Is the rhetorical tone in a MD&A consistent with financial performance?

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ABSTRACT

This paper investigates whether management writers communicate truthful information to investors by offering relevant data about financial performance. This work expands on the understanding of the potential congruence of rhetorical tone in Management's Discussion and Analysis of Financial Condition and Results of Operations (hereafter MD&A) text with financial performance. The 475 MD&A sections are analyzed using rhetorical tone derived from Diction 7. This verbal tone is measured by five thematic indicators, namely, activity; optimism; certainty; realism, and commonality; while the performance is measured by past and future growth of revenue. Management tone in communication is found to be affected by industry type. However, the association between the rhetorical tone of narrative disclosures and financial performance is not observed. Firms with different financial circumstances use the same rhetorical tone to deliver the different purpose of describing the corporate historical performance and talking about their expected future performance. This suggests that the management writers do create a MD&A as part of an annual routine just to satisfy the shareholders. This paper concludes that public firms most likely do not use their financial performance as a guide for writing MD&As. The study recommends conducting a more efficient analysis of the narrative disclosures.

Keywords**:** Rhetorical tone, narrative disclosures, financial performance, MD&A

INTRODUCTION

> Language is the currency of most human social processes. We use words to convey our emotions and thoughts, to tell stories, and to understand the world. It is somewhat odd, then, that so few investigations in the social sciences focus on natural language use among people in the real world (Chung & Pennebaker, 2007, p. 343).

Corporates communicate with potential and current investors by producing audited annual reports. The MD&A is the prime component of these reports. According to the Securities and Exchange Commission (hereafter SEC), publicly-traded companies are mandated to use a MD&A section to offer the view of management about the company's past, current and expected future performance (Arnold, Bedard, Phillips, and Sutton, 2012). So, shareholders can see the company through the management's perspective (Bochkay, 2014, p. 3). The MD&A section is mainly designed to assist readers in contextualizing and interpreting the financial numbers and in understanding the company's plans for the future (Yuthas, Rogers, and Dillard, 2002, p. 147).

For about five decades, the MD&A has been an integral component of the financial reporting mosaic in the American environment (Enev, Geiger, Gold, and Wallage, 2017). Exploring the information content in a MD&A section during this time has significant importance in accounting and finance literature (Mayew, Sethuraman, & Venkatachalam, 2015). Therefore, it is confirmed that the MD&A text is quite relevant (Bochkay and Levine, 2017).

The management writers use the narrative disclosures content in MD&As to present a comprehensive description of firm's financial performance. Management may utilize rhetorical tone to hide poor firm performance (Brennan, Guillamon-Saorin, and Pierce, 2009). So, analyzing the association between MD&A tone and financial performance has become urgent. By looking at linguistic style, previous studies investigate the association between MD&A tone and future financial reporting or capital market outcomes (Rich, Roberts, and Zhang, 2016). The textual analysis is widely used to conduct a comprehensive narrative assessment. Diction 7 is used to examine each of the rhetorical features of annual report narrative texts included in the MD&A.

Most empirical studies such as Davis, Piger, and Sedor, (2006); Elrod (2009); and Ober, Zhao, Davis, and Alexander. (1999) examined the association between text characteristics (e.g., tone and linguistic complexity) and future firm performance by focusing only on a single thematic indicator (e.g. optimism or certainty). Just a few studies used a complete set of thematic indicators with a small sample size, namely Sydserff and Weetman, 2002; Yuthas et al., 2002.

The contribution of this paper is to extend research on the associations between financial reporting and MD&A tone as a means of communicating financial information. To date, this is the first study that analyzes the linguistic style in MD&A texts by using the complete set of thematic indicators provided by Diction in a large sample of Fortune 500 firms. This work responds to a call in the literature review to scrutinize the congruence of the

rhetorical tone in narrative disclosure with financial performance.

This study is guided by one research question: Is the rhetorical tone in a MD&A consistent with financial performance? The paper begins by presenting related previous research. This is followed by research framework. Results and discussion follow along with a brief conclusion.

PREVIOUS RESEARCH

Using Diction to analyze the association between financial performance and corporate narrative disclosures has been the focus of empirical accounting studies. Empirical results of these studies confirmed that the association between performance and rhetorical manipulation is controversial (Mahboub, Mostapha, and Hegazy, 2017). Previous empirical studies have limited their thematic analysis by focusing only on a single thematic indicator (e.g. optimism or certainty). Only a few studies have used the complete set of thematic indicators provided by Diction (Patelli and Pedrini, 2015). Consistent with the paper's goal, the literature review, presented in this section, mirrors the results of those works.

Sydserff & Weetman (2002) looked at the significant difference in five master variables between good performance and poor performance in 26 small United Kingdom (UK) investment trusts. By analyzing the verbal tone in the president's letter and manger's report, they found a significant difference only in the optimistic scores of chairman statements and the activity scores of management reports. However, there was no relationship between performance and the variables realism, certainty and commonality, which is also supported by the results of this paper. Due to this result, Sydserff & Weetman (2002) were unable to confirm that impression management can be affected by profitability. Therefore, they suggested that management writers of poor performance use their language to portray a positive picture to make their narrative disclosures similar to the positive performers.

By applying the Habermas' principles of communicative action with very limited analysis of seven United States (US) matched pairs, Yuthas et al. (2002) found that firms expecting either a good or bad earnings surprise exhibited a high level of communicative action. This suggested that management writers of firms with a large earnings surprise (either high or low) utilize the narrative section to emphasize and present their sincerity and trustworthiness.

Following the methodology of Yuthas et al. (2002), Patelli and Pedrini (2014) investigated the association between firm performance and the rhetorical tone of the Chief Executive officer (CEO) letter in 664 annual letters to the shareholders. They found that optimistic tone is congruent with both past and future financial performance. The researchers pointed out that past performance influenced the rhetorical tone of CEO letters.

To explore the effects of tone at the top, Patelli & Pedrini (2015) empirically investigated the relationship between financial reporting aggressiveness and five thematic indicators from 535 annual CEOs' letters to shareholders. Their results indicated that several dimensions of CEOs' language (certainty, realism, and commonality) correlated with financial reporting aggressiveness.

Richards, Richard, & Stade. (2015) found no evidence for a relationship between five master variables and profitability. They suggested that firms with less performance tend to hide negative performance by mirroring those companies with significant improvements in

profitability.

Even though some of these studies did not investigate the associations between MD&A tone and financial reporting, they have an effective contribution in both the theoretical and practical dimensions. Thus, they are presented as evidence of the relation between linguistic style in annual reports and accounting practices.

STUDY FRAMEWORK

Measurement of Rhetorical Tone offered by Diction

To measure the rhetorical tone in MD&A reports for a research sample, this study uses the textual-analysis method. Diction 7 software was employed to read a passage. The reasoning behind this choice of Diction 7 is because it is widely used in business literature (Craig, Mortensen, and Iyer, 2013). Diction software counts types of words to capture the linguistic style (i.e., verbal tone). As shown in Table 1, the rhetorical tone is measured in terms of five master variables: certainty, optimism, activity, realism and commonality. These five composite dimensions are comprised of 34 individual dimensions1 (Hart and Carroll, 2014). These five composites are used to assess the congruence of tone variables in MD&A with financial performance.

According to the meta-analysis of Short and Palmer, these five master variables were stimulated by theoretical work of many social thinkers (2008, pp. 732-733). Certainty as the first master variable was derived from the study of Wendell Johnson's (1946), which dealt with general semantics, and investigated how language became inflexible and what can occur accordingly. In terms of the accounting application of Diction analysis, the first attempt was observed in the study of Ober et al. (1999), where no significant differences were found in the use of certainty among companies with good financial performance compared to weak performance (Appendix A-1 contains excerpts from an MDA).

The optimism variable was motivated by the study of James David Barber (1992), who had a priority to observe that optimism can be used as a key dimension to comprehend political personality.

Activity is based on the study of Osgood et al. (1957), who measured the meaning by examining the features of the language. Within the accounting literature, Haried (1979, 1973) provided the first application of the framework of Osgood et al. (1957) in the accounting field (Houghton, 1988) (Appendix A-3 contains excerpts from a MD&A).

Realism was developed as an endeavor to take advantage of John Dewey's (1954) study. This work was a point of interest in pragmatist political philosophy, and it has gained significant attention from many commentators as the mature expression of the American pragmatist's democratic theory (Ralston, 2014) (Appendix B-4 contains excerpts from an MDA). The last master variable is commonality. This variable is derived from the work of

[1]Diction's five Master Variables--Activity, Optimism, Certainty, Realism and Commonality--are composed by converting all subaltern variables to z-scores, combining them via addition and subtraction, and then by adding a constant of 50 to eliminate negative numbers (Hart & Carroll, 2014, p. 4).

Amitai Etzioni (1993). After publishing this work, the interest in communitarians has received significant consideration (Crawford, 1996) (Appendix A-5 contains excerpts from an MDA).

Even though Diction s developed by expertise in linguistics, and observed in political science and psychology, it became very widely used in accounting researches because of its simplicity of use and the advantages of automation (Sydserff & Weetman, 2002).

Measurement of Financial Performance

Financial performance was measured by past and future revenue growth, using the Standard & Poor's 500 Index (hereafter, S&P 500) as a benchmark for determining the state of the overall economy.

The sample was divided into highest performance, which includes companies with performance greater than a benchmark, and lowest performance, which includes firms with performance lower than a benchmark. The results of five thematic indicators of highest and lowest firms were compared to each other. It is assumed that a company with performance lower than its competitors might communicate differently than those with performance greater than the industry average. This does not mean yet that management uses language and verbal tone in narrative information to manipulate investors. Due to expectations, the communication between the speaker (management) and listeners (investors) can be affected by the performance because of two arguments (Richards et al., 2015): (1) Good performance motivates managers to distinguish themselves by increasing the narrative disclosures to advance the firm's reputation, (2) Due to the concept of agency theory, managers will be highly motivated as well to sell and promote their superior managerial capability because of a high profitability.

Research Hypotheses

By combining the measurement of rhetorical tone "qualitative information" with the measurement of financial performance "quantitative information", the main two hypotheses (stated in alternative form) were developed based on the assumption that the managers of the lowest performance firms may use their own language to convey their emotions and thoughts to make their narrative disclosures mimic the linguistic tone of the highest performance companies.

H1: Firms in different industries are significantly different in the rhetorical tone used in their MD&A section.

H2: Firms with the highest performance and those with the lowest performance are significantly different in the rhetorical tone used in their MD&A section.

Sample and Data Collection

The initial study sample includes the top 100 publicly-traded US companies from 2010 to 2014 with industry diversity, after the financial crisis. Out of 100 firms, five companies were excluded because they did not meet the sample criterion, which required that

a selected firm have at least one competitor from its industry for the comparison. This exclusion reduces the sample size to 95 firms.

Information regarding the narrative disclosures is collected from 475 MD&A sections under item 7 of the annual financial reports. These MD&As were extracted from annual reports taken from Electronic Data Gathering, Analysis, and Retrieval (EDGAR Pro) and the SEC. After excluding tables and exhibits from each MD&A to ensure that measurement is based on dialogues with sufficient text, the cleaned MD&A sections were used to build the qualitative database, and then this qualitative information was converted by Diction 7 to be quantitative before merging it in the statistical analysis. However, Data on financial performance were collected from Morgan star online database.

RESULTS AND DISCUSSION

Descriptive statistics

Averages and standard deviations for five master and 34 individual variables are presented numerically in Tables 2 and 3. The mean of five master variables for past performance as presented in Table 2 ranges from (mean = 42.77) of realism score to (mean = 52.40) for commonality for poor performance while for good performers the average ranges from (mean = 42.64) to (mean = 52.07) for realism and commonality respectively. Table 3 presents almost the same result.

It shows that the average of rhetorical tone for future performance ranges from (mean = 42.88) to (mean = 52.12) for poor performance while for good performance, it ranges from (mean = 42.56) to (mean = 52.29) for realism and commonality respectively. The sample average disclosure scores range from (mean = 42.70) and (mean = 52.22) for realism and commonality, respectively. This confirms that there are no differences for five characteristics between poor performance and good performance.

Hypothesis Test Results

The sample research is categorized using the Standard Industrial Classification (hereafter SIC). Two-digit numbers were used to determine the industry in which each firm works as presented in Table 4. A one-way ANOVA test is shown in Table 4 and points out that study thematic indicators are significantly different across industries except for one master variable, “namely commonality”. This result confirms that firms in seven industries do not distinguish themselves in their MD&As by using language featuring values of a group and rejecting idiosyncratic (commonality score). However, it is indicated that there is a significant difference between seven industry groups when using activity, optimism, certainty and realism in their MD&As. They use the different rhetorical tone to deliver the same purpose of describing the corporate historical performance and talking about their future performance.

Table 4 shows that the rhetorical tone measured by optimism is significantly different across different levels of industry. Optimism in MD&A text from the Services industry (codes 70-79 out of 70-89) is found to be more optimistically expressive than other industries with

written MD&A texts (Optimism Mean = 50.3). Firms in this industry put more words denoting inspiration (i.e. the expression indicates humanity virtues and nobility as well as loyalty), stratification (i.e. terms associated with confidence, encouragement and success), and praise (i.e. the genre of communication denoting compliment). However, their MD&A texts contained minimal usage of negative terms; they include significantly less expression of blame (i.e. expression indicating a bankrupt result and sad circumstances), hardship (i.e. terms describing challenges, dilemmas, fears), and denial (i.e. negative terms such as not, shouldn't, not-for-profit).

In terms of realism, the Finance, Insurance and Real Estate industries have a greater score than others (mean = 43.19). The realism tone used in MD&A sections discusses daily matters that are tangible, immediate, and recognizable for the readers. The lower value of the realism score indicates the higher level of lexical complexity (Patelli & Pedrini, 2015, p. 11). This result shows that the management writers in this industry use appropriate verbal speech to make the MD&A text more readable by avoiding complex expressions and allowing the reader to understand the subject under discussion (Yuthas et al., 2002). Therefore, the presentation of financial results in this industry is faithful and honest because having complex narrative disclosures deceives investors (Li 2008).

The Higher score of realism indicates that firms in this industry devote their writing style for both temporal orientation and spatial awareness. In order to tell a financial story, management writers should draw on past events by using verbal history (past concern) and link them with the present by utilizing rhetorical present (present concern) (Edwards, 2013). Firms distinguish themselves in this industry by referencing their past performance through past sentences and describing their current performance by heavy use of present tense forms.

As Yuthas et al. (2002) confirmed that truthful disclosures come from certainty expression, Table 4 shows that the Services industry group (mean = 49.39) uses significantly more certainty than others. Implicitly, it can be confirmed that the MD&A as a written communication tool is very tenacious and less ambivalent.

A certain tone for activity is found to be significantly different among seven industry groups.

Table 4 indicates that the Services industry (codes 80-89 out of 70-89) group (mean = 51.03) uses significantly more activity than other industry groups. This industry has a greater use of rhetoric in discussing a featuring movement, change, implementation of new ideas or avoidance of inertia when writing their MD&A section. This implies that these firms are trying to tell the truth since reporting changes usually unfavorable disclosers.

Because out of five master variables, four composite dimensions are significantly different in each industry, the alternative hypothesis is going to be supported, and it can be concluded that the use of rhetorical tone in communication can be affected by industry type.

To test the second hypothesis, a Mann-Whitney test for difference of mean was applied for five master variables. The mean scores of five master variables are shown in Table 5. This study also finds no significant differences between lowest and highest performances for the use of certainty, optimism, activity, realism, and commonality in MD&A reports. This result does not support the second hypothesis, which assumes that firms with the highest performance and those with the lowest performance are significantly different in the rhetorical

tone used in their MD&A section.

This is consistent with Sydserff & Weetman (2002), who confirmed that differentiation between two groups was not found in the manager's report in four master variables. In addition, by analyzing thematic manipulation in firms' communication, namely standalone CSR reports and annual reports, Richards et al. (2015) failed to accept the hypothesis that the verbal tone content of firm's narrative disclosures is significantly correlated with the company's financial performance. Based on their findings, Sydserff & Weetman (2002) and Richards et al. (2015) thought that linguistic style adopted by less performance companies was to paint a positive picture to mirror highly-profitable corporations. However, this paper will not be lulled into this opinion because management tone in a MD&A does not tell the annual report's entire story. Therefore, this study opens a door to explore the assumption that management writers do create a MD&A as part of an annual routine just to satisfy the shareholders, and public firms most likely do not use their financial performance as a guide for writing the MD&As.

CONCLUSION

The sincerity principle is the most important ethical issue in writing and evaluating the communication strategy of the narrative accounting disclosures. Because of the lack of significant difference between linguistic style in narrative information and performance, various opinions have been drawn in the literature review. Ober et al. (1999) suggested that no matter if the firm's profit has increased or decreased, the managers do, in fact, "tell it like it is," while Yuthas et al. (2002), suggested that the managers may candy-coat unfavorable news by painting a positive picture of expected future performance. Sydserff & Weetman (2002) indicated that firms with poor performance utilize impression management to present their narrative disclosures, just as with firms with good profitability. This paper explores whether or not the rhetorical tone in a MD&A is adequately consistent with financial performance. A direct link between the linguistic content in a MD&A and financial performance was not found. Unlike the previous works' suggestions, this paper suggests that public firms most likely do not use their financial performance as a guide for writing the MD&As. These finding must be interpreted with caution because of certain limitations.

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APPENDIX A

Table 1

Diction five master variables

Variable	Definition	Formula
Certainty	Language indicating resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra	[Tenacity + Leveling + Collectives + Insistence] - [Numerical Terms + Ambivalence + Self Reference + Variety]
Optimism	Language endorsing some person, group, concept or event or highlighting their positive entailments.	[Praise + Satisfaction + Inspiration] - [Blame + Hardship + Denial]
Activity	Language featuring movement, change, the implementation of ideas and the avoidance of inertia.	[Aggression + Accomplishment + Communication + Motion] - [Cognitive Terms + Passivity + Embellishment]
Realism	Language describing tangible, immediate, recognizable matters that affect people's everyday lives.	[Familiarity + Spatial Awareness + Temporal Awareness + Present Concern + Human Interest + Concreteness] - [Past Concern + Complexity]
Commonality	Language highlighting the agreed-upon values of a group and rejecting idiosyncratic modes of engagement.	[Centrality + Cooperation + Rapport] - [Diversity + Exclusion + Liberation]

Source: (Hart and Carroll, 2014, pp. 4-10).

Table 2

Tone and past growth of revenue

Past growth of revenue	**Poor Performance (*N* = 212)**		**Good Performance (*N* = 263)**	
	Mean	SD	Mean	SD
Certainty	**47.51**	**3.6**	**47.63**	**2.92**
Tenacity	15.61	5.52	15.69	5.22
Leveling Terms	5.94	3.17	5.96	3.37
Collectives	4.21	3.48	4.39	3.87
Insistence	136.77	62.32	131.91	54.39
Ambivalence	6.63	3.76	6.79	4.31
Self-reference	0.06	0.15	0.13	0.37
Variety	0.49	0.08	0.48	0.08
Optimism	**48.97**	**1.6**	**48.85**	**1.64**
Praise	2.2	1.62	2.2	1.76
Satisfaction	1.14	1.19	1.21	1.17
Inspiration	2.52	2.21	2.19	2.45
Blame	0.93	1.58	0.87	1.36
Hardship	4.1	4.36	3.94	3.78
Denial	3.58	2.81	4.13	3.49
Activity	**48.98**	**2.77**	**48.86**	**4.26**
Aggression	2.58	2.94	2.84	3.18
Accomplishment	20.97	8.31	20.44	8.09
Communication	6.87	6.06	8.02	8.28
Motion	0.81	1.63	0.74	1.54
Cognition	12.92	5.91	13.91	5.63
Passivity	4.73	2.78	4.83	2.75
Embellishment	0.52	0.77	0.57	1.58
Realism	**42.77**	**3.07**	**42.64**	**1.99**
Familiarity	116.63	13.66	117.82	11.97
Spatial Terms	4.87	3.05	4.86	4.27
Temporal Terms	10.54	4.18	11.02	5.28
Present Concern	10.01	9.58	9.11	5.01
Human Interest	14.3	10.5	13.86	9.27
Concreteness	19.12	11.05	19.06	7.29
Past Concern	3.05	2.15	3.29	1.91
Complexity	5.52	0.26	5.51	0.26
Commonality	**52.4**	**3.01**	**52.07**	**2.5**
Centrality	7.94	4.39	7.23	3.85
Cooperation	12.56	6.12	11.8	5.31
Rapport	1.52	1.6	1.7	1.93
Diversity	2.68	1.8	2.85	1.94
Exclusion	2.77	2.6	2.74	2.44
Liberation	1.18	2.28	1.02	2.26

Table 3

Tone and future growth of revenue

Future growth of revenue	**Poor performance (*N* = 206)**		**Good performance (*N* = 269)**	
	Mean	SD	Mean	SD
Certainty	**47.52**	**3.51**	**47.62**	**3.03**
Tenacity	15.66	5.41	15.64	5.32
Leveling Terms	5.80	3.66	6.07	2.95
Collectives	4.24	3.58	4.36	3.79
Insistence	137.58	58.71	131.40	57.51
Ambivalence	6.61	4.04	6.80	4.10
Self-reference	0.10	0.27	0.10	0.31
Variety	0.48	0.08	0.49	0.08
Optimism	48.92	1.60	48.89	1.64
Praise	2.19	1.67	2.20	1.72
Satisfaction	1.13	1.15	1.22	1.20
Inspiration	2.54	2.73	2.18	2.00
Blame	0.94	1.51	0.87	1.41
Hardship	3.97	3.60	4.04	4.35
Denial	3.86	3.40	3.90	3.06
Activity	**48.84**	**3.51**	**48.97**	**3.79**
Aggression	2.64	3.24	2.78	2.95
Accomplishment	20.65	8.15	20.70	8.22
Communication	6.85	5.51	8.01	8.53
Motion	0.95	2.02	0.63	1.11
Cognition	13.31	5.75	13.59	5.80
Passivity	4.83	2.80	4.75	2.74
Embellishment	0.56	1.31	0.54	1.26
Realism	**42.88**	**3.01**	**42.56**	**2.07**
Familiarity	117.22	11.61	117.34	13.58
Spatial Terms	4.80	3.12	4.92	4.21
Temporal Terms	10.55	4.33	11.00	5.16
Present Concern	9.98	9.75	9.15	4.92
Human Interest	13.60	9.80	14.40	9.86
Concreteness	19.51	11.25	18.76	7.14
Past Concern	2.95	1.84	3.37	2.13
Complexity	5.51	0.26	5.52	0.26
Commonality	**52.12**	**2.88**	**52.29**	**2.63**
Centrality	7.41	4.00	7.66	4.20
Cooperation	12.06	5.59	12.20	5.78
Rapport	1.68	1.75	1.57	1.83
Diversity	2.75	1.96	2.79	1.81
Exclusion	2.85	2.16	2.68	2.74
Liberation	1.16	2.56	1.04	2.01

Table 4

Differences in the rhetorical tone and performance among industries

N	Variables	Activity	Optimism	Certainty	Realism	Commonality
18	Manufacturing(*)					
	Mean	49.46	49.32	47.98	42.45	52.39
	SD	3.07	1.29	3.3	1.9	3.49
21	Manufacturing(**)					
	Mean	48.73	48.77	47.79	42.76	52.45
	SD	2.52	1.48	3.12	1.69	2.78
12	Transportation, communication					
	Mean	49.19	48.58	48.14	42.44	51.99
	SD	5.05	1.79	2.5	1.55	1.68
25	Wholesale &Retail trade					
	Mean	48.8	48.91	46.46	42.74	52.02
	SD	3.06	1.39	3.43	1.96	2.37
14	Finance, Insurance and Real Estate					
	Mean	48.34	48.5	47.67	43.19	51.86
	SD	5.57	2.22	2.98	4.66	2.73
4	Services(***)					
	Mean	48.86	50.3	49.39	42.9	53.38
	SD	1.65	0.9	3.58	2.75	3.49
1	Services(****)					
	Mean	51.03	47.5	48.56	41.81	52.32
	SD	0.74	0.88	0.6	0.23	0.68
95	Total					
	Mean	48.92	48.9	47.57	42.72	52.22
	SD	3.68	1.62	3.23	2.47	2.74
	ANOVA	2.216	2.552	3.651	2.71	0.508
	P-value	0.04	0.019	0.001	0.013	0.803

Note:(*) = (codes 20-29 out of 20-39), 18 firms are coded as 20-29 out of 20-39 while 21 firms are coded as 30-39 out of 20-39.

(**) = (codes 30-39 out of 20-39), Four firms are coded as 70-79 out of 70-89 while one firm is coded as 80-89 out of 70-89.

(***) (codes 70-79 out of 70-89), (****)(codes 80-89 out of 70-89)

Table 5

Mann-Whitney U for past growth of revenue

Test Statistics[a]					
Past growth of revenue					
	Activity	Optimism	Certainty	Realism	Commonality
Mann-Whitney U	27421	26446	27550.50	27484.00	26181.50
Wilcoxon W	62137	61162	62266.50	62200	60897.50
Z	-0.31	-0.96	-0.22	-0.26	-1.14
Asymp. Sig. (2-tailed)	0.76	0.34	0.83	0.79	0.25
Future growth of revenue					
Mann-Whitney U	27579	27644.50	27654	25607.50	26420.50
Wilcoxon W	48900	63959.50	48975	61922.50	47741.50
Z	-0.09	-0.04	-0.04	-1.42	-0.87
Asymp. Sig. (2-tailed)	0.93	0.97	0.97	0.16	0.39
Mean	48.91	48.90	47.57	42.70	52.22
SD	3.67	1.62	3.24	2.52	2.74

a. Grouping Variable: (0 is for poor performance, and 1 is for good performance

Appendix B

Excerpt from a MD&A text related to Diction five master variables

A-1: Certainty: Language indicating resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra.

"While we believe the long-term trend is toward the growth of free trade, we have noted with concern recent developments in a number of regions. In Asia Pacific Africa, for example, the recent dramatic depreciation of the yen significantly reduces the cost of exports into the United States, Europe, and other global markets by Japanese manufacturers. Over a period of time, the emerging weakness of the yen can contribute to other countries pursuing weak currency policies by intervening in the exchange rate markets. This is particularly likely in other Asian countries, such as South Korea. As another example, government actions in South America to incentivize local production and balance trade are driving trade frictions between South American countries and also with Mexico, resulting in business environment instability and new trade barriers. We will continue to monitor and address developing issues around trade policy" (Ford Motor Co: NYS: F- MD&A 2013, SIC = 3711)

"..We believe that our continued focus on the use of business reviews and business development activities, commitment to quality, investment in customer contact personnel and the efforts of our marketing associates and sales support personnel are key drivers to strengthening customer relationships and growing sales with new and existing customers. We also believe these activities help our customers in this difficult economic environment.." (Sysco Corporation: NYS: SYY- MD&A 2010, SIC = 5141).

A-2: Optimism: Language endorsing some person, group, concept or event or highlighting their positive entailments.

"As a multi-platform news provider, the Company recognizes the importance of maximizing revenues from new media, both in terms of paid-for content and in new advertising models, and continues to invest in its digital products. The development of technologies such as smartphones, tablets and similar devices and their related applications provides opportunities for the Company to make available its journalism to a new audience of readers, introduce new or different pricing schemes, develop its products to continue to attract advertisers and/or affect the relationship between publisher and consumer. The Company continues to develop and implement strategies to exploit its content in new media channels, including the introduction of paywalls around its newspaper websites (Twenty-First Century Fox, Inc: NASDAQ: FOXA- MD&A 2012, SIC = 2711)

"Drilling and Evaluation revenue increased 21% compared to 2010 as drilling activity improved across all regions, especially North America and Latin America. North America revenue grew 33% on substantial activity increases in the United States land market. Latin America revenue increased 34% due to higher demand in most product services lines in Brazil, Mexico, Venezuela, and Colombia. Europe/Africa/CIS revenue increased 4% due to improved drilling service in Angola, Nigeria, and Norway and increased fluid demand in Egypt.." (Halliburton Co: NYS:HAL- 2012, SIC = 1389).

A-3: Activity: Language featuring movement, change, the implementation of ideas and

the avoidance of inertia).

"….The Company utilizes several outsourcing partners to manufacture sub-assemblies for the Company's products and to perform final assembly and testing of finished products. These outsourcing partners acquire components and build product based on demand information supplied by the Company, which typically covers periods up to 150 days. The Company also obtains individual components for its products from a wide variety of individual suppliers. Consistent with industry practice, the Company acquires components through a combination of purchase orders, supplier contracts and open orders based on projected demand information. Where appropriate, the purchases are applied to inventory component prepayments that are outstanding with the respective supplier" (Apple Inc: NASDQ: AAPL- MD&A 2014, SIC = 3571).

" On November 2, 2011, our Board approved a change in our fiscal year-end from the Saturday nearest the end of February to the Saturday nearest the end of January, effective beginning with our fiscal year 2013. As a result of this change, our fiscal year 2013 transition period was 11 months and ended on February 2, 2013, and we began consolidating the results of our Europe, China and Mexico operations on a one-month lag, compared to a two-month lag in fiscal year 2012, to continue aligning our fiscal reporting periods with statutory filing requirements in certain foreign jurisdictions…" (BestBuy Co Inc: NSY:BBY- MD&A 2014, SIC = 5731)

A-4: Realism: Language describing tangible, immediate, recognizable matters that affect people's everyday lives**).**

"…Sales by geographic region: Sales declined in all geographic regions. The decline in Asia/Pacific was primarily related to lower sales in Australia where the most significant decrease was in mining sales, due to continued low demand. While sales in Asia/Pacific declined overall, sales in China increased as we focused on improving our competitive position through building out the Caterpillar business model, the key elements of which focus on increasing field population, improving customer loyalty and providing superior customer support in conjunction with our independent dealers. Our total company sales and revenues A-104 in China for 2013 were about $3.5 billion compared with about $2.9 billion for 2012, with the increase primarily in Construction Industries. Sales were down in North America primarily due to lower end-user demand and changes in dealer inventories. In **EAME**, the sales decline was primarily due to changes in dealer inventories and lower end-user demand. In **Latin America**, the sales decline was primarily due to changes in dealer inventories, partially offset by increases in deliveries to end users.." (Caterpillar Inc: NYS: CAT, MD&A 2013, SIC = 3531).

"Revenue increased 6%, with product revenue increasing 5% and service revenue increasing 9% . Total gross margin decreased by 0.6 percentage points. Various items such as higher amortization of purchased intangible assets and the TiVo patent litigation settlement in the fourth quarter of fiscal 2013 contributed to the product gross margin percentage decline. …... Operating income as a percentage of revenue increased by 1.1 percentage points, primarily as a result of an increase in revenue, lower restructuring charges, and our continuing focus on expense management. Diluted earnings per share increased by 25% from the prior year …" (CISCO System, Inc: NASDQ: CSCO- MD&A 2013, SIC = 3576)

A-5: Commonality: Language highlighting the agreed-upon values of a group and rejecting idiosyncratic modes of engagement**).**
Pharmacy Benefit Management ("PBM") Services Agreement. In June 2013, we entered into a 10-year pharmacy benefit management services agreement with Catamaran Corporation. Under this agreement, we utilize their technology and service platforms, retail network contracting and claims processing services. In the second quarter of 2013, we recorded one-time transaction costs of $37 million pre-tax ($24 million after-tax) that were reported as a special item. This arrangement has produced a positive contribution to earnings in 2014 through improved clinical management, purchasing and administrative efficiencies. (Cigna Corporation: NYSE: CI- MD&A 2014, SIC = 6324).