms they calculated daily net insider trading by subtracting the number of shares insiders sold from the number of shares insiders purchased on each day in both the non-event period and the test period. The test period was made up of a 21-day period centering on the day of release of the exposure draft (July 18, 1977), while the non-event period was made up of a 71-day period centering around a day one year before the exposure draft. Net insider trading during the non-event period formed the normal or expected net insider trading against which they compared insider trading activities of both the Full-Cost (FC) and

Success Effort (SE) firms around the release of the exposure draft to test for any "unusual" insider trading activities. Their experimental design comprised of tests of between-sample (i.e. a comparison of FC insider trading to SE insider trading on the same trading days) and within-sample (i.e. a comparison of FC (SE) insider trading to the historical FC (SE) insider trading) analyses. The between-sample statistical analyses were performed using both parametric and nonparametric tests. The most statistically significant difference in insider trading existed in period five, the time period after the exposure draft was released. During this period, FC insiders were selling relative to the SE insiders, while the SE insiders were buying relative to the FC insiders. On the other hand, results of the within-sample statistical tests were that FC insiders were selling in the period after the exposure draft and that SE insiders were selling in the period before the exposure draft and buying in the period after the exposure draft. The overall conclusion of the authors was that there was abnormal or unusual and differential insider trading by FC and SE insiders after the exposure draft. They expressed difficulty in explaining why insider trading was on the whole detected to have taken place after, rather than before, the exposure draft.

Almost all the studies reviewed lead to the conclusion that insiders not only possess superior information about the future prospects of the firm, but that they also trade on that information to earn abnormal profits on their firm's stock. Those studies which applied the "insider trading theory" to accounting information have succeeded in providing evidence that insiders can and actually do trade and make excess profits on accounting information. The present research question is whether insiders traded on the possible financial statement implications of SFAS No. 52.

The Trading Volume Reaction to the Exposure Draft to SFAS No. 52

Studies reviewed thus far provide evidence confirming managements' concern about the volatility in earnings introduced by SFAS No. 8. For instance, they lobbied against the standard before its adoption (Kelly 1982, 1985). They changed their financing and operating decisions (Shank et al., 1979) and their risk management practices (Evans et al., 1978) in order to reduce the impact of the Standard.

As a direct response to those criticisms, the Board issued an exposure draft to SFAS No. 52 on June 30, 1981. Where the functional currency was the U.S. dollar, the Current rate method was to be used and the translation gains and losses would no longer be included in the income statement. Otherwise the temporal method would continue to be used and the translation gains and losses would be included in the determination of income. The new Statement eliminated the requirement to include translation gains and losses in the determination of current income.

But the Standard was not to be adopted by all MNCs at the same time. Managers were left the option of either to adopt the Standard early, in 1981, or wait until 1982 or 1983 when it became mandatory.

This situation increased the usual advantage of insiders over non-insiders in investment matters. They could use their advance knowledge of when their particular companies were going to adopt the standard and their easy access to the details of the specific financial implications of the adoption to make trades before the information became public.

Insiders have been reported to act so as to maximize their personal wealth (Griffin, 1983; Watts & Zimmerman, 1978). They are also known to trade on their inside accounting information (Larcker et al., 1983; Penman, 1985). Evidence is also abundant regarding the fact that those firms which adopted SFAS No. 52 in 1981 were profit motivated (Ayres, 1986; Gray, 1984; Griffin, 1983). Under such conditions, it is hypothesized that insiders take position to benefit from their private information. More specifically, they are likely to be net buyers of their own stocks to the extent that the insiders knew how favorably SFAS No. 52 would affect their forthcoming financial statements. These arguments have led to the following null and alternate hypotheses:

Ho1: The insiders of MNCs which switched from SFAS No. 8 to SFAS No. 52 in 1981 did not engage in any abnormal or unexpected net buying upon the release of exposure draft to SFAS No. 52.

Ha1: The insiders of MNCs which switched from SFAS No. 8 to SFAS No. 52 in 1981 engaged in abnormal or unexpected net buying upon the release of exposure draft to SFAS No. 52.

COMPANY CHARACTERISTICS

Studies which investigated management reaction to the two foreign currency translation standards identified certain company and industry characteristics associated with managements' propensity to react to new accounting rules. For example, Kelly (1982) found that firms which lobbied and changed their financing and operating activities in response to SFAS No. 8 were characterized by greater leverage, large asset size, and lower management stock ownership. The results of Kelly (1985) confirmed his earlier results with regard to management ownership. Griffin (1982) found that firm size and leverage were important explanatory factors of managements' propensity to react to SFAS No. 8. Griffin (1983) tested the ability of foreign currency adjustment and three financial variables - leverage, return, and firm size-to explain managements' interest in SFAS No. 52. He found that the three variables could explain management's interest in the Standard. Ayres (1986) found an association between managements' choice of an adoption date and ownership control, earnings change from previous period, firm size, and how far the firm was from debt and dividend constraints. This study examines the cross-sectional relationship between abnormal net insider trading found in the event-study analysis and three of each firm's characteristics (firm size, leverage, and control type). Specifically, a cross-sectional regression is used to explain each company's abnormal net insider trading behavior as a function of the company-specific variables during the test period.

Firm Size

Waymire (1985) investigated, among other things, the association between earnings volatility and firm size. He found that "Repeat Forecasters", firms which issue earnings forecast more frequently, are characterized by two main features: (1) they had less volatile earnings processes; and (2) they were larger in size, relative to "Non-repeat Forecasters'" firms which issue such projections on an infrequent basis. He also found that the earnings disclosure announcements of the larger firms appeared in the Wall Street Journal (WSJ) more often.

The implication of the frequent earnings disclosures and their frequent appearance in the WSJ is that insiders of large firms would have less inside information to trade on. Sophisticated financial analysts would use those frequent earnings forecasts to project future earnings contents of those large companies, leaving little "surprise" in those earnings on the announcement date. On the other hand, insiders of smaller firms with less frequent earnings forecast announcements would have relatively more inside information to trade on.

In effect, Waymire's evidence provides support for an inverse relationship between firm size and amount of non-public information that can be left for the insiders to trade on. Further support for an inverse relationship between the amount of inside information and firm size is provided by Atiase, 1985; and Bamber, 1987.

The company-specific financial implications of the proposed

Standard change were inside information by the time of the exposure draft to SFAS No. 52. But given the intensive information search in large firms, some of this information most likely leaked to outsiders in large MNCs. Consequently, relatively more inside information would be available in smaller MNCs to trade on than there would be in larger ones. This suggests that firm size is likely to be inversely related to the magnitude of the abnormal net insider trading detected during the test period. That is, the smaller the MNC, the higher the abnormal net insider trading volume. Variable Size is denoted X1 and is expected to have a negative regression coefficient. The variable X1 provides the test of the second research hypothesis. Thus the second hypothesis in the null and alternate forms, states:

Ho2 : There was no difference in net trading volume between the small and large firms upon the release of exposure draft to SFAS No. 52.

Ha2 : The smaller the size of a MNC, the higher the abnormal net insider trading volume upon the release of the exposure draft to SFAS No. 52.

Leverage

According to Dhaliwal (1980), managements' preference for an accounting Standard depends on the impact of that Standard on the amount and volatility of that firm's earnings. In addition to Dhaliwal, other studies (Kelly, 1982; Zmijewski & Hagerman, 1981) seem to support the proposition that, because managers of highly leveraged firms fear running into technical default on their loan agreement, they would not favor accounting standards which would cause a reduction in reported earnings or equity or increase the volatility of reported earnings.

Thus by implication, insiders of high-leveraged MNCs would support a Standard that decreased such volatility in reported earnings. Accordingly, since NO. 52 meant reduced earnings volatility, the insiders of highly leveraged firms would be net-buyers of their own stock more so than insiders of low-leveraged firms.

The variable leverage is denoted as X2 and provides a test for the third hypothesis. The regression coefficient for the variable is expected to be positive. The third hypothesis in the null and alternate forms thus is:

Ho3 : There was no difference in net insider trading between insiders of highly-leveraged and low-leveraged firms upon the release of the exposure draft to SFAS No. 52.

Ha3 : The more highly-leveraged a MNC is, the higher the abnormal net insider trading volume upon the release of the exposure draft to SFAS No. 52.

Control-Type

Smith (1976) classified firms as owner-controlled if one party owned 10% or more of the voting stock. He classified a firm as manager-controlled if no single block of stock greater than 5% was controlled by any single party. Smith (1976) hypothesized that shareholders of owner-controlled firms were more concerned about accounting methods which aim at minimizing taxes than about those that aim at stabilizing the reported earnings. He argued that this was so because the larger owners: (1) have access to more complete information in the firm; (2) have more complete knowledge of the decision-making process; and (3) have superior financial advice. By combining these three advantages, large owners end up knowing what financial and operating steps managers would take to handle volatile earnings. As a result, they would be left to worry about methods that aimed at minimizing taxes, an area normally managed from outside of the firm.

By implication, small stockholders of manager-controlled firms tend to get more worried about accounting changes that aim at stabilizing reported earnings. Smith (1976) further provided empirical evidence to support the hypothesis that manager-controlled firms are more likely than owner-controlled firms to make accounting policy decisions which smooth income. Smith's empirical evidence is consistent with that of Monsen, Chiu and Cooley (1969).

The switch from SFAS No. 8 to SFAS No. 52 was generally anticipated to reduce volatility of reported earnings. This accounting change is therefore likely to have found more support among insiders of manager-controlled MNCs than among insiders of owner-controlled MNCs. The support meant engaging in more net insider trading volumes.

The variable control-type is measured as the ratio of common stock held by insiders over total owners' equity. This variable is denoted X4 and is used to test the fourth hypothesis.

Since the ratio of common stock held by insiders over total owners' equity is smaller in manager-controlled than in owner-controlled MNCs, an inverse relationship is expected between that ratio and the magnitude of abnormal net insider trading volume. This variable is thus expected to have a negative regression coefficient. The fourth hypothesis, stated in the null and alternate forms, is:

Ho4 : There was no difference in net insider buying between manager-controlled and owner-controlled firms upon the release of the exposure draft to SFAS No. 52.

Ha4 : The smaller the control-type ratio, the higher the abnormal net insider trading volume around the release date of the exposure draft to SFAS No. 52.

SUMMARY OF HYPOTHESES

Ho1: The insiders of MNC's which switched from SFAS No.8 to SFAS No. 52 in 1981 did not engage in any abnormal or unexpected net buying upon the release of exposure draft to SFAS No. 52.

Ha1: The insiders of MNCs which switched from SFAS No. 8 to SFAS No. 52 in 1981 engaged in abnormal or unexpected net buying upon the release of exposure draft to SFAS No. 52.

Ho2 : There was no difference in net trading volume between the small and large firms upon the release of exposure draft to SFAS No. 52.

Ha2 : The smaller the size of a MNC, the higher the abnormal net insider trading volume around the release date of the exposure draft to SFAS No. 52.

Ho3 : There was no difference in net insider trading between insiders of highly-leveraged and low-leveraged firms upon the release of the exposure draft to SFAS No. 52.

Ha3 : The more highly-leveraged a MNC is, the higher the abnormal net insider trading volume around the release date of the exposure draft to SFAS No. 52.

Ho4 : There was no difference in net insider buying between manager-controlled and owner-controlled firms upon the release of the exposure draft to SFAS No. 52.

Ha4 : The smaller the control-type ratio, the higher the abnormal net insider trading volume around the release date of the exposure draft to SFAS No. 52.

Chapter III deals with the research design and the method employed to test the hypotheses posited in this chapter.

CHAPTER III

RESEARCH DESIGN AND METHOD

INTRODUCTION

This chapter presents the research design and the method used to test the hypotheses advanced in Chapter II. It is divided into four major sections: (1) Event Selection (2) Sample Selection, (3) Data Collection, (4) Event-Study Analysis, and (5) Cross-sectional Analysis.

EVENT SELECTION

This study analyzes insider reaction to the revised exposure draft to SFAS No. 52, released on June 30, 1981. The revised exposure draft was selected for a number of reasons:

1. It redefined the concept of functional currency in a way that enhanced the advantage of insiders over non- insiders in estimating the possible company-specific impact of the new Standard. It defined functional currency as the currency of the primary environment in which an entity operates and generates net cash flow. Only insiders would be able to know such environments. Note that this advantage was to last as long as non-insiders did not know the various functional currencies.

2. Prior researchers found the revised exposure draft to have led to some economic consequences. For example Rezaee (1985) and Kim (1985) each found a significant abnormal market reaction to the revised exposure draft for SFAS No. 52. Rezaee (1985) found the reaction on the day following the release date. Kim (1985) found that it started two weeks before and ending three weeks after the release date. Earlier, Lev & Ohlson (1982 p.261) argued that "empirically, an above-average volume reaction might often be positively correlated with an above-average price reaction". Therefore, it is not unreasonable to expect that the revised exposure draft led to abnormal volume reaction.
3. The "announcement date" for the revised exposure draft to SFAS No. 52 and the associated market reaction appear to be well defined. That is, the security market reaction occurred on July 1, 1981 (Razaee, 1985), or around June 30, 1981 (Kim 1985). In a similar case, Larcker et al. (1983, p.610, dealing with FASB No. 19) argue that "if economic consequences associated with a Standard give rise to insider trading, we expect this to occur in a fairly short time interval surrounding the announcement date".

Based on those reasons, this study examined insiders' trading activities upon the release of the revised exposure draft to SFAS No. 52.

SAMPLE SELECTION

An initial sample of 522 MNCs was identified from the samples used in Dukes (1978) and Griffin (1982). Dukes' study provided a sample of 479 firms, and Griffin's study provided an additional 43 firms. Each firm in these two samples meets these three criteria: (1) it was affected by either SFAS No. 8 or SFAS No. 52, (2) it was listed on the New York Stock Exchange, and (3) it had to file 10-K Forms with the SEC.

For this study, the following additional criteria were imposed to arrive at the final sample: (1) the MNC had to have adopted SFAS No. 8 as its foreign currency translation method prior to the release of the exposure draft to SFAS No. 52, (2) the MNC must have voluntarily used the current rate method in 1981, (3) the MNC's financial data must have been available on the Compustat Industrial Tape (1983) for years 1980 and 1981, (4) the MNC must not have announced earnings, dividends, or stock dividends during the critical period (ten days before and ten days after) surrounding the release of the exposure draft to SFAS No. 52 (June 30, 1981), and (5) the MNC's insider trading transactions were available on the machine readable Securities and Exchange Commission's Ownership Reporting System Master File (1975-85) Tape. (This tape was obtained from the National Archives in Washington, D.C.)

The rationale for imposing the five additional criteria is as follows. The first criterion was imposed to ensure that firms included in the sample switched from SFAS No. 8 to SFAS No. 52 in 1981. The second criterion was important because past research has shown that firms which voluntarily switched from SFAS No. 8 to SFAS No. 52 in 1981 were profit motivated (Gray, 1984; Griffin, 1983). Managers of those firms which adopted the standard in 1981 were, therefore, more likely to engage in insider trading activities than of those firms that adopted the standard only when it became mandatory. The third criterion was imposed to ensure that the required company characteristics data were available. The fourth criterion was imposed to ensure that there was no other information releases in the vicinity of the exposure draft release date to influence the insiders' stock trading activities. The fifth criterion was imposed to ensure that the stock trading information of the insiders was available.

Of the 522 firms in the initial sample, 80 did not appear on the 1983 Industrial Compustat tape and were eliminated. Of the remaining 442 firms, 81 did not have transactions of their insiders registered on the 1985 Ownership Reporting System Master File Tape and were eliminated. Of the remaining 361 firms, 181 were eliminated because they had 10 or fewer days of their trading activities reported on the insider trading tape during the entire 244 trading days used in the study. The number of 10 observations as the minimum acceptable number was arbitrarily chosen. This is consistent with Fama et al.(1969) who arbitrarily chose a minimum of 14 observations out of a possible maximum of 940.

This elimination process left 180 firms to test the principal hypothesis. The same firms (180) were used in testing for cross-sectional variations as discussed in Chapter II.

DATA COLLECTION

The primary data were individual insider's transactions. The insider trading data were collected from the machine readable Securities and Exchange Commission's Ownership Reporting System Master File (1975-85) Tape. These transaction data were for (1) a 21-day test period centered on June 30, 1981, the exposure draft date, and (2) the 223-day non-event period ending 46 days before the exposure draft date.

Insider Trading Data

The following data were collected for each MNC from the Ownership Reporting System (ORS) Master File Tape: Common shares bought, sold, or obtained as gift, exercise of options, exchange or conversion, or other acquisition or disposition, by all parties designated as "insiders," that is, (those parties required to report these transactions to the Securities and Exchange Commission), for each trading day during the 21-day test period and the 223-day non-event period.

For purposes of analyzing the insider trading activities, all forms of purchases and acquisitions were recorded as purchases while all forms of sales or dispositions were recorded as sales.

A firm was classified as owner-controlled if any single insider party owned 10% or more of total common stock, and classified as manager -controlled if no single insider party owned up to 10% of total common stock. Manager-controlled MNCs were so defined because the Tape does not report the 5% figure suggested by Smith (1976).

Company Data

For purposes of carrying out the cross-sectional tests on the three company characteristics variables, the following data were collected for each sample company (as at December 31, 1980) from the 1983 Industrial Compustat Tape: (1) total consolidated (book-value) assets, (2) total long-term debt, (3) total equity, and (4) total owners' equity.

THE EVENT-STUDY ANALYSIS

This section discusses the method used to investigate if insiders of the sample MNCs which adopted the Standard in 1981 engaged in any "abnormal" insider trading activities upon the release of the exposure draft.

The Critical Event

The focus of this study is on insider trading dealings upon the release of exposure draft to SFAS No. 52 on June 30, 1981. A 21-

trading day "test" period (June 16, 1981 to July 15, 1981) was used to test the event-study hypothesis developed in Chapter II. This test period is centered on the release date of June 30, 1981. If there was no leakage of the pending release of the exposure draft, then June 30 would be the only event date. But the analysis also examines the ten days prior to June 30 in order to detect any leaks about or anticipation of the release.

A 223-trading day "non-event" period (June 30, 1980 to April 15, 1981) is used to provide an assessment of insider trading in "normal" or "non-event" periods under the mean-adjusted method. The non-event and test periods are separated by a period of 46 trading days. The two trading periods are illustrated in Figure 1.

```
        Non-event Period                  Test-Period

   |                            |    |                    |
   |    223 Trading-days        |    |     Ta      |   Tb |
  -|----------------------------|----|-------------|------|--
6/30/80                   4/15/81 6/16/81    6/30/81   7/15/81
```

Figure 1. Non-event and Test periods used in the Event-Study Analysis

Ta = 10 trading days of potential leakage of release

Tb = 10 trading days after the release date.

Measurement of Net Insider Trading

Net insider trading for the sample MNCs and the whole market were measured using a modified version of Larcker et al.'s (1983) method as explained in the next section.

Company Net Insider Trading

Larcker et al. (1983) measured a firm's net insider trading (NIT) as the difference between the number of shares insiders in firm i sold and the number of shares they bought on day t. They thus defined Net Insider Trading as follows:

$$[\text{Net Insider Trading}]_{it} = [B_{it} - S_{it}] \quad \text{.........} \quad (1)$$

where

i = company index,

t = trading day index,

B_{it} = number of shares purchased by insiders of company i on day t,

S_{it} = number of shares sold by insiders of company i on day t,

This study adopted Larcker et al.'s measure of NIT with one modification. The difference (B_{it} - S_{it}) was standardized by the number of shares held by insiders of company i on the last day, t, of the previous month (H_{it}). The standardization procedure can be justified on the following grounds. First, the ratio measure of net insider trading (NIT_{it}) permits comparison among MNCs whose normal trading volumes differ substantially in magnitude. Secondly, the use of absolute, rather than relative differences between purchases and sales of shares might cause MNCs with large trading volumes to dominate any inter-firm analysis.

The (NITit) ratio was therefore calculated for each sample MNC as follows:

$$NITit = \frac{Bit - Sit}{Hit} \quad \ldots\ldots\ldots\ldots\ldots(2)$$

where

i , t , Bit, and Sit are defined as in (1) above, while

Hit = number of shares held by insiders of company i, on last trading day, t, of the previous month.

A positive (negative) ratio for net insider trading (NITit) means that insiders of company i were net buyers (sellers) on day t.

Market Net Insider Trading
(Adjusting for Market-wide Factors)

Beaver (1968) found a significant positive relationship between an individual firm's trading volume and overall market volume. The general market influences must therefore be considered in any definition of normal trading volume. The daily market net insider trading (NITmt) is defined as follows:

$$NITmt = \frac{\begin{matrix}\textbf{[Number of Shares Purchased]} \\ \textbf{[by all NYSE insiders]} \\ \textbf{[on day t]}\end{matrix} - \begin{matrix}\textbf{[Number of Shares Sold]} \\ \textbf{[by all NYSE insiders]} \\ \textbf{[on day t]}\end{matrix}}{\begin{matrix}\textbf{[Number of Shares Outstanding Held by all NYSE Insiders]} \\ \textbf{[on the last trading day of the previous month]}\end{matrix}}$$

From this, the "expected" trading volume can be modelled as a linear function of the NITmt. In particular, the adjustment for the market-wide trading effect can be expressed as:

$$E(NIT_{it}) = \alpha_i + \beta_i(NIT_{mt}) \text{ .... } (3)$$

where,

E(NITit) = the "normal" net insider trading in security i on day t,

E(NITmt) = the "normal" market net insider trading on day t,

α_i , β_i = parameters of the generation model

Equation (3) can be estimated using historical data. Also from equation (3), the abnormal volume can be computed as the actual trading volume minus the predicted volume.

Prior researchers adjusted for market conditions and then used the market model to analyze stock trading volume activity (e.g. Bamber, 1986, 1987; Beaver, 1968; Nicholas et al., 1979). In these studies, like in those using the market model to analyze security returns, researchers have used volume residuals as the measure of abnormal trading volume. Bamber (1986) defends this similarity in the measurement of abnormal performance between volume and return analyses using the market model as follows:

> ... adjustment for the overall market level of trading volume is analogous to using a market model to adjust for market returns in security price research (p. 44).

Foster (1973, and Kiger (1972) provide empirical support for Bamber's explanation. These studies used the volume market model to replicate basic information content studies and came out with findings similar to those based on security prices. Stock volume researchers have typically computed volume residuals by regressing each firm's measure of shares traded each period on the market index for that period. However, other researchers have used other models to generate the "expected" or normal trading volumes.

According to Bamber (1986), models that do not adjust for market conditions would be worth using since "there is no theoretical support for a trading volume 'market model' "(p. 44). She adopted two alternative approaches tc analyzing abnormal volume trading. One of them used each firm's median trading volume over the calendar year as its expected trading volume. Bamber (1986) defended using a period's median volume as normal volume as follows:

> Unfortunately, there is no theoretical basis for choosing a particular model, so...as an alternative, I also used each firm's median trading volume over the calender year as its expectation"(p. 43).

This study adopted both approaches. The first approach adjusted for general market conditions (e.g., Bamber, 1986; Beaver, 1968; Morse, 1981). DVRit were computed via the market-adjusted model (Sefcik & Thompson, 1986). The second approach did not adjust for market conditions (Bamber, 1986). DVRit were computed via the mean-adjusted model.

In the Market-Adjusted model, the expected relative trading volume is equal to the market relative trading volume. Thus a firm's expected net insider trading (ENITit) is equal to the market insider trading (NITmt) for that period. In other words, expected net insider trading (ENIT) is assumed to be constant across securities but not over time. This implies that in the market model, a is set equal to 0 and b is set equal to 1 in (3). That is:

$$DVRit = NITit - NITmt \ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The mean-adjusted model does not explicitly account for market-wide factors. The predicted volume for a security is equal to a constant, estimated by averaging a series of past trading volumes. Therefore, in the residual-generating model (Equation 3), a is set equal to the average (NITi) volume over the estimation period, and b is set equal to zero.

Therefore, for each security i, the measure of abnormal trading volume on a given day t, DVRit, is the difference between its observed net insider trading volume (NITit) and the expected net insider trading volume (ENITi), estimated over the non-event period. The estimation period extended over trading days (-234 to -11). The difference is standardized by the estimated standard deviation over the same non-event period. That is:

$$SDVR_{it} = (NIT_{it} - ENIT_i) / S(NIT_i) \ldots\ldots\ldots\ldots (5)$$

where

$$ENIT_i = \frac{1}{224} \left(\sum_{t=-234}^{-11} NIT_{it} \right) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (6)$$

$$\hat{S}(NIT_i) = \left\{ \frac{1}{223} \sum_{t=-234}^{-11} (NIT_{it} - ENIT_i)^2 \right\}^{1/2} \ldots\ldots\ldots\ldots\ldots (7)$$

Testing Procedures for the Event Study Hypothesis (Hypothesis 1)

Since abnormal insider trading was measured by the daily volume residuals (DAVRs) as computed above, it was necessary to determine whether those daily volume residuals were statistically different from zero. Statistically significant DVRt would imply that insiders of the sample MNCs engaged in net buying or selling in a way that could not be attributed to chance. Insignificant DVRt would mean failure to find empirical evidence to conclude that they engaged in net insider trading.

Under the market-adjusted model, a test of the significance of the DVRt on day zero was performed by testing the significance of the difference (NITit - NITmt) on day zero. Similarly, significance of the DAVRs for the period (day-10 to day +10) was examined by testing the statistical significance of the average cumulative daily average volume residual (ACDAVR).

The cumulative daily average volume residual method concentrates on the average cumulative abnormal performance for day 0 to day +10. This is repeated for the entire period (i.e. from day -10 to day + 10) in order to pick up any leakage of the pending release.

Thus, the first hypothesis was restated in terms of both DAVR-the measure of abnormal performance on a given day, and ACDAVR-cumulative abnormal performance over the entire test period as follows:

Market Adjusted Model Subhypotheses

(Daily Average Volume Residuals at day 0)

Hola: DAVRm0 = 0

Hala: DAVRm0 > 0

(Average Cumulative Average Volume Residuals)

Holb: ACDAVRm = 0

Halb: ACDAVRm > 0

Mean Adjusted Model Subhypotheses

(Daily Average Volume Residuals at day 0)

Holc: DAVRm0 = 0

Halc: DAVRm0 > 0

(Average Cumulative Average Volume Residuals)

Hold: ACDAVRm = 0

Hald: ACDAVRm > 0

A one-tailed t-test was utilized to test both the DAVR and CDAVR null hypotheses. Rejection of the null hypotheses would mean that the stock trading behavior of insiders of the sample MNCs was different from the market (expected) stock trading behavior.

Test of Statistical Significance

To perform the one-tailed t-tests, the sample daily average volume residuals (DAVR) were computed and compared with NYSE daily average volume residuals. The average cumulative daily average volume residuals (ACDAVR) were then computed. The t-statistics were then computed using the DAVR and the CDAVR.

Computation of DAVR and CDAVR

DAVR for all securities that were traded on each day of the test period was calculated as follows:

$$DAVRt = \frac{1}{N} \sum_{i=1}^{N} DVRit \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (8)$$

$$\text{for } t = -10, \ldots\ldots\ldots +10.$$

where

DAVRt = the daily average volume residuals, and

N = the number of securities in the sample whose insiders traded in their stock on that day.

Implementation of the above steps led to 21 averages for the period. These computed averages were then used to examine abnormal or unexpected net insider trading activities around the exposure draft release date.

Hence, the cumulative average volume residuals (CDAVR) were also calculated as follows:

$$CDAVRt = DAVRt + CDAVRt\text{-}1 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (9)$$

$$\text{for } t = -9, \ldots\ldots, +10,$$

where

CDAVR = the sum of the previous daily average volume residuals (DAVR)

Computation of the One-tailed t-statistic for the DAVR and ACDAVR

To provide a test of the statistical significance of both the daily average volume residuals (DAVRt), and the average cumulative daily average volume residuals (ACDAVR), one-tailed t-tests were performed. Morse (1981) used a similar one-tailed t-test to test the significance of daily average price and daily average volume residuals.

This study adopted Brown and Warner's (1980) t-test to test for the significance of both the 21 DAVR and the corresponding CDAVR. Brown and Warner's (1980) t-test was preferred to others (eg. Dyl, 1977; Foster, 1983, Kiger, 1972; Morse, 1980, 1981) because it takes into account cross-sectional dependence in the security-specific performance measure through the "Crude Dependence Adjustment." This procedure makes securities' abnormal NIT independent and homoscedastic. Hence, it makes the market-adjusted DAVR normal, serially independent, and identically adjusted.

For this study, a Crude Dependence Adjustment period of 112 days, exactly half the non-event period starting at least 123 days before and ending 10 days prior to the exposure draft release date day 0, was used to calculate the empirical standard deviation (K0) of DAVR. Using this approach, the null hypothesis that the ratio of the average performance measure at day 0 to the estimated standard deviation (K0) for this study is distributed Student-t with 111 degrees of freedom.

The t-statistic based on the Crude Dependence Adjustment procedure which was used to test the hypothesis that the DAVR0 (daily average volume residuals for day 0) is equal to 0, was calculated as follows:

$$t0 = [\frac{1}{N} \sum_{i=1}^{N} DAVRi0] / K0 \ldots\ldots\ldots\ldots\ldots\ldots\ldots(10)$$

Where

DAVRi0 = a firm average of the difference between individual firm net insider trading on day zero (NITi0) and market net insider trading on day zero (NITm0).

K0 = the empirical standard deviation of the average difference between NITi0 and NITm0.

N = number of firms whose insiders traded in their stocks on day 0.

K0 was calculated as follows:

$$K0 = [\frac{1}{111} \sum_{t=-122}^{-11} \{(\frac{1}{N} \sum_{i=1}^{N} DAVR_{it})) - E^*\}2)]1/2 \ldots\ldots(11)$$

where E* is defined as follows:

$$E_* = (\sum_{t=-122}^{-11} \sum_{i=1}^{N} DAVR_{it}) \frac{1}{112N} \ldots\ldots\ldots\ldots\ldots\ldots(12)$$

To test for ACDAVR, the t-statistic (tc) was computed as to above, with modifications in both the numerator and denominator of Equation 10. The modifications in the numerator over the test periods (0, +10; and -10, +10) are:

For period (0, +10)

$$\frac{1}{11N} \sum_{t=0}^{+10} \sum_{i=1}^{N} DAVR_{it} \ldots\ldots\ldots\ldots\ldots\ldots(13)$$

For period (-10, +10)

$$\frac{1}{21N} \sum_{t=-10}^{10} \sum_{i=1}^{N} DAVR_{it} \ldots\ldots\ldots\ldots\ldots (14)$$

In the denominators of both Equations 13 and 14, K0 was further divided by the square root of 11 and 21 respectively.

THE CROSS-SECTIONAL ANALYSIS

The cross-sectional analysis examines whether the detected insider trading behavior in the event-study analysis could be explained by the three company-specific variables (Size, Leverage, and Control-type).

Measurement of the Independent Variables

The three independent variables in this study are: (1) firm size, (2) leverage, and (3) control-type. The data used to measure these variables were identified earlier in the company data sub-section as: (a) total consolidated assets (at book value), (b) total long-term debt, (c) total equity, and (d) total owners' equity. These data were obtained from three sources: (1) the Compustat Industrial Tape (1983), (2) Moody's Industrial Manual, and (3) the Ownership Reporting System Tape (1975-85).

Firm Size

Kelly (1985) found that sales revenue, market value of equity, and total assets, as measures of firm size, were highly correlated. The Pearson product moment correlation coefficients among the three measures all exceeded .93, which led him to conclude that substituting one measure for another would not alter the empirical results. Thus, he used total assets as a measure of firm size. The current study followed Kelly by using book value of total assets as a surrogate for firm size. The book value is as of December 31, 1980. These figures were obtained from the 1983 Industrial Compustat tape.

Leverage

Leverage was measured as the debt-to-equity ratio. The debt-to-equity ratio was computed as the ratio of long-term debt as of December 31, 1980, to the sum of the same long-term debt plus the market value of owners' equity (i.e. owner's equity as reported at 31 December, 1980). That is, Leverage = Long-term debt/(long-term debt + Owners' Equity).

Control-Type

Kelly (1985) used percentage of total common stock owned by directors and officers as a measure of management-ownership variable. In this study, control-type was measured as the number of common shares held by insiders on the last day of the previous month, standardized by company common stock as reported at December 31, 1980. Common stock figures as at the end of 1980 were used as denominator because company stock during the test period could not be obtained.

Measurement of the Dependent Variable

DAVRi were calculated for each firm i for the 21-day test period as follows:

$$\overline{DAVRi} = \frac{1}{n}\sum_{t=-10}^{10} DVR_{it} \ldots\ldots\ldots\ldots\ldots\ldots (15)$$

Where

$\overline{DAVRi}$ = daily average volume residual for firm i during the period (-10, 10)

DVRit = daily volume residual for company i on day t.

n = number of days on which company i had insider trades during the period (-10 to 10).

Note that total residuals of each firm were averaged over different numbers of days (n) rather than a single number (21) because of the inherent problem of irregularity of daily data. Many firms did not have their insiders participate in insider trading everyday of the test period.

Testing Procedures for the Cross-sectional Hypotheses

Hypothesis 2

Given an inverse relationship between firm size and the amount of information made public as hypothesized in Chapter II, we would expect insiders in smaller MNCs to have engaged in relatively more trading than those in larger MNCs upon the release of the exposure draft. Consequently, the regression coefficient for X1 (proxying for Firm Size) is expected to have a negative sign. Variable X1 thus provides a test of the following hypotheses:

$$H_{o2}: \quad \beta_1 \geq 0$$

$$H_{a2}: \quad \beta_1 < 0$$

Hypothesis 3

Since insiders of high-leveraged firms are hypothesized to be more net-buyers than insiders of low-leveraged firms upon the release of the exposure draft to SFAS No. 52, the coefficient for the Leverage variable, X2, is expected to have a positive sign. Thus this hypothesis can be stated as:

$$H_{o}3 : \beta_2 \leq 0$$

$$H_{a}3 : \beta 2 > 0$$

Hypothesis 4

The variable Control-type was measured above as the proportion of common stock held by insiders in a firm. Insiders of a manager-controlled firm would therefore hold a relatively smaller proportion of common stock than those of a comparable owner-controlled firm. Since insiders of manager-controlled MNCs were hypothesized to have engaged in relatively more net trading than those of owner-controlled MNCs, the variable control-type, denoted by X3, is inversely related to insider trading volume. The coefficient of the variable, control-type, is thus expected to have a negative sign. This hypothesis can thus be stated as:

$$H_{o}4 : \beta_3 \geq 0$$

$$H_{a}4 : \beta_3 < 0$$

The Multiple Regression Model

To test the three hypotheses posited above, the following multiple regression was estimated:

$$DAVR_{it} = \beta_0 + \beta_1 X_{1i} + \beta 2 X_{2i} + \beta_3 X_{3i} + u_i \text{..........}(16)$$

where,

DAVRit = the dependent variable (abnormal net insider trading volume)

X1 = Firm Size

X2 = Leverage

X3 = Control-type

ui = the random error.

The statistical significance, and sign of the estimates for the regression coefficients (bj, j= 1,2, and 3) provide the necessary information for testing the research hypotheses:

Some Statistical Considerations

The validity of the statistical tests performed using the regression model (equation 16), and the conclusions based on those tests all rest on some assumptions about the model that must be met. Violation of those assumptions renders those tests and the conclusions inaccurate. The major assumptions include:

1. The error terms have a constant variance over the range of observations

2. The error terms are normally distributed
3. The independent variables are not highly correlated-
   Multicollinearity

The Constant Variance of Residuals

The constant variance assumption is that the standard deviation and variance of the u's is constant for all values of each independent variable. The implication of this assumption is that the distribution of the u's is unaffected by the size of the independent variables.

Violation of this assumption leads to heteroscedasticity. When heteroscedasticity is present, ordinary least squares estimates place more weight on the observations which have large error variances than on those with smaller error variances.

Since each of the explanatory variable in the sample MNCs included both large and small firms, this assumption was likely to be violated. As Kennedy, 1983; and Pindyck & Rubinfeld, 1981 argue, large firms are likely to have larger variances than smaller firms.

The possible violation of this assumption was checked on by performing partial plotting of the residuals. As figures 8, 9, and 10 indicate, the plots show no sign that the assumption is violated. In all the three plots, the absolute magnitude of the residuals do not appear to be related to the values of the independent variables. Thus no further steps were necessary.

Normality of the error terms

The regression model also assumes that the u's are normally distributed about a mean of zero. Violation of this assumption renders the confidence intervals based on the t-table incorrect.

The normality assumption was checked on by computing a normal probability plot of standardized residuals (figure 6) and a histogram of the standardized residuals (Figure 7). Both the plot and the histogram show that the residuals are normally distributed.

Multicollinearity Correction

The first two of the three independent variables of the cross-sectional part of the study (i.e. size and leverage) are financial variables. Financial variables have been found to be highly correlated (Lev, 1974; Kelly, 1985). A possible explanation for such interrelationships among financial variables is that they all depend on the same financial and managerial decisions of the same firm.

To check on the degree of multicollinearity between those two financial variables, the matrix of correlation coefficients was examined. The correlation between size and leverage was (0.094), indicating that the degree of collinearity between the two variables was low and thus did not necessitate any steps to reduce it further (Fogler & Garapathy, 1982).

The next Chapter presents and analyzes the empirical results of the statistical tests that have been discussed in this Chapter.

CHAPTER IV

TEST RESULTS AND ANALYSES

The empirical results of the event-study and cross-sectional analyses are reported and interpreted in this chapter.

EMPIRICAL RESULTS OF THE EVENT-STUDY ANALYSIS

Hypothesis 1

The first null hypothesis posites that insiders of MNCs which switched from SFAS No. 8 to SFAS No. 52 in 1981 did not engage in any abnormal net buying upon the release of exposure draft to SFAS No. 52. More specifically, that the (DAVRt) = (ACDAVRt) = 0. The market-adjusted and the mean-adjusted models were used to test the hypothesis.

The Market-adjusted Model Results

The market-adjusted model results are reported in Tables 1 and 2. Table 1 shows that the DAVRs are positive on fifteen of the twenty-one test-period days. Of the fifteen days with positive DAVRs, six days are significantly different from zero ($p < .05$). Table 1 also shows that the cumulative daily average volume residuals, CDAVRs, are negative from day -10 to day -3. They become positive on day -2 and they continue being positive to the end of the test period.

TABLE 1

Market-adjusted Volume Model Statistics for Each day of the 21-day Test Period (-10 to +10) (N = 180)

DAY	DAVR	t-Statistic	CDAVR
-10	-.126516	-1.037226	-.126516
-9	-.033988	-.278643	-.160504
-8	.090884	.745102	-.069620
-7	-.268754	-2.203345	-.338374
- 6	.118204	.969082	-.220170
-5	.045052	.369351	-.175115
- 4	-.173092	-1.419076	-.348207
-3	.191542	1.570335*	-.156665
-2	.345350	2.831310***	.188685
-1	.261318	2.142382**	.440003
0	.077086	.631982	.517089
1	.073025	.598687	.590114
2	-.072814	-.596955	.517300
3	.398737	3.269001***	.916037
4	.138567	1.136023	1.054604
5	.186038	1.525208*	1.240642
6	-.051492	-.422148	1.189150
7	.176760	1.449143	1.365850
8	.215539	1.767075*	1.581389
9	.173756	1.424515	1.755145
10	.152329	1.248852	1.907474

* DAVRs are significant at $p < .10$

** Daily average volume residuals are significant at $p < .05$, one-tailed test.

*** Daily average volume residuals are significant at $p < .01$, one-tailed test.

DAY = The trading day of the event period relative to the day of the release of the exposure draft (day zero), from day -10 to day +10.

DAVR = Daily Average Volume Residuals

t-statistic = One-tailed t-test for DAVR

CDAVR = Cumulative Daily Average Volume Residuals

Table 2 shows that the ACDAVR are positive and significantly different from zero (p < .01) for a one-tailed test. Table 2 also reports that the period (0, +10) is statistically significant (p < .01); and the period (-10, +10) is statistically significant (p < .01. These results provide support to H1b. The behavior of DAVR and CDAVR for the market-adjusted model are graphically presented in Figures 2 and 3 respectively.

TABLE 2

Market-Adjusted Average Cumulative Daily Average Volume Residuals (ACDAVR) Abnormal Insider Trading Statistics for the periods (0, +10) and (-10, + 10).

Interval	Average CDAVRt	t-Statistic	n
(0, + 10)	1.467471	5.00305473**	142
(-10, +10)	0.090832	3.4064129**	180

** Average Cumulative average volume residuals for the interval is significant at the .99 level, one-tailed test.

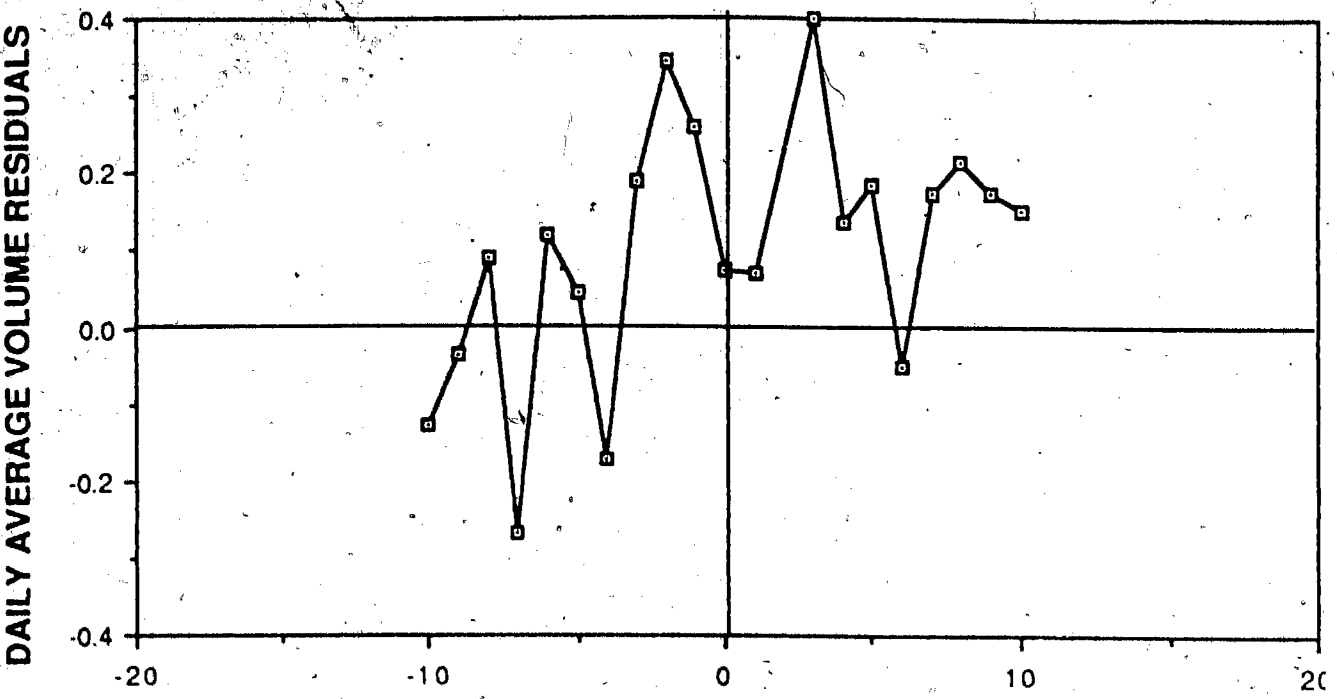

Fig. 2 Market - Adjusted Daily Average Volume Residuals

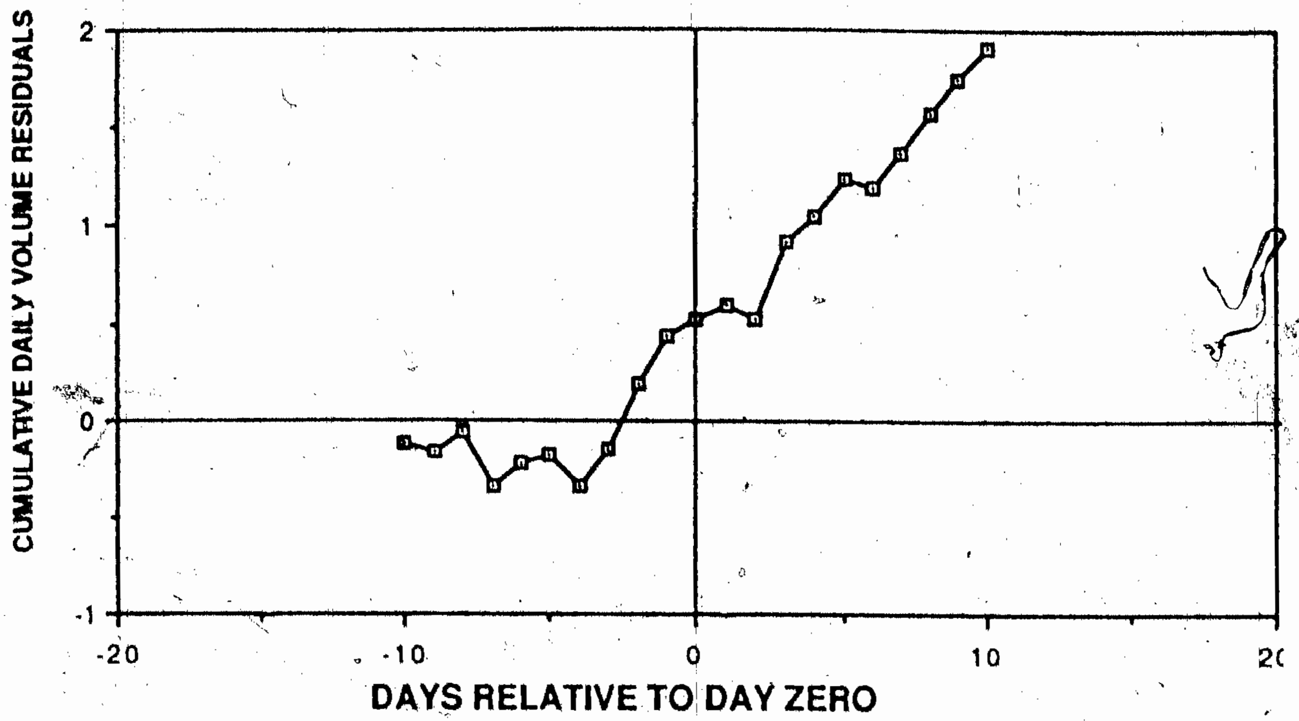

Fig. 3 Market - Adjusted Cumulative Average Residuals

Analyses of the Results of the Market-adjusted Model

In Table 1, the positive and statistically significant daily average volume residuals on days -3, -2 , -1, +3, +5, and +8, one-tailed, indicate that the insiders of the sample multinational companies engaged in net-buying that was different from zero. The positive but non-significant daily average volume residuals on days -8, -6, -5, 0, 1, 4, 7, 9, and 10, indicate net insider buying but is not statistically significant. The cumulative volume residuals become positive on day -2 and continue being so until the end of the test period. In sum, these results lend support to the hypothesis that the sample insiders engaged in abnormal net-buying during the test period.

Timing of the significant results

Significant net insider trading was detected before and after the announcement date of the exposure draft. While significant trading detected before the release date may be attributed to leakage of the contents of the exposure draft, Morse (1980 , 1981) attributes it to differences in beliefs about the pending announcement. He further attributes trading after the announcement date to interpretation of the revealed contents of the event. Specifically, Morse (1981) argues that:

> Trading prior to a public announcement may occur because of differences in beliefs about the probability of different signals being emitted by the public announcement. These differences in beliefs may be caused by the asymmetric distribution of the information before its public announcement. Trading volume following the public announcement may be due to different interpretations of the signals released"(p. 375).

Based on Morse's (1980, 1981) analytical framework, the timing of the results reported in Table 1 can be interpreted as follows. Abnormal net-buying before the announcement date suggests that the sample insiders, as a small group, believed that the exposure draft contained favorable information. These beliefs were different from the beliefs of those insiders who decided not to adopt SFAS No. 52 in 1981. It is likely that those who were going to adopt the new Standard in 1981 believed that the contents of the exposure draft would lead to higher stock prices. Those who were not going to adopt the new Standard did not believe so. Uniformity of beliefs would have led to failure to detect abnormal net-buying during the test period.

Another possible explanation for the abnormal net-buying just before the exposure draft date is the need to beat the six months requirement by the Securities and Exchange Act of 1934. Section 16(b) requires all profits on purchases and subsequent sale within 6 months to be returned to the corporation. So, if the company-specific financial implications of the exposure draft were to be disclosed in the year-end financial statements, the insiders would maximize their personal wealth if they sold then.

Abnormal net-buying after the release date, according to Morse's framework, would mean that the insiders' interpretation of the contents of the exposure draft was consistent with the **ex ante favorable** beliefs.

It is also possible that the abnormal net insider trading identified in this study may have been due to reasons unrelated to the exposure draft. However, a search of the Wall Street Journal did not reveal any significant general events to support such reasons.

The steadily rising cumulative average volume residuals suggest that the insiders steadily engaged in net-buying for some time following the release of the exposure draft. Such extended duration (ten days after the announcement date) is consistent with Morse's (1981) observation that trading volume reaction stays on for some time. It is however contrary to Larcker et al.'s (1983) assertion that if an event leads to insider trading, it does so immediately surrounding the announcement date.

Table 2 shows that the ACDAVR are positive and significantly different from zero ($p < .01$), one-tailed test, for the periods (0, +10) and (-10, +10). This means that the abnormal net insider trading detected following the release date, as well as for the entire test period could not be attributed to chance.

The Mean-adjusted Model Results

Table 3, like Table 1, shows that the DAVRs are positive on fifteen of the twenty-one test period days. Also of the fifteen days with positive DAVRs, four days are significantly different from zero ($p < .05$).

Table 3 also reports that the CDAVRs are negative from day -10 to day -4. They become positive on day -3 and continue so to the end of the test period. These results are generally consistent with the results of the market-adjusted model.

TABLE 3

Mean-adjusted Volume Model Statistics for Each Day of the 21-day Period (-10 to +10).
(N = 180)

DAY	DAVR	t-Statistic	CDAVR
-10	-.036921	-1.913482	-.036921
-9	.023879	1.237572	-.013042
-8	.004949	.256506	-.008093
-7	-.040394	-2.093459	-.048487
-6	.011718	.607286	-.036769
-5	.009871	.511573	-.026898
-4	-.008830	-.457649	-.035728
-3	.041112	2.130666**	.005384
-2	.001442	.074709	.006826
-1	.029257	1.516288*	.036083
0	.004520	.234237	.040603
1	-.001612	-.083534	.038991
2	-.003938	-.204111	.035053
3	.031890	1.652725*	.066943
4	.006034	.312711	.072977
5	-.007539	-.390713	.065438
6	.016831	.872300	.082269
7	.038559	1.998364*	.120828
8	.009207	.477160	.130035
9	.007951	.412082	.137986
10	.011860	.614668	.149846

* DAVRs are significant at p < .10, one-tailed test.

** DAVRs are significant at p < .05, one-tailed test.

DAY = The trading day of the event period relative to the day of the release of the exposure draft (day zero), from day -10 to day +10.

DAVR = Daily Average Volume Residuals

t-statistic = One-tailed t-test for DAVR

CDAVR = Cumulative Daily Average Volume Residuals

Table 4 shows that the ACDAVR for both the periods (0, +10) and (-10, +10) are positive but are not significantly different from zero. These results thus generally do not support the hypothesis that the insiders engaged in net-buying during those two periods. The behavior of DAVR and CDAVR for the mean-adjusted model are graphically presented in Figures 4 and 5 respectively.

TABLE 4

ACDAVR of the Mean-adjusted Model for Over the Test periods (0, +10) and (-10, +10)

PERIOD	ACDAVR	t-Statistic	n
(0, +10)	0.113763	0.38785	138
(-10, 10)	0.007135	0.369807	180

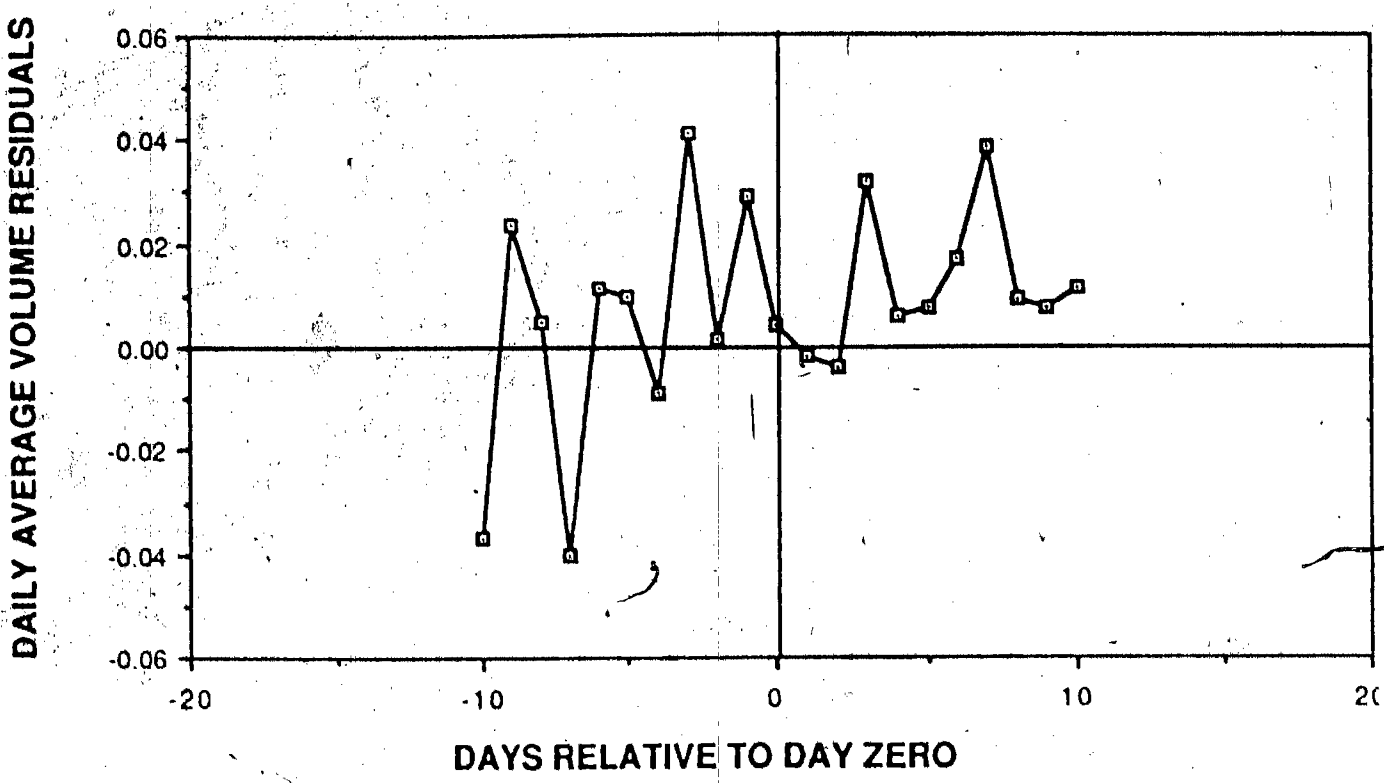

Fig. 4 Mean - Adjusted Daily Average Volume Residuals

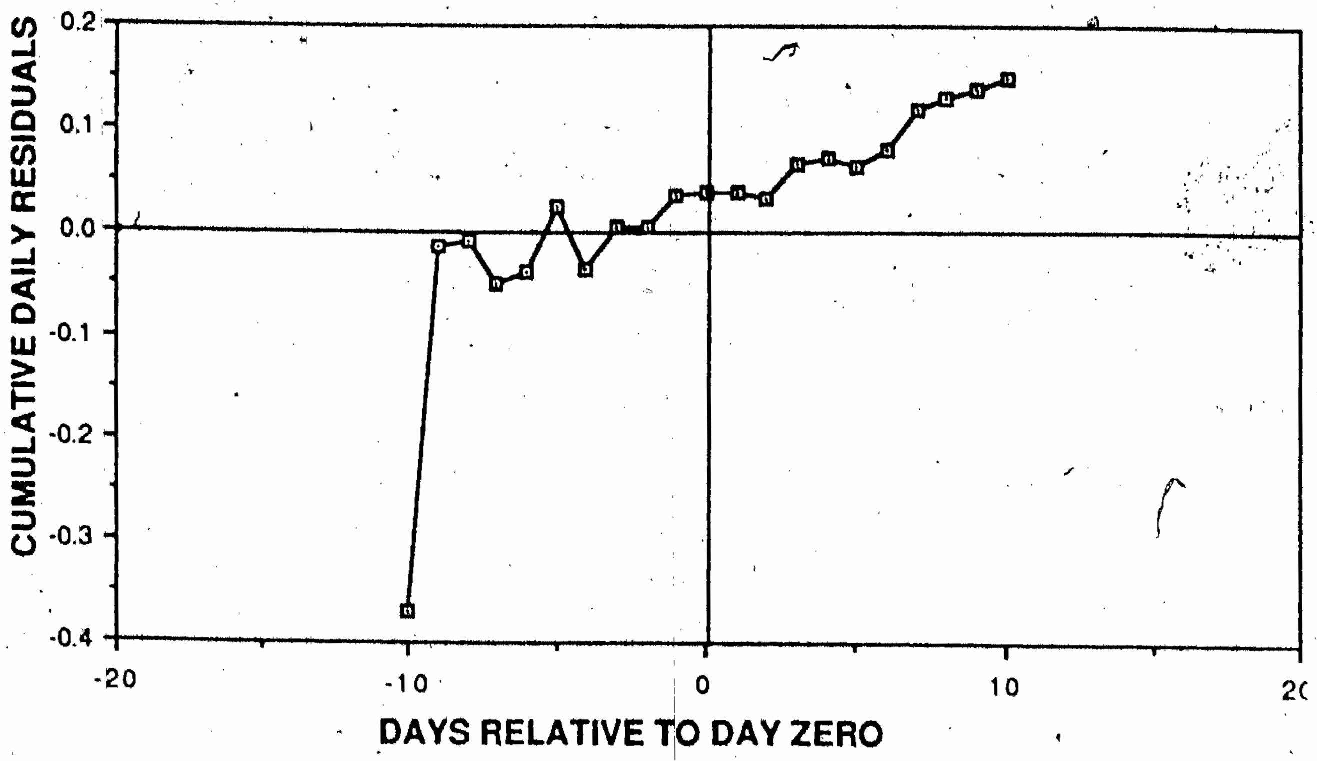

Fig. 5 Mean- Adjusted Cumulative Average Residuals

Analyses of the Results of the Mean-adjusted Model

In Table 3, the positive and statistically significant DAVRs on days -3 , -1, +3, and +7 indicate that the insiders of the sample multinational companies engaged in abnormal net-buying. The positive but non-significant DAVRs on days -9, -8, -6, -5, - 2, 0, 4, 6, 8, 9, and 10, suggest that there was some net-buying that could be attributed to chance. The CDAVRs become positive from day -3 and continue being so until the end of the test period. These results are generally consistent with those of the market-adjusted model.

Timing of the significant results

The timing of the significant abnormal net-buying of the mean-adjusted model is consistent with that under the market-adjusted model. These results may be interpreted as follows. The abnormal net-buying before day zero indicate that the insiders of the sample MNCs held beliefs about the probability of different signals being emitted by the exposure draft that were (beleifs) different from those held by the rest of the NYSE insiders.

The significant positive results after the release date suggest that the insiders' interpretation of the contents of the exposure draft was consistent with the favorable beliefs about the exposure draft prior to the release date. A search of the Wall Street Journal revealed no confounding events for the results.

The steadily rising cumulative average volume residuals suggests that the insiders steadily engaged in net insider buying after the exposure draft was released.

In sum, the results of the event-study analysis under both models are very similar. They support the principal hypothesis of this study. The only noticeable difference between the results reported under the market-adjusted and the mean-adjusted models lies in the degree of statistical significance of the ACDAVRs during the periods (0, +10) and (-10, +10).

EMPIRICAL RESULTS OF THE CROSS-SECTIONAL ANALYSIS

The subsidiary purpose of this study was to test for an association between the detected trading volume behavior and firm variables (size, leverage,and control-type) over the test period. A multiple regression model of the form (Equation 16) was estimated for the purpose.

Interdependence Among the Independent Variables

To check on the degree of interdependency among the independent variables, the matrix of the correlation coefficients of independent variables was examined. Table 5 displays the summary statistics and the intercorrelations.

TABLE 5

Summary Statistics of all Cross-Sectional Analysis Variables and their Intercorrelations. (N = 178)

VARIABLE	MEASURE	MEAN	STD ERROR	SIZE	LEVERAGE	CONTROL-TYPE	CDAVR
SIZE	Natural Log of Total Assets	7.20	1.40	1.000			
LEVERAGE	Debt/ Debt+Equity	0.266	.167	0.094	1.000		
CONTROL-TYPE	Insiders' Equity/ Total Equity**	0.007	.040	-0.044	0.079	1.000	
DAVR	Cumulative Average Volume Residual	0.026	0.309	0.054	0.079	-0.014	1.000

** Total number of shares held by insiders of company i on last day of the month (May 31, 1981) over total common equity of the company at December 31, 1980.

The information in Tables 5 indicate that Size is positively correlated with Leverage and DAVR, but negatively correlated with Control-type. Leverage is positively correlated with Control-type, and with DAVR. Control-Type is negatively correlated with DAVR. In terms of the degree of correlation with DAVR, Table 5 shows that Leverage (r = 0.079) has the strongest relative correlation followed by Size (r = 0.054), and then with Control-type (r = -.014).

Judging by the traditional standards, the inter-dependencies within the set of independent variables do not appear to reflect any severe collinearity. Even in absolute terms, no two independent variables have a correlation near .50. Besides, none of the standard errors is very high (Pindyck & Rubinfeld, 1981). Results of the cross-sectional regression parameter estimates are reported in Table 6.

TABLE 6

Estimates of parameters from cross-sectional regression test on daily average volume residuals, DAVR$_i$, for the 21-day test period. N = 178

$$\overline{DAVR} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + u_i$$

Coefficients (predicted sign)						
β_0	$\beta_1(-)$	$\beta_2(+)$	$\beta_3(-)$			
Constant	Size	Leverage	Manager-Control	Unadj. R^2	Adj. R^2	F Statistic
-0.08494 (-0.667)	1.03672 (0.608)	0.14026 (0.993)	-0.13934 -(0.238)	0.0088	-0.0085	0.51

Table 6 presents the relationships between the DAVRs and size, leverage, and control-type as previously discussed. The overall association between the explanatory variables and the dependent variable is a weak one ($R2= 0.0088$; $F = 0.51$). However, two of the three independent variables have the predicted signs. One does not.

As hypothesized, leverage is positively associated with the DAVRs, while control-type is negatively correlated. But both of these associations are statistically insignificant. On the other hand, size, contrary to the hypothesized relationship, is positively associated with the DAVRs. The association is also statistically insignificant.

In sum, the findings reported in Table 6 provide insignificant support for two of the three hypothesized relationships between company characteristics and detected insider trading volume. The low R2 and F values indicate that the chosen company variables do not explain most of the variation observed in the trading volume. What these statistics may mean is that there are other explanatory variables, not considered in the model, which may better explain the cross-sectional variation in the detected insider trading volume over the test period. Another possibility is that there are other measures of those variables which could have better captured variation in the insider trading volume. Finally, the weak results may have been due to a possible specification error. While the dependent variable was measured in daily data, the independent variables were measured in annual data. The reasons for this use of data of different dates were discussed in Chapter III.

Interpretation of the Results of the Cross-sectional Analysis

Size

The results in Table 6 show that Size is positively associated with daily average volume residuals at an insignificant level. These results do not support the hypothesized inverse relationship between the size of a MNC and the observed net trading volume during the test period. These results suggest that the larger the MNC, the higher the trading volume that MNC engaged in.

One possible explanation for the positive relationship is that inside information about foreign operations takes longer to leak to outsiders than usual earnings disclosures. Consequently, during the period immediately surrounding the event, the larger the MNC, the more inside information there was to trade on. Two reasons seem to support this view in the case of the exposure draft to SFAS No. 52. First, managers had to decide on what was to be the functional currency to use in translating their foreign operations. Such a decision was being made for the first time and likely took some time. Secondly, as a result of the first reason, most of the statistically significant results are on days before the release date. This suggests that most statistically significant abnormal trading took place before the release date. According to Morse (1981), trading prior to event date is based on differences in individual beliefs, rather than interpretation, of the announcement. Beliefs are certainly more difficult to leak than earnings disclosures.

Leverage

As hypothesized, leverage is positively associated with net trading volume during the test period. The association is however insignificant. Thus these results do not provide empirical support for the hypothesis that the more highly leveraged the MNC, the more net buying there was in it.

Control-Type

Results in Table 6 indicate that as predicted, variable Control-type is negatively associated with the trading volume during the test period. The negative association would indicate that the insiders of manager-controlled MNCs got relatively more involved in abnormal trading than those in owner-controlled MNCs. However, the association is statistically insgnificant. Thus the results of this study fail to provide support for the hypothesis that manager-controlled insiders were relatively more involved in abnormal net-buying than those of owner-controlled MNCs.

What is of interest to note though, is that out of the 178 firms that were used to perform the cross-sectional tests, 169 were classfied as manager-controlled. This inconsestence between the reportred empirical results and the firm classfication results underscores the difficulty of interpreting results of studies based on insider trading approach.

Results of the Specification Tests

Results of the statistical tests performed to test for possible violation of the assumptions of constant variance and normal distribution of the error terms are reported in Figures 6, 7, 8,9, and 10.

Normality of the error terms

The normality assumption was checked on by computing a normal probability plot of standardized residuals (figure 6) and a histogram of the standardized residuals (Figure 7). Both the plot and the histogram shows that the residuals are normally distributed.

The Constant Variance of Residuals

Partial scatter plots of each of the independent variables were performed to check on the possibility of the violation of the constant variance assumption. The partial plots are reported in Figures 8, 9 and 10. These plots indicate no sign of non-constant variance.

```
             NORMAL PROBABILITY (P-P) PLOT
                  STANDARDIZED RESIDUAL

   1.0 +---------+---------+---------+--------**
       I                                     *  I
       I                                   **   I
       I                                 **     I
       I                               **       I
   .75 +                            ***         +
       I                       *****            I
 O     I                     **                 I
 B     I                    *                   I
 S     I                   *                    I
 E .5  +                  *                     +
 R     I                 *                      I
 V     I                *                       I
 E     I               *                        I
 D     I         *****                          I
   .25 +        **                              +
       I       *                                I
       I     **                                 I
       I  **                                    I
       I **                                     I
       +*--------+---------+---------+---------+ EXPECTED
                .25       .5        .75       1.0
```

Figure 6 : Normal Probability (P-P) Plot

Standardized Residual

```
HISTOGRAM :  STANDARDIZED RESIDUAL

 N EXP N       (* = 1 CASES,     . : = NORMAL CURVE)
 0   .14   OUT
 0   .27  3.00
 1   .69  2.67 :
 3  1.57  2.33 *:*
 4  3.21  2.00 **:*
 6  5.88  1.67 *****:
 8  9.66  1.33 ******** .
12 14.20  1.00 ************ .
15 18.69   .67 ***************   .
10 22.05   .33 **********           .
45 23.30     0 **********************:**********************
22 22.05  -.33 *********************:
18 18.69  -.67 ******************.
11 14.20 -1.00 ***********  .
12  9.66 -1.33 *********:**
 4  5.88 -1.67 **** .
 3  3.21 -2.00 **:
 1  1.57 -2.33 *.
 1   .69 -2.67 :
 0   .27 -3.00
 0   .14   OUT
```

Figure 7 : Histogram of standardized residual

```
STANDARDIZED PARTIAL RESIDUAL PLOT

ACROSS - SIZE      DOWN - DVR
OUT ++----+-----+-----+-----+-----+-----++
  3 +                                    +  SYMBOLS:

    I             .                  .   I
    I             .      .               I     MAX N
  2 +               ..                   +
    I           .....    . .             I   .

    I             .  ..  ;. . .          I   ;

  1 +          .. ;   . ;. .. .  . .     +   *

    I          .  .  *;.* ...          . I
    I          ..  .  ..;.   .           I
  0 +      ... ;..*. *..*** ;;. * ; .     +
    I  .   ... ;  ;.;.. .;;.;.;           I
    I       . .. ...; ;..   ....         I
 -1 +       . . ;  ..;..*    .    .      +
    I    . .    ..   .;. .        .      I
    I          .  ;        .    .        I
 -2 +                    . .             +
    I                   .                I
    I             .         .            I
 -3 +                                    +
OUT ++----+-----+-----+-----+-----+-----++
   -3    -2    -1     0     1     2     3 OUT
```

Figure 9 : Size Standardized Partial Residual Plot

```
STANDARDIZED PARTIAL RESIDUAL PLOT

ACROSS - LEVER      DOWN - DVR
OUT ++-----+-----+-----+-----+-----+-----++
  3 +                                     +   SYMBOLS:
    I             .                       I
    I           *                                MAX N
  2 +                 ; . .;          .   .
    I                   .           .         .      1.0
    I         .  ;  ;  .   ;.             I   ;      2.0
  1 +         ..  .;; . ; ..          .   +   *      6.0
    I         . ..;. . . ;   ...          I
    I             .;..; .. .  . .         I
  0 +         . ..**..;*;**.;; ;..     . ;+
    I          *   ;.*.; ;*..   .         I
    I      .   ;   . .; .;.;.  .   .      I
 -1 +         ...;  ;   ;;.. ;.           +
    I         ..   . ... .                I
    I         ;. .      .;               .I
 -2 +                . .                  +
    I                                     I
    I             .   .                   I
 -3 +                                     +
OUT ++-----+-----+-----+-----+-----+-----++
    -3    -2    -1     0     1     2     3 OUT
```

Figure 8 : Leverage Standardized Partial

Residual Plot

STANDARDIZED PARTIAL RESIDUAL PLOT

```
 ACROSS - CONTROL     DOWN - DVR
 OUT ++-----+-----+-----+-----+-----+-----++
   3 +                                      +   SYMBOLS:
     I                      .               I
     I                      ..              I      MAX N
   2 +                     ..
     I                     ..               ..   .       6.0
     I                      ..       .           ;      12.0
   1 +                     .;.              +    *      27.0
     I                     .;.              I
     I                      ;.              I
   0 +                     .*;.  .    .  .  +
     I                     .;..       .
     I                     ..... .          .
  -1 +                     .;.
     I                     .;.              I
     I                      ..              I
  -2 +                     ..               +
     I                      .               I
     I                      .               I
  -3 +                                      +
 OUT ++-----+-----+-----+-----+-----+-----++
     -3    -2    -1     0     1     2     3 OUT
```

Figure 10 : Control-Type Standardized Partial Residual Plot

CHAPTER V

SUMMARY, LIMITATIONS , CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

This study empirically examined insider reaction to the change in foreign currency translation standards from SFAS No. 8 to SFAS No. 52. The study was divided into two parts. First, an event-study analyzed the volume of securities traded by insiders upon the release of the exposure draft to SFAS No. 52, to determine if the insiders engaged in any abnormal trading. Secondly, a cross-sectional analysis was utilized to determine the extent to which the detected insider trading behavior could be explained by the firms' characteristics (size, leverage, and control-type).

Many managers had criticized SFAS No. 8 on the grounds that its implementation led to greater volatility of reported earnings, causing lower stock prices of the affected securities. The FASB issued the exposure draft to SFAS No. 52 as a direct response to the severe criticisms against SFAS No. 8. The issuance of the exposure draft to SFAS No. 52 on June 30, 1981, was therefore generally anticipated to reduce the volatility of reported earnings, and thus to improve stock prices. The anticipated favorable valuation of stock would thus motivate insiders, who have been said to aim at maximizing their personal wealth, to engage in net insider buying upon the release of the exposure draft. As was discussed in Chapter II, Zeibert & Kim (1987) study reports a positive market reaction to SFAS No. 52. This market reaction implies that those insiders who had engaged in net-buying at the time of the exposure draft benefited from the purchase.

Thus the primary null hypothesis stated that insiders of MNCs which switched from SFAS No. 8 to SFAS No. 52 in 1981 did not engage in abnormal or unexpected net buying upon the release of exposure draft to SFAS No. 52. This hypothesis was tested through two sub-hypotheses under the "market-adjusted" and "mean-adjusted" models in the event-study analysis.

The results provide evidence that the proposed Standard change provided insiders of the sample firms with enough motivation to engage in abnormal insider trading. Under both test models, the DAVR are positive and statistically significant on four out of the 21-day test period. The CADVRs become positive three days prior to the release date and continued rising to the end of the test period. The statistically significant results prior to the announcement date, according to Morse (1981), indicate that insiders held different beliefs about the likely contents of the exposure draft. On the other hand, the statistically significant days after the release date reflect the insiders' interpretation of the contents of the exposure draft.

Morse's framework seems to fit the results reported in this study well. The fact that there were significant abnormal net-buying days prior to the release date indicates diversity of beliefs among the insiders about the contents of the awaited exposure draft. A common belief among insiders would have led to abnormal net-buying that was not different from zero.

Morse (1981) continues to hypothesize that trading after the announcement date reflects how market participants interpreted the contents of the announcement. In this study, significant results after the release date imply that the exposure draft was interpreted favorably by the insiders leading them to continued net-buying as was hypothesized.

The cross-sectional analysis examined the association between detected insider trading volume and each of the three company variables (Size, Leverage, and Control-type). Results of the Size variable do not support the hypothesized inverse relationship between size of a MNC and detected trading volume. Instead, the results seem to suggest that the size of a MNC was proportionately related to the trading volume that it engaged in. A possible explanation for this positive relationship are political costs. Large firms like to report lower earnings. Thus, SFAS No. 52 tends to work against large firms due to added political costs for them. So we expect a positive relationship between NIT and Size as a means of reducing reported earnings. The variable Leverage has a positive sign; but the coefficient is not significant. These results thus fail to provide support for Dhalwal's (1980) results. Results of the control-type variable also show the predicted sign, but the coefficient is also insgnificant. The variable had a negative coefficient sign. This shows that the smaller the proportion of common stock held by insiders, the higher the observed trading volume in that MNC. But since insider ownership in manager-controlled MNCs is generally less than in owner-controlled

MNCs, the results imply the trading volume in manager-controlled MNCs was higher than it was in owner-controlled MNCs.

In sum, the cross-sectional results do not provide support for the three hypotheses. Several reasons may be responsible for the low R2 value and the non-significant beta values. First, it is possible that some variables not considered in equation 16 explains variation in DAVRs better. Secondly, it is possible that the three variables considered in this study were not measured properly. Thirdly, the results may have suffered from a specification error since the dependent variable was measured using daily data while the explanatory variables were measured using annual data. Finally, it is also possible that the hypotheses tested in this study were based on wrong theses.

LIMITATIONS

This study faced two major limitations. First, it is based on the insider trading approach. The research methodology based on insider trading is not yet rigorously tested. Relatively little is known about when insiders trade and how insider trading should be measured. This state of affairs makes interpretation of results based on insider trading difficult. Secondly, this study used daily data to test the presented hypotheses. A major problem of using daily data lies in dealing with infrequent trading. Much of what might have been useful data was eliminated due to infrequent trading.

More specific limitations existed from the way NIT and DAVR were measured. First, when recommending the standardization of the difference between Bit and Sit in measuring NIT, Larcker et al., (1983) referred to using shares held at the time of the trade. In this study, the difference between Bit and Sit, was standardized by number of shares held at the end of the previous month. Shares held at the time of trade were not available. Since neither of these versions is guided by a theory, it is difficult to decide which one of the two would lead to fewer limitations.

Also in the measurement of abnormal net insider trading, the market volume model was utilized to generate volume residuals. But as Bamber (1986) points out, "there is no theoretical support for a trading volume market model"(p.44). Even if Bamber (1986) reassures that adjusting for the market-wide factors renders the volume market model equivalent to the return volume model, the former has not yet been rigorously tested. Consequently, many of the assumptions made regarding the market-adjusted and the mean-adjusted models relate to the market return residuals. Thus the validity of the conclusions to be drawn from this study are subject to those limitations.

CONCLUSIONS AND RECOMMENDATIONS

Earlier studies which applied the insider trading approach to accounting standard changes found abnormal insider trading taking place after the event (Larcker, Reder & Simon , 1983). Larcker et al.

expected the abnormal trading to have taken place before the event, leading them to call for:

> a rigorous empirical explanation for insider trading in the period after the exposure draft"(p. 618).

This study used Morse's (1981) theory of asymmetric information to explain the existence of insider trading both before and after the exposure draft.

Lev and Ohlson (1982, p. 261) proposed a positive correlation between an above-average volume reaction with an above-average price reaction. This study detected some abnormal net insider trading before the release of the exposure draft to SFAS No. 52. Earlier, Zeibart and Kim (1987) found some abnormal market price reaction preceding the release of the exposure draft to the same statement. While the results of this dissertation and those of Zeibart and Kim tend to support Lev and Ohlson's hypothesis, the two studies did not use the same sample. An empirically strong statement about offering or not offering support for the Lev and Ohlson hypothesis would need the two studies to have used the same sample and the testing to have been conducted under similar conditions. Future research should thus try to test for the asserted correlation between an abnormal volume reaction with an abnormal price reaction prior to the release of the exposure draft to SFAS No. 52.

In the cross-sectional analysis, while variable Size did not support the Hypothesis 2, Leverage offered support to Hypothesis 3.

This in a way complicates the interpretation of the two results since Size has been said to proxy for leverage as discussed in Chapter II. The control-type variable provided support for hypothesis 4.

This study plays a pioneering role in applying the methodology of insider trading to the area of foreign currency translation. Conclusions drawn from this study should foster further research including validation and examination.

REFERENCES

Aggarwal, Raj. (1978). FASB No. 8 and Reported Results of Multinational Operations: Hazard for Management and Investors, Journal of Accounting, Auditing & Finance, 1, 197-216.

American Accounting Association, Committee on International Accounting. (1974). Report of the committee on International Accounting, in Supplement to The Accounting Review, 259-63.

American Accounting Association, Committee on International Accounting. (1975). Report of the Committee on International Accounting (a Supplement to The Accounting Review), 41-95.

Atiase, R. K. (1985). Predisclosure Information, Firm Capitalization, and Security Price Behavior Around Earnings Announcement, Journal of Accounting Research, 23 1, 21-36.

Ayres, Frances L. (1986). Characteristics of firms Electing Early Adoption of SFAS. 52, Journal of Accounting and Economics, 8, 143-158.

Baesel, J. B. & Stein, G. R. (1979). The Value of Information: Inferences from the Profitability of Insider Trading, Journal of Finance and Quantitative Analysis, 553-571.

Bamber, Linda S. (1986). The Information of Annual Earnings Release: A Trading Volume Approach, Journal of Accounting Research, 24 1, 40-56.

Bamber, Linda S. (1987). Unexpected Earnings, Firm Size, and Trading Volume Around Quarterly Earnings Announcements, The Accounting Review, 510- 532.

Basu, S. (1981). Market Reaction to Accounting Policy Deliberations: The Inflation Accounting Case Revised, The Accounting Review, 942-954.

Beaver, William H. (1968). Information Content of Annual Earnings Announcements, Empirical Research in Accounting: Selected Studies, Journal of Accounting Research, Supplement to Vol. 6, (1968), pp. 67-92.

Beaver, William H. (1973). What Should Be The FASB's Objectives, Journal of Accounting, 49-56.

Benjamin, J. J., Grossman, S. D., & Wiggins, C. E. (1986). The Impact of Foreign Currency Translation on Reporting during the Phase-in of SFAS No. 52, Journal of Accounting, Auditing & Finance, 1, 3, 177-184.

Brown, Betty C. & Brandi, Jay T. (1986). Security Price Reactions to Changes in Foreign Currency Translation Standards, Journal of Accounting, Auditing & Finance, 1, 3, 185-205.

Choi, F. D. S., Lowe, H. D., & Worthley, R. G. (1978). Accounters, Accountants, and Standard No. 8, Journal of International Business Studies, 81-87.

Chow, Chee W. (1983). The Impacts of Accounting Regulation on Bondholder and Shareholder Wealth: The Case of the Security Acts, The Accounting Review, 485-520.

Collins, D. W. & Dent, W. T. (1979). The proposed Elimination of Full Cost Accounting in the Extractive Petroleum Industry: An Empirical Assessment of the Market Consequences, Journal of Accounting and Economics, 1, 3-44.

Collins, D. W., Rozeff, M. & Dhaliwal D. (1981). The Economic Determinants of the Market Reaction to Mandatory Accounting Changes in the Oil and Gas Industry, Journal of Accounting and Economics, 37-71.

Combes, J. R., & Houghton, J. W. (1973). Translation of Foreign Currency, Financial Executive, 8-16.

Connor, Joseph E. (1972). A New Approach to the Translation Problem, Price Waterhouse Review, 8-16.

Dhaliwal, Dan S. (1980). The Effect of the Firm's Capital Structure on the Choice of Accounting Methods. The Accounting Review, 55(1), 79-84.

Dukes, Ronald, E. (1978). An Investigation of the Effects of Statement of Financial Accounting Standards No. 8 on Security Returns Behavior., Financial Accounting Standards Board.

Dukes, Ronald, E. (1981). Foreign Currency Financial Statement Translation: A Review of the Evidence on Security Market Responses to Statement No. 8. In F. D. S. Choi (Ed.). Multinational Accounting A Research Framework for the Eighties (pp. 139-153). Ann Arbor, Michigan: UMI Research Press.

Dyl, Edward A. (1977). Capital Gains Taxation and Year-End Stock Market Behavior. Journal of Finance, 165-75.

Evans, T. G., Folks, W. R., & Jilling, M. (1978). The Impact of Statement of Financial Accounting Standards No. 8 on the Foreign Exchange Risk Management Practices of American Multinationals: An Economic Impact Study. Stanford, Conn.: FASB.

Fama, Eugene, F. (1970). Efficient Capital Markets : A Review of Theory and Empirical Work, Journal of Finance, 25, 383-417.

Fama, Eugene, F. (1980). Agency Problems and the Theory of the Firm, Journal of Political Economy, 288-307.

Financial Accounting Standards Board. (1975). Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements, Statement of Financial Accounting Standards No. 8. Stanford, Conn.: FASB.

Financial Accounting Standards Board, Exposure Draft, "Foreign Currency Translation" Stanford, Conn.: FASB, August 28, 1980.

Financial Accounting Standards Board, Exposure Draft (Revised) "Foreign Currency Translation" Stanford, Conn.: FASB, June 30, 1981.

Financial Accounting Standards Board. (1981). Foreign Currency Translation, Financial Accounting Standards, Statement of Financial Accounting Standards No. 52. Stanford, Conn.: FASB.

Finnerty, J. E. (1976a). Insiders' Activity and Inside Information: A Multivariate Analysis, Journal of Financial and Quantitative Analysis, 205-215.

Finnerty, J. E. (1976b). Insiders' Trading and Market Efficiency, The Journal of Finance, 1141-1148.

Foster, D. (1973). Stock Market Reactions to Estimates of Earnings Per Share by Company Officials. Journal of Accounting Research, 25-37.

Givoly, Dan & Palmon, D. (1985). Insider Trading and the Exploitation of Inside Information : Some Empirical Evidence, Journal of Business, 58(1), 69-87.

Gonedes, Nicholas J. & Dopuch, N. Capital Market Equilibrium, Information Production and Selecting Accounting Techniques: Theoretical Framework and Review of Empirical Work, Studies of Financial Accounting Objectives Supplement to Vol. 12, Journal of Accounting Research, 48-129.

Gray, D. (1984). Corporate Preferences for Foreign Currency Accounting Standards, Journal of Accounting Research, 22, 760-764.

Griffin, Paul, A. (1982). Foreign Exchange Gains and Losses: Impact on Reported Earnings, ABACUS, 18(1), 50-69.

Griffin, Paul, A. (1983). Management's Preferences for FASB Statement No. 52: Predictive Ability Results, ABACUS, 19, 130-138.

Hopworth, Samuel R. (1956). Reporting Foreign Operations. Ann Arbor, Michigan: University of Michigan.

Jain, R. (1980). An Empirical Investigation of Some Economic Consequences of FASB Statement No. 8: Foreign Currency Translation. Unpublished doctoral dissertation, The University of Florida.

Jeff, J. (1974). Special Information and Insider Trading, Journal of Business, 410-428.

Kelly, L. (1982). Corporate Lobbying and Changes in Financing or Operating Activities in Reaction to FASB No. 8, Journal of Accounting and Public Policy, 1, 153-173.

Kelly, L. (1985). Corporate Management Lobbying on FASB No. 8: Some Further Evidence, Journal of Accounting Research, 23, 619-632.

Kennedy, Peter (1983). A Guide to Econometrics, The MIT Press, Cambridge, Massachusetts.

Keown, Arthur J. and Pinkerton John M. (1981). Merger Announcements and Insider Trading Activity : An Empirical Investigation, The Journal of Finance, 36, 855-869.

Kim, Hyuk (1985). An Empirical Study of the Market Reaction to Statement of Financial Accounting Standard No. 52: "Foreign Currency Translation. Unpublished Doctoral Dissertation (1985).

Kiger, J. (1972). An Empirical Investigation of NYSE Volume and Price Reactions to the Announcement of Quarterly Earnings, Journal of Accounting Research, 113-25.

Largay, James A. (1983). SFAS No. 52: Expediency or Principle? Journal of Accounting, Auditing and Finance, 7, 44-53.

Larcker, D.F., Reder, R.E., and Simon D.T., "Trades by Insiders and Mandated Accounting Standards", The Accounting Review, (July, 1983) : pp. 606-620.

Larcker, D. F. & Revsin L. (1983). The Oil and Gas Accounting Controversy: An Analysis of Economic Consequences, The Accounting Review, 706-733.

Lev, B. (1979). The Impact of Accounting Regulation on the Stock Market:The Case of Oil and Gas Companies, The Accounting Review, 485-503.

Lev, B., & Ohlson, J. (1982). Market-Based Empirical Research in Accounting: A Review, Interpretation and Extension, Journal of Accounting Research, 20(Suppl.), 249-322.

Lorensen, L. (1972). Reporting Foreign Operations of U.S. Companies in U.S. Dollars, Accounting Research Study No. 12. New York: American Institute of Certified Public Accountants.

Lorie, James, & Niederhoffer, V. (1968). Predictive and Statistical Properties of Insider Trading, Journal of Law and Economics, 34-54.

Markin, John H. (1978). Measuring the Impact of Floating and FASB No. 8 on Costs of Capital for Multinationals, Economic Consequences of Financial Accounting Standards: Selected Papers. Stanford, Conn.: FASB.

Masulis, Ronald W. (1980). The Effects of Capital Structure Changes on Security Prices: A Study of Exchange Offers, Journal of Financial Economics, 139-177.

Monsen, R.J., Chui, J. S., & Cooly, D. E. (1968). The Effects of the Separation of Ownership and Control on the Performance of the Larger Firm, The Quarterly Journal of Economics, 435-451.

Monsen, R.J. & Downs, A. (1965). A Theory of Large Managerial Firms, The Journal of Political Economy, 231-236.

Morse, D. (1980). Asymmetrical Information in Securities Markets and Trading Volume, Journal of Financial and Quantitative Analysis, 1129-48.

Morse, D. (1981). Price and Trading Volume Reaction Surrounding Earnings Announcements: A Closer Examination, Journal of Accounting Research, 374-83.

Pakkala, A. L. (1975). Foreign Exchange Accounting of Multinational Corporations, Financial Analyst Journal, 32-76.

Penman, S. H. (1980). An Investigation of the Voluntary Disclosure of Corporate Earnings, Journal of Accounting Research, 132-160.

Penman, S. H. (1982). Insider Trading and the Dissemination of Firm's Forecast Information, Journal of Business, 479-503.

Penman, S. H. (1985). A Comparison of the Information Content of Insider Trading and Management Earnings Forecasts, Journal of Financial and Quantitative Analysis, 20, 1-17.

Pindyck R. S. and Rubinfielf L. (1981). Econometrics and Models : Economic Forecasts 2nd Edn. McGraw-Hill Book Company.

Ramasamy, O. (1985). Economic Consequences of Financial Accounting Standards Board Statement Number 33: An insider Trading Perspective. Unpublished doctoral dissertation, University of Florida.

Rezaee, Zabihollah (1985). Capital Market Reaction to Accounting Policy Deliberations : An Empirical Study of Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements, 1974- 1982. Unpublished doctoral dissertation, University of Mississippi.

Revine, L. (1984). The Rational Underlying the Functional Currency Choice, *The Accounting Review*, (3), 505-514.

Sefcik, Stephen E.; and Thompson, R. (1986). An Approach to Statistical Inference in Cross-Sectional Models with Security Abnormal Returns as Dependent Variable, *Journal of Accounting Research*, 317-334.

Shank, J., Dilland, J. F.; and Murdock, R. J. (1979). *Assessing the Economic Impact of FASB 8*. Financial Executives Research Foundation.

Smith, Daniel E. (1976). The Effect of the Separation of Ownership from Control on Accounting Policy Decisions. *The Accounting Review*, *51*, 707-723.

Sprouse, Robert T. (1987). Commentary on Financial Reporting, *Accounting Horizons*, *1*(1), 87-90.

Standard and Poor's Compustat Services, Inc. (1983). *Industrial Compustat*. New York: Standard and Poor's Corporation.

Stanley, Marjorie T. & Block, Stanley B. (1978). Response by United States Financial Managers to Financial Accounting Standard No. 8, *Journal of International Business Studies*, 89-99.

Tinic, S. M., & West, R. R. (1974). Marketability of Common Stocks in Canada and the U. S. A.: A Comparison of Agent versus Dealer Dominated Markets, *Journal of Finance*, *XXXIX*, 729-746.

Verrecchia, R. (1981). On the Relationship Between Volume Reaction and Consensus of Investors: Implications for Interpreting Tests of Information Content, *Journal of Accounting Research*, 271-283.

Watts, R. & Zimmerman, J. (1978). Toward a Positive Theory of the Determination of Accounting Standards, The Accounting Review, 112-134.

Waymire, G. (1985). Earnings Volatility and Voluntary Management Forecast Disclosure, Journal of Accounting Research, (1), 268-295.

Wilner, Neil A. (1982). SFAS 8 and Information Inductance: An Experiment, Accounting, Organizations and Society, 7(1), 43-52.

Ziebart, David A. & Kim, David H. (1987). An Examination of the Market Reactions Associated with SFAS No. 8 and SFAS No. 52, The Accounting Review, 343-357.

Zmijewski, Mark & Hagerman, Robert L. (1981). An Income Strategy Approach to the Positive Theory of Accounting Standard Setting/Choice, Journal of Accounting and Economics, (3), 129-150.

APPENDIX A

FOREIGN CURRENCY TRANSLATION METHODS PRIOR TO SFAS No. 8

There were four foreign currency translation methods before SFAS No. 8 was introduced in 1975:

1. The Current/Non-current Method

Under this method, all current assets and current liabilities of foreign subsidiaries are translated at the current rate (foreign exchange rate in effect at the balance sheet date; while the non-current assets and liabilities are translated at the historical exchange rate (exchange rate in effect when the assets and liabilities were acquired or otherwise recorded in the subsidiary's accounting books). In the Income Statement, revenue and expense items are translated at the average rate except for ones that relate to noncurrent assets and liabilities (e.g. depreciation expenses)which is translated at the historical exchange rate.

2. The Monetary/Non-monetary Method

This method requires that only monetary items such as cash, accounts receivable, accounts payable, and long-term payables and receivables, be translated at the current rate. But that non-monetary accounts such as investments, property, and plant and equipment, long-term deferred charges and credits, inventories, and short-term deferrals be translated at their historical exchange rates. All income statement items are translated at average exchange rates except for items relating to non-monetary assets and liabilities, which are translated at historical rates.

3. The Temporal Method

Under this method, cash money, receivables, and payables measured at the amounts promised are translated at the exchange rate in effect at the balance sheet date, while assets and liabilities measured at money prices are translated at the exchange rate in effect at the dates to which the money prices pertain. Thus the Temporal method is simply a measurement conversion process which should not change the attribute being measured.

4. The Current Rate Method

Under this method, all assets, liabilities, revenues and expenses are translated at the current rate of exchange. The historical exchange rate is used only where the foreign country's currency is more unstable than the domestic currency.

This method voids inclusion of exchange gains and losses in the current period income, except those reported on the local currency financial statements of the subsidiary. This overcomes some of the weaknesses of the monetary/non-monetary and the temporal methods.

APPENDIX B

LIST OF MULTINATIONAL COMPANIES USED IN THE STUDY

CUSIP	NAME OF MNC
131069	CALLAHAN MINING CORP.
186000	CLEVELAND-CLIFFS IRON CO.
344892	FOOTE MINERAL CO.
674599	OCCIDENTAL PETROLEUM CORP.
368298	GEARHART INDUSTRIES INC.
806857	SCHLUMBERGER LTD.
356714	FREEPORT MCMORAN INC.
350244	FOSTER WHEELER CORP.
406216	HALLIBURTON CO.
33609	ANDERSON, CLAYTON & CO.
74077	BEATRICE FOODS CO.
126149	CPC INTERNATIONAL INC.
370334	GENERAL MILLS INC.
487836	KELLOGG CO.
99599	BORDEN INC.
143483	CARNATION CO.
373712	GERBER PRODUCTS CO.
861504	STOKELY-VAN CAMP INC.

460043	INTL. MULTIFOODS CORP.
155177	CENTRAL SOYA CO.
428182	HEUBLEIN INC.
191216	COCA-COLA CO.
713448	PEPSICO INC.
718167	PHILIP MORRIS INC.
761753	REYNOLDS (R.J.) INDS.
910858	UNITED MERCHANTS & MFRS INC.
189486	CLUETT, PEABODY & CO.
458506	INTERCO INC.
575379	MASONITE CORP.
608030	MOHASCO CORP.
97383	BOISE CASCADE CORP.
228669	CROWN ZELLERBACH
460146	INTL PAPER CO.
494368	KIMBERLY-CLARK CORP.
809877	SCOTT PAPER CO.
746252	PUREX INDUSTRIES INC.
13068	ALBERTO-CULVER CO.
961548	WESTVACO CORP.
887224	TIME INC.
26375	AMERICAN GREETINGS CORP-CL A
19087	ALLIED CORP.
252741	DIAMOND SHAMROCK CORP.
260543	DOW CHEMICAL
263534	DU PONT (E.I.) DE NEMOURS

302491	FMC CORP.
427056	HERCULES INC.
693506	PPG INDUSTRIES INC.
905581	UNION CARBIDE CORP.
9158	AIR PRODUCTS & CHEMICALS INC.
297659	ETHYL CORP.
2824	ABBOTT LABORATORIES
110097	BRISTOL-MYERS CO.
770706	ROBINS (A.H.) CO.
806605	SCHERING-PLOUGH
812302	SEARLE (G.D.) & CO.
832377	SMITHLINE BECKMAN CORP.
915302	UPJOHN CO.
934488	WARNER-LAMBERT CO.
742718	PROCTER & GAMBLE CO.
54303	AVON PRODUCTS
165339	CHESEBROUGH-POND'S INC.
375766	GILLETTE CO.
423236	HELENE CURTIS INDUSTRIES
459506	INTL FLAVORS & FRAGRANCES
457659	INSILCO CORP.
629853	NALCO CHEMICAL CO.
44540	ASHLAND OIL INC.
48825	ATLANTIC RICHFIELD CO.
173036	CITIES SERVICE CO.
302290	EXXON CORP.

492386	KERR-MCGEE CORP.
626717	MURPHY OIL CORP.
822635	SHELL OIL CO.
853683	STANDARD OIL CO (CALIF)
853700	STANDARD OIL CO (INDIANA)
866762	SUN CO. INC.
880370	TENNECO INC.
977385	WITCO CHEMICAL CORP.
23519	AMERACE CORP.
42465	ARMSTRONG RUBBER
239577	DAYCO CORP.
530000	LIBBEY-OWENS-FORD CO.
219327	CORNING GLASS WORKS
483044	KAISER CEMENT CORP.
542290	LONE STAR INDUSTRIES
460578	INTERPACE CORP.
370622	GENERAL REFRACTORIES CO.
690734	OWENS-CORNING FIBERGLAS CORP.
42170	ARMCO INC.
120547	BUNDY CORP.
196864	COLT INDUSTRIES INC.
493422	KEYSTONE CONS INDUSTRIES INC.
549866	LUKENS INC.
228255	CROWN CORK & SEAL CO. INC.
635128	NATIONAL CAN CORP.
833034	SNAP-ON TOOLS CORP.

854616	STANLEY WORKS
580033	MCDERMOTT INC.
754713	RAYMOND INDUSTRIES INC.
117043	BRUNSWICK CORP.
690020	OUTBOARD MARINE CORP.
244199	DEERE & CO.
576216	MASSEY FERGUSON LTD.
19645	ALLIS-CHALMERS CORP.
260003	DOVER CORP.
481196	JOY MFG CO.
149123	CATERPILLAR TRACTOR CO.
736202	PORTEC INC.
261597	DRESSER INDUSTRIES INC.
300587	EX-CELL-CORP.
291210	EMHART CORP.
465632	ITEK CORP.
216669	COOPER INDUSTRIES INC.
456866	INGERSOLL-RAND CO.
122781	BURROUGHS CORP.
459200	INTL BUSINESS MACHINES CORP.
538021	LITTON INDUSTRIES INC.
212363	CONTROL DATA CORP.
428236	HEWLETT-PACKARD CO.
848355	SPERRY CORP.
878895	TECUMSEH PRODUCTS CO.
291011	EMERSON ELECTRIC CO.

402784	GULTON INDUSTRIES INC.
934436	WARMER COMMUNICATIONS INC.
460470	INTL TELEPHONE & TELEGRAPH
620076	MOTOROLA INC.
799850	SANDERS ASSOCIATES INC.
922204	VARIAN ASSOCIATES INC.
460254	INTL RECTIFIER CORP.
882508	TEXAS INSTRUMENTS INC.
27627	AMERICAN MOTORS CORP.
345370	FORD MOTOR CO.
370442	GENERAL MOTORS CORP.
459578	INTL HARVESTER CO.
99725	BORG-WARNER CORP.
278058	EATON CORP.
313549	FEDERAL-MOGUL CORP.
359370	FRUEHAUF CORP.
666807	NORTHROP CORP.
369550	GENERAL DYNAMICS CORP.
883203	TEXTRON INC.
521894	LEAR SIEGLER INC.
32177	AMSTED INDUSTRIES
573275	MARTIN MARIETTA CORP.
774347	ROCKWELL INTERNATIONAL CORP.
714041	PERKIN-ELMER CORP.
343856	FLUKE (JOHN) MFG CO.
71707	BAUSCH & LOMB INC.

71892	BAXTER TRAVENOL LABORATORIES
75887	BECTON, DICKINSON & CO.
871140	SYBRON CORP.
601753	MILTON BRADLEY CO.
746384	PUROLATOR INC.
247361	DELTA AIR LINES INC.
693602	PSA INC.
886735	TIGER INTERNTIONAL
291101	EMERY AIR FREIGHT CORP.
402550	GULF STATES UTILITIES CO.
252435	DI GIORGIO CORP.
13788	ALCO STANDARD CORP.
913606	UNIVERSAL LEAF TOBACCO
299209	EVANS PRODUCTS CO.
853156	STANDARD BRANDS PAINT CO.
477196	JEWEL COS INC.
565097	MAPCO INC.
536257	LIONEL CORP.
568287	MARINE MIDLAND BANKS
81721	BENEFICIAL CORP.
53501	AVCO CORP.
177846	CITY INVESTING CO.
540424	LOEWS CORP.
893485	TRANSAMERICA CORP.
534187	LINCOLN NATIONAL CORP.
26874	AMERICAN INTERNATIONAL CORP.

435081	HOLIDAY INNS INC.
344872	FOOTE CONE & BELDING COMM.
264830	DUN & BRADSTREET CORP.
444859	HUMANA INC.
268457	EG & G. INC.
861572	STONE & WEBSTER INC.ESIGN

SOURCES: Standard and Poor's Compustat Services, Inc. (1983). Industrial Compustat. New York: Standard and Poor's Corporation.

Securities and Exchange Commission, Ownership Reporting System Master File, 1975-83.