

# Chairman's Letter : Does it Communicate Something ?

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## Abstract

Accounting narratives offer a very rich and complex set of inscriptions and represent a distinct genre of business communications. This study focused on Chairman's letter, which is a voluntary accounting narrative provided in most annual reports across the globe. Techniques of tone measurement and readability analysis were used to study Chairman's letter. Also, association of tone and readability with financial performance measures (stock return, return on equity, and return on assets) was assessed. The Henry wordlist was used to capture the tone and content of financial disclosures. Based on annual stock returns, top performing 50 companies and least performing 50 companies were drawn from NSE Nifty 500 list. Data were collected from the Bloomberg database. CAT scanner, QDA MinorLite, and SPSS software were used for analysis. The findings suggested that the Chairman's letter tone was positive and there was a significant difference between the tones of top performing and least performing companies. The readability analysis suggested that the Chairman's letter had a graduate - level readability. This level was above the danger line of difficulty ; so, it should be made simple for the public to read. The correlation of tone and readability with performance measures was found to be significant.

**Keywords :** accounting narratives, Chairman's letter, tone, readability, financial performance, India

**JEL Classification :** M40, M41, M49

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Every listed company provides an annual report in the public domain, which enables its stakeholders to understand and analyze the company's financial and economic health. An annual report consists of (a) numeric segments such as position statement, income statement, cash flow statement, including notes to accounts both for standalone and consolidated entities and (b) narrative segments such as director's report, corporate governance report, Chairman's letter, etc. Table 1 provides a comparison of different narratives reported by the corporates of India and the world at large. Andersen (2000) in a survey of 100 listed UK companies found that narrative material's portion has increased over the years. The accounting or financial narratives occupied 57% of the annual reports in 2000 as compared with 45% in 1996. In our study, the portion of accounting narratives accounted for 52 % of the annual reports for 2017–18 in Indian listed companies.

Various financial frauds happened all over the corporate world in the late 20th century and early 21st century. Some frauds that happened in the current decade are Lehman Brothers in 2008, Satyam in 2009, Olympus in 2011, Toshiba in 2014, Theranos Inc. in 2018, and Nirav Modi in 2018, etc. These frauds forced the regulatory bodies all over the world for standardized and statutory disclosures. Along with these statutory disclosures, corporates also

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**Table 1. Different Types of Accounting Narratives**

India	Outside India
Chairman's Message/ CMD's Message	Chairman's Statement / Letter President's Letter
Earnings Announcement	Earnings Call/Announcement
Management Discussion and Analysis	Chief Executive's Review Management Discussion and Analysis Operating and Financial Review
Director's Report	Director's Report
Corporate Governance Report	Corporate Governance Report
Business Responsibility Report	Global Reporting Initiatives
Corporate Social Responsibility Report	Community Expenditure Report

provide non-statutory disclosures such as Chairman's letter. The Chairman's letter appears in a prime location, mostly as a preface to the annual report. It is titled as Chairman's Message, From the Desk of the Chairman, Address to Shareholders, etc. It is being undersigned by the Chairman or Chairman cum Managing Director of a company. It is the most widely read section by investors and sophisticated users, despite of being not formally audited (Clatworthy & Jones, 2003). It is also the mostly used document for content analysis in management studies relating to narratives in annual reports. It communicates the overall financial health of a company for the year and potential opportunities and threats in the near future. This letter, along with other statutory numeric and narrative segments, reduce the information asymmetry between a company and its stakeholders and helps in conducting its proper valuation. As there are very few studies attempted to study Chairman's letter in the Indian context, our study focuses on tone and readability aspects of the Chairman's letter in Indian corporates.

## Literature Review

**(1) Accounting Narratives :** Accounting narratives have been defined by various authors. Sedor (2002) depicted accounting narratives as a story about firm's performance. Rutherford (2003) said that accounting narratives offer rich and complex set of inscriptions and represent a distinct genre of business communications. Beattie (2014) described it as the representation of economic performance using the accounting data by the management. Accounting or financial narratives are qualitative information about a company. It can be either produced by the firms, or by industry, analysts, investors, etc. using different platforms such as magazines, newspapers, social blogs, company websites, annual reports, etc. Financial statements along with accounting narratives provide useful and robust information to investors (Bryan, 1997). Various financial audiences shape their perceptions towards organizational future outcomes from the available information (Laskin, 2018). Bhattacharya (2019) found that negative news about a big firm affects the industry, but if the news is related with some new or smaller firms, it will affect only to some specific firms. Ranjan, Singh, Dua, and Sood (2018) developed a model for stock price prediction using the stock - related blogs & posts and predicted 84% stock prices correctly. Brennan and Merkl-Davies (2013) reported that when accounting narratives are used for impression management, it has a negative impact on shareholders, stakeholders, and the society at large. Investors are least motivated to invest when a negative narrative is written concretely (Riley, Semin, & Yen, 2014).

The Securities and Exchange Commission (SEC) of USA made an act and guidelines in 2010 to make the 10K documents easy for the public. In line with this, the Government of India (GOI) with Securities and Exchange

Board of India (SEBI) and two major exchanges in India, Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) initiated various programmes for financial inclusion and financial literacy across India. These programmes cater not only to the higher education and urban areas, but also to undergraduate, higher secondary education, and rural areas. It is also expected from corporates to use simple English so people understand the reports. The investors from across the globe are also now making huge investment in the form of FIIs and FDIs in the Indian stock market. It becomes essential to understand the narratives provided by the corporates.

**(2) Accounting Narratives and Financial Performance :** A number of studies found an association between accounting narratives and financial performance (Frazier, Ingram, & Tennyson, 1984 ; Henry, 2008 ; Henry & Leone, 2016 ; Ingram & Frazier, 1980 ; Tennyson, Ingram, & Dugan, 1990). Courtis (1986) found no systematic relationships between accounting narratives and financial success. Smith and Taffler (1992) concluded the presence of positive association between accounting narratives and financial success. Kasznik and Lev (1995) observed that disappointment is more permanent and consistent among investors when forecast revisions of earnings announcement are more adverse and negative around the warnings. Francis, Schipper, and Vincent (2002) revealed that concurrent disclosures of the detailed income statements along with earnings announcements increased the absolute market reactions to earnings announcements. Henry (2006) found that narrative disclosures and financial measures improved the prediction of market reaction to the earnings announcements.

**(3) Tone of Accounting Narratives and Financial Performance :** Henry (2008) described tone as the affect or feeling of a communication. Henry (2008) found that a more positive tone of earnings press releases positively affected investors' reaction to earnings announcements and vice-versa. The length of earnings press releases inversely affected investors' reaction to the financial results reported. Davis, Piger, and Sedor (2012) found that tone was not only associated with market reaction, but with future ROA also. Boudoukh, Feldman, Kogan, and Richardson (2012) found that measures of linguistic tone improved the explanatory power of market models by up to 62% by using a single variable regression model.

**(4) Readability of Accounting Narratives and Financial Performance :** Chen and Li (2015) suggested that textual disclosures' length and institutional investment in the company were positively correlated. Ajina, Laouiti, and Msolli (2016) found that companies managing their earnings had a tendency to make annual report readability more complex. Bonsall IV, Leone, Miller, and Rennekamp (2017) observed that the readability of annual reports varied with earnings management and found consistent and robust evidence that firms that are likely to have managed earnings to meet or beat the benchmark of the prior year's earnings on average have more complex reports. Luo, Li, and Chen (2018) investigated the association between annual report readability and corporate agency costs of Chinese listed firms from the period of 2001 – 2015 and concluded that firms with higher levels of readability in their annual reports suffered from lower agency cost.

## **Research Gap, Objectives, and Hypotheses**

**(1) Motivation for the Study :** India is the fastest growing emerging economy in the world and was likely to grow at 7.0% in 2019 as per IMF. The Indian government is also taking the necessary steps for creating both industry and investor friendly environment. At this juncture, India is the top attractive destination for the investors from all over the world in terms of both FDI and FII. The government is also taking initiatives to attract the neglected large population to financial markets through financial literacy programmes. In this scenario, the study of the narratives of the annual reports in India is critical.

On the basis of literatures reviewed in the previous section, subsequent gaps are found and the objectives are framed.

## **(2) Research Gaps**

- ✧ There are no studies measuring tone, content, and readability of Chairman's letter in Indian companies.
- ✧ No studies have attempted to measure association between tone and readability of Chairman's letter and performance measures.

## **(3) Objectives**

- ✧ To study the tone, content, and readability of Chairman's letter for top performing & least performing companies.
- ✧ To study the association among the tone & readability of Chairman's letter and performance measures.

## **(4) Research Questions**

- ✧ Is there any difference in tone, content, and readability of Chairman's letter in top performing & least performing companies in the Indian context ?
- ✧ Does any association exist among tone & readability of Chairman's letter and performance measures?

**(5) Hypotheses :** The narratives communication style significantly differs between profitable and unprofitable companies (Clatworthy & Jones, 2003). Kohut and Segars (1992) correctly classified 78% of the companies based on textual characteristics of the President's letter by using discriminant analysis with top and bottom 25 Fortune 500 companies ranked by return on equity. Beynon, Clatworthy, and Jones (2004) used variable-precision rough sets (VPRS) model to discriminate profitable and non-profitable companies with the top and bottom 49 non-financial listed UK companies' Chairman's statements. As the Chairman letter communicates recent past, current, and expected future outlook with potential opportunities and threats, so it is expected that the tone of the top and least performing companies will differ. From the above literatures, the following hypothesis is formulated :

- ✧ **H1 :** There is a significant difference in the tone of Chairman's letter between top performing companies and least performing companies.

Courtis (1998) in a study of 30 profitable and 30 unprofitable Hong Kong companies and Rutherford (2003) with 419 UK Companies' annual reports revealed that poorly performing or non-profitable companies do not complicate the narratives by the use of textual complexity. Luo et al. (2018) investigated the association between annual report readability and corporate agency costs. With these arguments, the following hypothesis is formulated :

- ✧ **H2 :** There is a difference in readability of Chairman's letter between top performing companies and least performing companies.

Smith and Taffler (1992) concluded the presence of positive association between accounting narratives and financial success. Henry (2006) found that narrative disclosures and financial measures improved the prediction

of market reaction to the earnings announcement. Davis, Ge, Matsumoto, and Zhang (2014) found that tone is not only associated with market reaction, but with future ROA also. Bonsall IV et al. (2017) studied the association between the readability measures and post-filing return of annual reports and its related documents. With these arguments, the study formulates the third hypotheses :

🔗 **H3a** : There is an association between the tone and financial performance measures.

🔗 **H3b** : There is an association between readability and financial performance measures.

## Methodology

**(1) Sample Selection** : The Chairman's letter of Indian listed companies were taken for the study. A sample of 50 top performing companies and 50 least performing companies based on stock returns of NSE Nifty 500 (Dikshita & Singh, 2019 ; Reddy, 2019) during 2017–18 was taken for the study. Bloomberg database was the source for the annual reports and other financial information. The financial services companies were excluded for their different disclosures practices and reporting norms. As the Chairman's letter is voluntary disclosure, 16 companies (i.e. 14 from top performing companies and 2 from least performing companies) were excluded from the sample as Chairman's letters were not available for these companies. The extreme outliers of the companies were excluded based on Z-score of stock returns at 95% confidence interval ; 33 top performing companies and 30 least performing companies were in the final sample. The details of the sample selection are given in Table 2.

**Table 2. Sample Selection**

Particulars	No. of Top Performing Companies	No. of Least Performing Companies
<b>Initial Sample</b>	<b>50</b>	<b>50</b>
Financial Companies	01	18
Absence of Chairman's Message	14	02
Extreme Outliers	02	00
<b>Final Sample</b>	<b>33</b>	<b>30</b>

**(2) Financial Performance Measures** : Financial performance of an entity has been measured in various ways. This study defines financial performance in two ways : (a) market based performance measures and (b) accounting based performance measures. Stock return is a market based performance measure, while return on equity (ROE) and return on assets (ROA) are accounting based performance measures. Market based measures are free from accounting constraints and show the market efficiencies (Ha, Van, & Hung, 2019). The stock return is calculated as the difference in stock price over the period divided by price at the initial period. ROE and ROA measures are used to evaluate accounting based performance measures with the argument that these are least likely to be manipulated as compared to other measures (Ha et al., 2019). ROE is measured as the ratio of a company's earnings after tax to shareholders' funds. The ratio of a company's net income to average total assets value is termed as ROA. Financial measures, ROE, and ROA were taken from Bloomberg terminal.

**(3) Tone** : Content analysis is applied to assess the tone in Chairman's letter. Content analysis is often very subjective & qualitative one and based on the authors' interpretation. Computerization enables the users to discriminate between relevant and irrelevant content of large size and helps in better decision-making with the



help of Computer Aided Text Analysis (CATA) software (Beynon et al., 2004). In this study, the Henry word list is used for the content analysis (Appendix A). We classified 105 positive words in 30 groups and 85 negative words in 27 groups.

Henry (2008) described tone measurement as the affect or feeling of a communication. The tone is computed with the help of different wordlists such as DICTION wordlist, Harvard General Inquirer (GI) wordlist, Henry wordlist, Loughran & McDonald (LM) wordlist. Domain specific wordlists are better over general wordlists (Henry & Leone, 2014, 2016; Loughran & McDonald, 2011, 2015). Loughran and McDonald (2011) analyzed 10-K filings of American companies and found that the domain specific wordlists are a better tool over general wordlists in studying the association between filing-date of 10K and stock returns. Henry and Leone (2014, 2016) advocated for Henry wordlist as the better available wordlist among the available domain specific wordlists in accounting and financial narratives for tone measurement. Therefore, this paper used Henry wordlist of financial disclosure for tone measurement.

Tone is measured as a difference between positive word counts and negative word counts divided by the sum of both positive and negative word counts. It varies between  $-1.00$  to  $+1.00$ .

$$\text{Tone} = (\text{Positive word counts} - \text{Negative word counts}) / (\text{Positive word counts} + \text{Negative word counts}) \quad (1)$$

List of 105 positive and 85 negative words in Henry wordlist is given in Appendix A, which is used to calculate the tone of Chairman's letter. Positive word and negative word counts can be generated manually or using CATA. Computer-aided text (CAT) scanner software was used as it allows the user to use dictionaries developed by others. It enables the researcher to conduct quantitative analyses based on rich narrative content of text. The special characters from text files are systematically eliminated, resulting in clean narratives. The 'independent sample  $t$  - test' on tone of Chairman's letter was conducted between tone of top performing and least performing companies.

**(4) Readability :** Readability analysis is applied to assess the readability (toughness or difficulty level) of the narratives. In this study, the Gunning Fog Index is taken as proxy for readability. The Gunning Fog Index, commonly known as Fog Index, has been widely used in the finance and accounting literatures (Lehavy, Li, & Merkley, 2011 ; Li, 2008 ; Lo, Ramos, & Rogo, 2017 ; Miller, 2010 ; Rennekamp, 2012). Maximum score of Fog Index is 17 and above, which corresponds to reading by college graduates and above while minimum score is 6, which shows readability by sixth grade students. The desired qualification required for readability at different levels of the Fog Index score is given in Appendix B.

The sum of average words per sentence and percent of complex words is multiplied by 0.4 to obtain the Fog Index score. The average sentence length (i.e. average words per sentence) is calculated by dividing the total number of words in the document by the number of sentences. The "complex" words mean words consisting of three or more syllables. It does not include proper nouns, familiar jargon, or compound words. It also does not include common suffixes (such as -es, -ed, or -ing etc.) as a syllable. The complex words to total word count in percent term is taken to get the percentage of complex words.

$$\text{Fog Index} = 0.4 * (\text{words per sentence} + \text{percent of complex words}) \quad (2)$$

The Fog Index score and difficulty is inversely associated (Appendix B). A wide audience commonly need a Fog Index score less than 12. The score less than 8 is near-universal understanding. Fog Index was calculated using online software [gunning-fog-index.com](http://gunning-fog-index.com).

## Analysis and Results

Descriptive statistics of 33 top performing (TP) companies and 30 least performing (LP) companies based on 1 year stock return of 2017–18 is given in Table 3. The mean (0.84) value of tone of TP companies is superior to the mean (0.74) value of tone of LP companies. The tone deviation is high for LP companies. The Fog Index mean of TP companies and LP companies is 15.67 and 16.75, respectively. The Fog Index is low for TP companies, which indicates that Chairman's letters of TP companies were easier to read than the letters of LP companies. The mean log size of TP companies' annual report is 3.57 and the mean of LP companies is 3.60, which is higher than that of TP companies. The mean of complexity is also higher for LP companies as compared to TP companies, which means TP companies' Chairman's letters were easier to read and understand. The mean stock return, ROA, and ROE is 121.17%, 8.95%, and 18.89% for TP companies and 32.79%, 4.71%, and 5.99 % for LP companies.

The Levene's test for equality of variances suggest the absence of equal variances in the tone ( $p = 0.01$ ). The 'independent samples  $t$  - test' shows that the tone varies significantly ( $p = 0.02$ ) for TP and LP companies (Table 6). So, hypothesis H1 could not be rejected. The tone is positive for both TP and LP companies, but the tone of TP companies is significantly higher than that of the LP companies.

$t$  - test is applied to test the readability of Chairman's letters. The Fog Index ( $t = 1.90$ ) of Chairman's letters does not vary significantly between TP and LP companies. So, hypothesis H2 at the 5% significance level is rejected (Table 6). Although the mean score of every Fog Index is higher for LP companies, however, it is not statistically different. This advocates that there is no difference in readability of LP companies' Chairman's letters. Also, it can be inferred that LP companies did not complicate the narrative as compared to TP companies (Courtis, 1998 ; Rutherford, 2003).

A Karl Pearson correlation is conducted using SPSS between tone and Fog Index with performance measures of stock return, ROE, and ROA. The correlation between tone and performance measures is moderate, with highest being 0.372 with ROE and lowest being 0.254 with ROA. Tone is found to be significantly related with all performance measures at the 5% significance level. This shows that the tone of Chairman's letter is influenced by returns earned by corporates. Financial performance and tone move in the same direction. This is in line with the findings of Davis et al. (2014) and Smith and Taffler (1992). So, hypothesis H3a is not rejected (Table 7).

The Fog Index is negatively correlated with returns. As in case of tone, here also, correlation is maximum with ROE ( $-0.452$ ) and minimum with ROA ( $-0.268$ ). Negative correlation means lower the company performance, higher is the index score, making interpretation difficult for readers of Chairman's letter. This is also in line with the previous findings. Based on the above analysis, hypothesis H3b could not be rejected (Table 7).

## Post- Hoc Analysis

🔗 **Usage Pattern Measurement :** The Henry wordlist is also used to measure the content of Chairman's letters.

**Table 3. Descriptive Statistics**

Particulars	Top Performing (N = 33)			Least Performing (N = 30)		
	Mean	Median	Std. Deviation	Mean	Median	Std. Deviation
Tone	0.84	0.83	0.11	0.74	0.78	0.18
Fog Index	15.67	16.01	1.77	16.75	16.69	2.72
Stock Return (2017–18)	121.17	107.36	54.23	-32.79	-30.68	7.89
ROE	18.89	20.52	13.70	5.99	11.44	24.14
ROA	8.95	7.84	7.55	4.71	4.47	5.86

**Table 4. Occurrences of Words in Annual Reports**

Category	Code	Cases TP	Cases LP	Percent TP Cases	Percent LP Cases
<b>Positive* N=41</b>	Growth	27	23	81.80%	76.70%
	High	6	15	18.20%	50.00%
	Increased	11	12	33.30%	40.00%
	More	18	17	54.50%	56.70%
	Most	13	14	39.40%	46.70%
	Opportunities	12	9	36.40%	30.00%
	Strong	14	14	42.40%	46.70%
	Up	14	14	42.40%	46.70%
<b>Negative N=8</b>	Challenges	6	14	18.20%	46.70%
	Challenging	2	13	6.10%	43.30%
	Decline	1	8	3.00%	26.70%
	Low	3	6	9.10%	20.00%
	Lower	3	11	9.10%	36.70%
	Lowest	1	3	3.00%	10.00%
	Risk	2	3	6.10%	10.00%
	Under	7	11	21.20%	36.70%
Average words per Cases		6.88	7.82	20.84%	26.06%

**Note.** \* Positive words with more than 50% cases (No. of annual reports with Chairman's message) are shown. Rest have been excluded.

Content was analyzed in two ways ; first, the presence of each specific positive and negative word in a number of annual reports and percentage occurrence was determined for top (33) and least (30) performing companies. In this case, paired samples *t* - test was used to analyze the content of Chairman's letter in top and least performing companies. Word frequencies were calculated using QDA MinorLite and statistical tests were conducted using SPSS.

Second, occurrence (frequency) of each word category of the Henry wordlist in top and least performing companies was calculated for positive and negative words, and also, percentage occurrence of each word category in top and least performing company was calculated for positive and negative words. Percentage occurrence was calculated by dividing frequency of each word category of Henry wordlist in top and least performing companies to total frequency occurrence (including both positive and negative words) of Henry wordlist in top and least performing companies. The results of the analysis are presented in Table 5.

Out of 105 positive words of Henry wordlist, 41 words (39%) were found in 63 Chairman's letters together. The words – growth, high, increased, more, most, opportunities, strong, and up appeared in more than 50% of the companies. Only 8 words (9.4%) appeared out of 85 negative words in Chairman's letters. These eight words are challenges, challenging, decline, low, lower, lowest, risk, and under. The word 'growth' appeared in 50 companies out of which it appeared in 27 TP companies, that is, 81.80% (27/33) and in 23 LP companies, that is, 76.70% (23/30). From the negative wordlist, the word 'challenges' appeared in 20 companies, out of which, it appeared in 6 TP companies (18.20%) and appeared 14 times in LP companies (43.30%). As expected, negative words occurred in the Chairman's letters in more numbers of LP companies rather than in the letters of TP companies (Table 4).

Combined frequency of Henry positive 41 words and negative 8 words is 507 for TP companies and 630 for LP companies. The frequently occurring word category in TP and LP companies is 'grow' with frequency of 116, that is, 22.9% (116/507) and 122, that is, 19.4% (122/630), respectively. The words category 'more,' 'increase,' 'good,' and 'strong,' and more follows the list of TP companies. In LP companies, the words category 'high,' 'more,'



**Table 5. Occurrences of Words as per The Henry Wordlist**

Frequently Occurring Words					
Words Category		Count		% Codes	
		TP	LP	TP	LP
Positive	Grow (grow, grew, growing, grown, growth)	116	122	22.9%	19.4%
	More (more, most)	47	55	9.3%	8.7%
	Increase (increase, increases, increasing, increased)	42	50	8.3%	7.9%
	Good (good, better, best)	30	29	5.9%	4.6%
	Strong (strong, stronger)	30	26	5.9%	4.1%
	High (high, higher, highest)	28	57	5.5%	9.0%
	<b>TOTAL POSITIVE WORDS</b>	<b>478</b>	<b>536</b>	<b>94.0%</b>	<b>85.0%</b>
Negative	Challenge (Challenges, Challenging)	9	32	1.8%	5.1%
	Decline	1	17	0.2%	2.7%
	Low (low, lower, lowest)	8	23	1.6%	3.7%
	Risk	2	3	0.4%	0.5%
	Under	9	19	1.8%	3.0%
<b>TOTAL NEGATIVE WORDS</b>		<b>29</b>	<b>94</b>	<b>6.0%</b>	<b>15.0%</b>
Total		507	630	100%	100%

**Note.\*** Positive words less than 5% codes have not been included here. The words are: Opportunity, Success, Up, Achieve, Strength, Deliver, Lead, Expand, and Large.

'increase,' 'good,' and 'strong' follows the list. All the negative words occur more times in LP companies in terms of counts and percentage. The word 'challenge' comes 5.1% times for LP companies as compared to 1.8% times for TP companies (Table 5).

**Table 6. Independent Samples t-test**

Independent Samples t-Test					
	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Tone	8.24	0.01	-2.52	45.77	0.02
Fog_Index	2.71	0.10	1.90	61.00	0.06

**Table 7. Correlations**

Correlations			
	Stock Return	ROE	ROA
Tone	.354**	.372**	.254*
Fog_Index	-.299*	-.452**	-.268*

**Note.\*\*** Correlation is significant at the 0.01 level (2-tailed).

**Note.\*** Correlation is significant at the 0.05 level (2-tailed).

## **Conclusion and Research Implications**

Based on the findings, it can be concluded that Chairman's letter varies significantly between the TP and LP companies, and so, it gives an understanding about the companies' performance. The content used in TP and LP companies statistically varies. The tone of Chairman's letter changes with the companies' performance. Since we used the Henry wordlist which was developed for financial disclosures ; so, tone is significantly different and is also related to performance.

The readability is similar between TP and LP companies. The readability of the Indian corporates' Chairman's letter has a mean Fog Index of 15.67 for TP companies and 16.75 for LP companies. It can be inferred that as there is no significant difference in Fog Index of TP and LP companies, LP companies do not complicate their narrative due to low performance. Also, Fog Index above 15 means that it is above the danger line and very tough to read and can be understood by people with qualification/experience equivalent to college graduates. There is a need to make it simple with Fog Index score below 12, which is a universally accepted reading level. Regulatory bodies should take initiatives to make these narratives simple and understandable, which will help people understand them easily within India and across geographies. It is also observed that the Fog Index is negatively correlated with financial performance measures.

## **Limitations of the Study and Scope for Future Research**

Like any other study, this study is also not without limitations. The study period is only one year, with a small sample size. Future studies can take a longer period with a large sample size to generalize the findings. The study focuses on Chairman's letter, which can be extended to other accounting narratives based on industry. The future studies may also build explanatory models taking tone, content, and readability measures as variables to explain firm performance. Lastly, this study has used the Henry wordlist developed from earnings call based on the U.S. context ; future studies should develop a dictionary in the Indian context and also specifically for Chairmen's letter.

## **Authors' Contribution**

Aswini Kumar Bhuyan and Devesh Baid contributed to the design and implementation of the research, to the analysis of the results, and the writing of the manuscript.

## **Conflict of Interest**

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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# Appendix

## Appendix A. Henry Wordlist

Henry's Positive Wordlist (105)	Henry's Negative Wordlist (85)
1. positive, positives,	1. negative, negatives,
2. success, successes, successful,	2. fail, fails, failing, failure,
3. succeed, succeeds, succeeding, succeeded,	3. weak, weakness, weaknesses,
4. accomplish, accomplishes, accomplishing, accomplished, accomplishment, accomplishments,	4. difficult, difficulty,
5. strong, strength, strengths,	5. hurdle, hurdles, obstacle, obstacles,
6. certain, certainty, definite, solid, excellent,	6. slump, slumps, slumping, slumped,
7. achieve, achieves, achieved, achieving, achievement, achievements,	7. uncertain, uncertainty,
8. progress, progressing, deliver, delivers, delivered, delivering,	8. unsettled, unfavorable, downturn, depressed,
9. leader, leading,	9. disappoint, disappoints, disappointing, disappointed, disappointment,
10. pleased,	10. risk, risks, risky,
11. reward, rewards, rewarding, rewarded,	11. threat, threats,
12. opportunity, opportunities,	12. penalty, penalties,
13. enjoy, enjoys, enjoying, enjoyed,	13. down,
14. encouraged, encouraging,	14. decrease, decreases, decreasing, decreased,
15. up, increase, increases, increasing, increased,	15. decline, declines, declining, declined,
16. rise, rises, rising, rose, risen,	16. fall, falls, falling, fell, fallen,
17. improve, improves, improving, improved, improvement, improvements,	17. drop, drops, dropping, dropped,
18. solid, strengthen, strengthens, strengthening, strengthened,	18. deteriorate, deteriorates, deteriorating, deteriorated,
19. stronger, strongest,	19. worsen, worsens, worsening,
20. good, better, best,	20. weaken, weakens, weakening, weakened,
21. more, most,	21. worse, worst,
22. above,	22. low, lower, lowest,
23. record,	23. less, least,
24. high, higher, highest,	24. smaller, smallest,
25. greater, greatest,	25. shrink, shrinks, shrinking, shrunk,
26. larger, largest,	26. below, under,
27. grow, grows, growing, grew, grown, growth,	27. challenge, challenges, challenging, challenged
28. expand, expands, expanding, expanded, expansion,	
29. exceed, exceeds, exceeded, exceeding,	
30. beat, beats, beating	

Source : Elaine Henry (2006) and compiled by authors.

### Appendix B. Fog Index Scores

Fog Index Score	Reading Level By Grade	Remarks
17	College graduate	<b>Above Danger line</b>
16	College senior	
15	College junior	
14	College sophomore	
13	College freshman	
12	High school senior	<b>Danger line</b>
11	High school junior	
10	High school sophomore	<b>Easy Reading</b>
9	High school freshman	
8	Eighth grade	
7	Seventh grade	
6	Sixth grade	

Source : From "Clear writing" : How to achieve and measure readability," by Postscripts, 2006 (<http://notorc.blogspot.com/2006/09/devils-in-details-measuring.html>). *In the public domain.*

### Appendix C. List of Companies

Sl. No.	Top Performing Companies	Least Performing Companies
1	Venky's (India) Ltd.	Sharda Cropchem Ltd.
2	Himadri Speciality Chemical Ltd.	BEML Ltd.
3	Phillips Carbon Black Ltd.	Glaxosmithkline Pharmaceuticals Ltd.
4	Adani Transmission Ltd.	Reliance Infrastructure Ltd.
5	Avan` Feeds Ltd.	Reliance Power Ltd.
6	Dilip Buildcon Ltd.	Cummins India Ltd.
7	Radico Khaitan Ltd.	Bharat Heavy Electricals Ltd.
8	Sterlite Technologies Ltd.	Granules India Ltd.
9	V-Mart Retail	Blue Dart Express Ltd.
10	Lux Industries Ltd.	Va Tech Wabag Ltd.
11	Minda Industries Ltd.	Sun Pharmaceutical Industries Ltd.
12	TeamLease Services	Naonal` Fertilizers Ltd.
13	Jubilant FoodWorks	Tata Motors Ltd.
14	KEI Industries Ltd.	Godfrey Phillips
15	Avenue Supermarts Ltd.	Trident Ltd.
16	Indiabulls Real Estate Ltd.	Gateway Distriparks Ltd.
17	Future Retail Ltd.	Fors` Healthcare Ltd.
18	Himachal Fut Com Ltd.	Welspun India Ltd.
19	TV Today Network Ltd.	Dish TV India Ltd.
20	Larsen & Toubro Infotech Ltd.	Reliance Industries
21	Deepak Nitrite Ltd.	Triveni Turbine Ltd.

22	Future Consumer Ltd.	Greaves Cotton Ltd.
23	Godrej Properties	Glenmark Pharmaceuticals Ltd.
24	Minda Corporation Ltd.	Strides Pharma Science Ltd.
25	Jamna Auto Industries Ltd.	Adani Power
26	Jindal Steel & Power Ltd.	Suzlon Energy Ltd.
27	Jai Corp Ltd.	Max India Ltd.
28	Bajaj Electricals Ltd.	Balrampur Chini Mill
29	Tata Global Beverages Ltd.	Advanced Enzyme Tech Ltd.
30	Ashok Leyland Ltd.	Lupin Ltd.
31	MindTree Ltd.	
32	APL Apollo Tubes Ltd.	
33	Network18 Media & Investments Ltd.	

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Source : Collected from NSE Nifty 500 and compiled by authors

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