

Insider Trading:
A Study of Motivations and Deterrents

By

Joseph D. Beams

Dissertation submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

In
Business Administration
with a Concentration in Accounting

Dr. Larry Killough, Chair
Dr. David Brinberg
Dr. Robert Brown
Dr. John J. Maher
Dr. Eugene Seago

December 17, 2002
Blacksburg, Virginia

Keywords: Insider Trading, Deterrents, Motivations, Compliance

Copyright 2002, Joseph D. Beams

**Insider Trading:
A Study of Motivations and Deterrents**

Joseph D. Beams

ABSTRACT

Due to recent events in corporate America, including the recent Enron scandal and numerous cases of insider trading, the public's faith in the fairness of the stock markets has been shaken. The current study suggests that public relations efforts that are designed to increase the public's perception of the integrity of United States stock markets and lower public cynicism toward insider trading may be fruitful.

The contributions of this study are to identify what leads to insider trading and thereby identify methods to reduce it. Graduate student subjects are used to test the relationship between the intent to trade based on insider information and the deterrents and motivations for insider trading. The results of the study indicate that gain, certainty, cynicism, guilt, social stigma, and agreement with the law have a significant effect on an individual's intent to take part in insider trading. The results do not provide conclusive support that increasing severity of punishment decreases the likelihood of trading based on insider information. The results also show that there are differences in the perceptions of male and female respondents with regard to the deterrence variables.

Identifying what situations are more likely to lead to insider trading allows policymakers to design more efficient detection efforts. This study finds that subjects' are more inclined to trade based on insider information to avoid a loss on stock they currently own than to achieve an abnormal gain by purchasing a stock that they do not currently own.

This study finds that the intent to take part in insider trading increases as the perception of likelihood of getting caught decreases. The results indicate that subjects are more willing to use insider information when it is from a friend because their likelihood of getting caught is lower. This is important for two reasons. If the incidence of insider trading is higher in situations that involve second hand knowledge, then detection efforts

become more complicated. Also, the presence of insider trading may be significantly higher than current detection efforts indicate because these cases are hard to detect.

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION	1
CHAPTER 2 LITERATURE REVIEW AND HYPOTHESES	6
2.1 INSIDER TRADING STUDIES	6
2.2 UTILITY THEORY OF CRIME AND PUNISHMENT	9
2.3 EMPIRICAL STUDIES OF DETERRENCE VARIABLES – CERTAINTY, SEVERITY, SOCIAL STIGMA, GUILT	11
2.4 MOTIVATIONAL VARIABLES – GAIN	17
2.5 CYNICISM – BELIEF THAT EVERYONE ELSE WOULD BREAK THE LAW	18
2.6 HYPOTHESES	20
CHAPTER 3 PRELIMINARY STUDIES	21
3.1 STUDY 1 – IMPORTANCE RATINGS	21
3.1.1 Sample	21
3.1.2 Methodology	22
3.1.3 Results of Study 1	24
3.2 STUDY 2 – SUBJECTIVE PROBABILITIES	26
3.2.1 Sample	26
3.2.2 Methodology	26
3.2.2.1 Prospect Theory	28
3.2.2.2 Social Desirability Response Bias	28
3.2.3 Results of Study 2	29
3.3 RECONCILIATION OF STUDIES	31
CHAPTER 4 METHODOLOGY	34
4.1 SUBJECTS	34
4.2 WITHIN-SUBJECTS EXPERIMENTAL DESIGN	35
4.3 REGRESSION AND MIXED MODEL DESIGNS	38
4.4 PROTOCOL OF EXPERIMENT	41
CHAPTER 5 RESULTS	43
5.1 OVERVIEW	43
5.2 DEMOGRAPHICS	43
5.3 TEST OF UNDERSTANDING	44
5.4 ORDERING OF CASES	44
5.5 MANIPULATED VARIABLES – GAIN AND CERTAINTY	44
5.6 CERTAINTY MANIPULATION CHECK	45
5.7 HYPOTHESES 1 AND 2 – GAIN AND CERTAINTY	46
5.8 HYPOTHESES 3, 4, 5, 6 – SEVERITY, GUILT, SOCIAL STIGMA, CYNICISM	46
5.8.1 Mixed Model	46
5.8.2 Regression Analysis of Individual Cases	49
5.9 PROSPECT THEORY	50

5.10 SOCIAL DESIRABILITY RESPONSE BIAS (HALO EFFECT)	51
5.11 GENDER EFFECTS	51
5.12 ANALYSIS USING PROBABILITY OF TRADING AND FRIEND TRADING AS DEPENDENT VARIABLES	53
5.13 DISCUSSION	54
CHAPTER 6 IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH	56
6.1 IMPLICATIONS	56
6.2 LIMITATIONS AND FUTURE RESEARCH	58
REFERENCES	61
TABLES & EXHIBITS	63
APPENDIX A FULL INSTRUMENT	91
APPENDIX B IRB REQUEST	100
APPENDIX C SUBJECTS SIGN UP SHEETS	103
VITA	106

LIST OF TABLES

TABLE 3.1 Frequency of Demographic Variables	22
TABLE 3.2 Importance Ratings - Mean Responses	24
TABLE 3.3 Importance Ratings – Contrasts	25
TABLE 3.4 Subjective Probabilities – Regression	30
TABLE 3.5 Reconciliation of Studies	31
TABLE 1 Demographic Summary of Subjects	63
TABLE 2 Test of Understanding of Insider Trading	65
TABLE 3 Order of Cases	66
TABLE 4 Test of Effect of Order on Probability of Trading	67
TABLE 5 Certainty Manipulation Check	69
TABLE 6 T-test for Manipulation Check of Certainty (Cases 1-2 and 3-4 Comparisons)	70
TABLE 7 T-test for Manipulation Check of Certainty (Cases 1-4 and 2-3 Comparisons)	71
TABLE 8 Probability of Trading Cell Means	72
TABLE 9 Effect of Gain and Certainty on Probability of Trading	73
TABLE 10 Mixed Model Results (Cases 1-4 Combined)	74
TABLE 11 Regression Results (Case 1 – Low Gain, Low Certainty)	75
TABLE 12 Regression Results (Case 2 – Low Gain, High Certainty)	76
TABLE 13 Regression Results (Case 3 – High Gain, High Certainty)	77
TABLE 14 Regression Results (Case 4 – High Gain, Low Certainty)	78
TABLE 15 Regression Results (Case 5 – Low Gain, Low Certainty – Buy Situation)	79
TABLE 16 Comparison of Severity between Cases	80
TABLE 17 Test of Prospect Theory	81
TABLE 18 Test of Social Desirability Response Bias	82
TABLE 19 Gender Effects for Guilt and Social Stigma	83
TABLE 20 Gender Effects for Certainty	84

TABLE 21 Mixed Model Results with Average of Trading and Friend Trading As Dependent Variable (Cases 1-4 Combined)	85
TABLE 22 Regression Results with Average of Trading and Friend Trading As Dependent Variable (Case 1 – Low Gain, Low Certainty)	86
TABLE 23 Regression Results with Average of Trading and Friend Trading As Dependent Variable (Case 2 – Low Gain, High Certainty)	87
TABLE 24 Regression Results with Average of Trading and Friend Trading As Dependent Variable (Case 3 – High Gain, High Certainty)	88
TABLE 25 Regression Results with Average of Trading and Friend Trading As Dependent Variable (Case 1 – High Gain, Low Certainty)	89
TABLE 26 Regression Results with Average of Trading and Friend Trading As Dependent Variable (Case 1 – Low Gain, Low Certainty – Buy Situation)	90