

COMPENSATION CHOICE - THE EFFECT ON FIRM PERFORMANCE:
AN INTERINDUSTRY LOOK AT PERFORMANCE
PLANS AND RESTRICTED STOCK

by

Patricia Graybeal Lobingier

Virginia Polytechnic Institute and State University

DOCTOR OF PHILOSOPHY
in Business
with a major in Accounting

Robert M. Brown, Chairman
Cintia M. Easterwood
Frederick M. Richardson
Christine M. Haynes
Raman Kumar

March 24, 1997
Blacksburg, Virginia

Key Words: Performance Plans, Restricted Stock, Executive Compensation

COMPENSATION CHOICE - THE EFFECT ON FIRM PERFORMANCE:
AN INTERINDUSTRY LOOK AT PERFORMANCE
PLANS AND RESTRICTED STOCK

Patricia Graybeal Lobingier

(ABSTRACT)

Public criticism of executive pay has increased significantly in recent years. Shareholders express concern that the level of pay to many executives does not match the level of increase in shareholder wealth. The government has even gotten involved in the issue by changing tax laws related to compensation and taking an interest in how compensation is recorded in financial statements. This study investigates the relationship between adoption of compensation components and improved firm performance. Specifically, performance and restricted stock plan adoptions are analyzed for nine industries. Variable change is analyzed pre and post adoption for adopters; these adopters are then compared to non-adopters and to non-adopting peers.

Data were gathered from COMPUSTAT and analyzed using four statistical methods; t-tests, analysis of variance, multivariate analysis of variance and analysis of means. The study covers 20 years of adoptions and involves 335 adopting firms.

Results of the study indicate that, when solely analyzing adopters, adoptions of performance or restricted stock plans improve firm performance for some industries but not for others. The study further indicates for most industry groups, the improvement experienced by adopters is not as significant as the improvement realized by the non-adopting segment of the industry. Lastly, when adopters are compared to non-adopting peers the study finds peers perform as well as or better than adopters.

These results imply adoption of restricted stock plans works as intended for some industries by improving firm performance but may not improve performance to the levels reached by the industry as a whole.

ACKNOWLEDGEMENTS

I am very grateful to my dissertation chairman, Dr. Robert Brown, for his unending guidance and support, as well as his extreme patience throughout this process. In addition, I would like to thank my committee, Dr. Fred Richardson, Dr. Cintia Easterwood, Dr. Christine Haynes and Dr. Raman Kumar for their sound advice and encouragement.

I am also grateful to Dr. Wayne Leininger for his direction and the financial support from the Department of Accounting and the University. A special thanks to my fellow doctoral students whose support and encouragement helped me more than I can express.

With great love, admiration and appreciation I wish to thank my family. I am grateful to my parents, Phyllis and Lewis Ferguson and Sheila and Dan Graybeal, for their constant support, for encouraging me to reach for my dreams, for always believing in me even when I didn't believe in myself, and for giving me more love than I ever dreamed possible. I want to thank my brother Gary and his wife Cathy for their continual caring, for their ability to make me feel positive about this process and for being so understanding when I missed important family events.

A very special thanks goes to my husband, Ken, who gave me so much love and support. Without his constant encouragement, ability to suffer through my irrational states without complaining, and unending capacity for making me laugh and smile, the process of completing this project would have been much more difficult.

I wish to also thank my puppy, Sammy. She put many smiles on my face, made me feel very loved and didn't give me a reason to use the excuse, "the dog ate my dissertation."

Lastly, I wish to thank God whose guiding hand led me to this challenge in my life and helped me accomplish this and many other goals.

Table of Contents

CHAPTER 1 INTRODUCTION.....	1
CHAPTER 2 LITERATURE REVIEW	3
Agency Theory	3
Empirical Evidence Related to Shareholder Wealth Changes	4
The Relationship Between Compensation Plans and Accounting Measures	5
Performance Plans and Restricted Stock	6
Recent Developments Affecting Compensation	7
Problems With Linking Compensation to Performance.....	8
CHAPTER 3 HYPOTHESES	10
CHAPTER 4 RESEARCH DESIGN AND METHODOLOGY.....	13
Variable Definition.....	13
Company Classification	13
Adopter	13
Non-Adopter.....	13
Peer.....	13
General Performance Measure.....	14
Industries and Industry Specific Measures	14
Bank and Non-Bank Financial.....	15
Chemical Manufacturing & Distribution.....	16
Consumer Products Manufacturing & Distribution.....	18
Electrical, Electronics & Related Equipment	19
Food Processing & Distribution	19
Heavy Manufacturing	20
Mining & Extractive	20
Non-Financial Services	21
Textiles, Paper and Forest Products	22
Variables Related to Time and Size	22
Time.....	22
Size	23
Data Manipulation.....	24
Adopters	24
Non-Adopters.....	24
Peers	25
Statistical Analysis	29
t-tests	29
ANOVA.....	29
MANOVA.....	30
Data	30
Sample Selection	31

Data Assembly.....	31
Adopters	31
Non-Adopters	31
Peers.....	32
CHAPTER 5 ANALYSIS OF RESULTS	33
Data Description.....	33
Sample Size	33
Descriptive Statistics	33
Diagnostics.....	36
Correlation.....	36
Normality.....	50
Tests of Hypotheses	50
Tests of Hypotheses 1A and 2A	51
Hypothesis 1A.....	51
Hypothesis 2A.....	51
Financial	51
Chemical.....	53
Consumer	53
Electrical.....	54
Food	54
Heavy Manufacturing.....	55
Mining	55
Non-Financial.....	55
Textiles.....	55
Summary.....	55
Tests of Hypothesis 1B	62
Financial	62
Chemical	62
Consumer	63
Electrical	63
Food	64
Heavy Manufacturing	64
Mining	64
Non-Financial	64
Textiles.....	65
Summary	65
Tests of Hypothesis 2B	71
Financial	71
Chemical	71
Consumer	72
Electrical	72
Food	73
Heavy Manufacturing	73

Mining	74
Non-Financial	74
Textiles.....	74
Summary	74
Tests of Hypothesis 1C	86
Summary	86
Tests of Hypothesis 2C	90
Financial	90
Consumer	90
Electrical	90
Heavy Manufacturing	91
Textiles.....	91
All Other Industries	91
Summary	91
Industry Group Summaries.....	97
Financial	97
Chemical	97
Consumer	97
Electrical	97
Food	98
Heavy Manufacturing	98
Mining	98
Non-Financial	98
Textiles.....	98
CHAPTER 6 CONCLUSIONS, LIMITATIONS AND IMPLICATIONS	
FOR FUTURE RESEARCH	99
Summary and Conclusions	99
Limitations	101
Implications for Future Research.....	101
REFERENCE.....	103
APPENDIX A Adopter Companies By Industry Group	107
APPENDIX B Pearson Correlations	116
VITA.....	126

LIST OF TABLES

TABLE 1:	Industries, Variables and Predicted Direction.....	17
TABLE 2:	Description of Variable Calculation	27
TABLE 3:	Description of Variable Calculation	28
TABLE 4:	Sample Size	35
TABLE 5:	Descriptive Statistics - Financial	37
TABLE 6:	Descriptive Statistics - Chemical.....	38
TABLE 7:	Descriptive Statistics - Consumer	39
TABLE 8:	Descriptive Statistics - Electrical	40
TABLE 9:	Descriptive Statistics - Food Processing	41
TABLE 10:	Descriptive Statistics - Heavy Manufacturing	42
TABLE 11:	Descriptive Statistics - Mining.....	43
TABLE 12:	Descriptive Statistics - Non-Financial	44
TABLE 13:	Descriptive Statistics - Textiles.....	45
TABLE 14:	Pre-Adoption Descriptive Statistics	46
TABLE 15:	Pre-Adoption Descriptive Statistics	47
TABLE 16:	Pre-Adoption Descriptive Statistics	48
TABLE 17:	t-Test results for Pre-Adoption Data	49
TABLE 18:	t-test results for testing hypothesis 1A on the general performance measure	52
TABLE 19:	t-test results for testing hypothesis 2A on the industry-specific variables.....	57
TABLE 20:	t-test results for testing hypothesis 2A on the industry-specific variables.....	58
TABLE 21:	ANOVA results for testing interactions on the industry- specific variables and TIME AND SIZE for hypothesis 2A.....	59
TABLE 22:	ANOVA results for testing interactions on the industry- specific variables and TIME AND SIZE for hypothesis 2A.....	60
TABLE 23:	ANOMEANS results for testing significant interaction levels on TIME and SIZE for hypothesis 2A.....	61
TABLE 24:	ANOVA results for testing hypothesis 1B on the general performance measure	66
TABLE 25:	ANOMEANS results for testing significant COCLASS variables for hypothesis 1B.....	67
TABLE 26:	ANOVA results for testing interactions on the industry- specific variables and TIME and SIZE for hypothesis 1B.....	68
TABLE 27:	ANOVA results for testing interactions on the industry- specific variables and TIME and SIZE for hypothesis 1B.....	69
TABLE 28:	ANOMEANS results for testing significant interaction levels on TIME and SIZE for hypothesis 1B.....	70
TABLE 29:	MANOVA results for testing hypothesis 2B on the group of industry specific variables.....	75

TABLE 30:	ANOVA results for testing hypothesis 2B on the individual industry-specific variables.....	76
TABLE 31:	ANOVA results for testing hypothesis 2B on the individual industry-specific variables.....	77
TABLE 32:	ANOMEANS results for testing significant COCLASS variables for hypothesis 2B.....	78
TABLE 33:	ANOMEANS results for testing significant COCLASS variables for hypothesis 2B.....	79
TABLE 34:	ANOVA results for testing interactions on the industry-specific variables and TIME and SIZE interactions for hypothesis 1B.....	80
TABLE 35:	ANOVA results for testing interactions on the industry-specific variables and TIME and SIZE interactions for hypothesis 1B.....	81
TABLE 36:	ANOVA results for testing interactions on the industry-specific variables and TIME and SIZE interactions for hypothesis 1B.....	82
TABLE 37:	ANOVA results for testing interactions on the industry-specific variables and TIME and SIZE interactions for hypothesis 1B.....	83
TABLE 38:	ANOMEANS results for testing significant interaction levels on TIME and SIZE for hypothesis 1B.....	84
TABLE 39:	ANOMEANS results for testing significant interaction levels on TIME and SIZE for hypothesis 1B.....	85
TABLE 40:	ANOVA results for testing hypothesis 1C on the general performance measure.....	87
TABLE 41:	ANOMEANS results for testing significant COCLASS variables for hypothesis 1C.....	88
TABLE 42:	ANOVA results for testing interactions on the industry-specific variables and TIME and SIZE for hypothesis 1C.....	89
TABLE 43:	MANOVA results for testing hypothesis 2C on the group of industry-specific variables.....	92
TABLE 44:	ANOVA results for testing hypothesis 2C on the individual industry-specific variables.....	93
TABLE 45:	ANOMEANS results for testing significant COCLASS variables for hypothesis 2C.....	94
TABLE 46:	ANOVA results for testing interactions on the industry-specific variables and TIME and SIZE for hypothesis 2C.....	95
TABLE 47:	ANOMEANS results for testing significant interaction levels on TIME and SIZE for hypothesis 2C.....	96