

# TEXTUAL DISCLOSURES AND RETAIL INVESTORS

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# **TEXTUAL DISCLOSURES AND RETAIL INVESTORS**

## **ABSTRACT**

Using rich transaction-level data from the stock market, we examine how retail investors react to textual information. We focus on earnings conference call transcripts and find that managers employ optimistic tone to obfuscate poor future operating performance. However, retail investors are not necessarily misled by the optimistic tone. This study contributes to the growing literature on textual disclosures and improves our understanding of the secondary market consequences of such disclosures.

**JEL Classification:** M41, G14, G11

**Keywords:** narrative disclosures, tone management, conference calls, retail investors

## **INTRODUCTION**

Prior evidence suggests that textual disclosures provide incremental information to investors as all value-relevant information cannot be presented in financial statements (Davis, Piger, and Sedor 2012; Li 2010). However, there is no formal external auditing requirement for these disclosures, and it is difficult to regulate them (Cazier, Merkley, and Treu 2019). Thus, managers often mislead investors by increasing the complexity of the annual reports when the performance is poor (Li 2008) or engaging in tone management around important corporate events (Huang, Teoh, and Zhang 2014). The experimental evidence from Tan, Wang, and Zhou (2014) suggests that less sophisticated investors are more susceptible to the framing effects of language. The purpose of the current study is to empirically examine how less-sophisticated investors interpret textual information.

Most of the early evidence on the behavior of retail investors show that retail investors are unsophisticated, behaviorally biased, and otherwise uninformed. They argue that retail investors have lower ability to process information as compared to institutional investors (Tan, Wang, and Zhou 2014) and that they are more likely to be influenced by the poor readability of textual disclosures (Lawrence 2013). Thus, retail investors could make poor investment decisions by misinterpreting textual disclosures. However, the view that retail investors are unsophisticated and noise traders has been challenged by recent findings. Retail investors vastly outnumber institutions. They are not homogenous and some of them could be informed. Kelley and Tetlock (2013) and Kelley and Tetlock (2016) suggest that retail investors may have unique information about the firm either from geographical proximity, relationships with employers, or additional insights into customer tastes. Moreover, unlike institutional investors, retail investors do not suffer from principal-agent problems. Thus, it is possible that some retail investors are not prone to the

framing effects of language. Therefore, it is not clear ex-ante if retail investors are influenced by textual disclosures.

Prior studies examining the trading of retail investors have employed data either from a single broker or used an indirect proxy. Lawrence (2013) employs data on the trades and portfolio positions of individual investors from a single broker for the period 1994 to 1996. Baginski, Demers, Kausar, and Yu (2018) use the trade size as a proxy for small investors. These proxies could lead to biased inferences about the population of retail investors (Kelley and Tetlock 2013). This concern is motivated by the fact that large investors split their orders into smaller trades (Loughran 2018), and therefore employing trade size to proxy investor category could lead to misclassification of traders. We use unique transaction-level data from the stock market in India that enables us to employ a much cleaner investors' classification scheme.

We analyze the content of earnings conference calls as they are one of the most important avenues through which the management communicates significant information to investors (Brown, Call, Clement, and Sharp 2017; Li, Minnis, Nagar, and Rajan 2014; Frankel, Mayew, and Sun 2010). Although conference calls are voluntary in India, the number of Indian companies hosting these calls has risen significantly in recent years.<sup>4</sup> The Indian capital market regulator, Securities and Exchange Board of India (SEBI), mandates the disclosure of conference call transcripts to the public.<sup>5</sup>

We employ a sample of 8,273 quarterly earnings conference call transcripts from 559 unique firms in the S&P BSE 500 index from 2004 to 2019. We operationalize the textual content

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<sup>4</sup> “Number of companies hosting earnings calls rises by 40% in five years to FY18” – By Kiran Kabtta Somvanshi, Economic Times (November 27, 2018). (Link: <https://economictimes.indiatimes.com/markets/stocks/news/number-of-companies-hosting-earnings-calls-rises-by-40-in-fy18/articleshow/66820555.cms?from=mdr>)

<sup>5</sup> Provisions of Regulation 30 of Listing Obligations and Disclosure Requirements Regulations, 2015

of earnings conference call transcripts by capturing the sentiment of the management. We calculate *TONE* as the difference in the frequency of optimistic and pessimistic words and scale this measure by the count of optimistic and pessimistic words. We start by examining if *TONE* contains some information about future operating performance. We find that *TONE* is negatively associated with future earnings and sales growth. The negative association is both statistically significant and economically meaningful. Specifically we find that when *TONE* increases from 25<sup>th</sup> percentile to 75<sup>th</sup> percentile, next quarter's earnings decreases by 5.7 percent of its average value. This evidence suggests that managers use *TONE* to obfuscate poor future performance. In the next step, we examine how the market reacts to *TONE* around conference calls. We find that market reacts positively to optimistic *TONE* over the short-window around the conference calls. This finding suggests that investors are misled by *TONE*.

Finally, we analyze the trading activities of retail investors separately. We find that retail investors are net sellers of the stocks when managers employ more optimistic *TONE*. Furthermore, we find that large non-institutional investors' ownership decreases when *TONE* is more optimistic while there is no effect on small non-institutional investors' ownership. This evidence suggest that the large retail investors may not be misled by *TONE*. Further research should investigate the different trading behavior of small and large retail investors.

Our study makes multiple contributions. First, it contributes to the growing literature on textual disclosures by providing additional evidence on the secondary market consequences of these disclosures and improves our understanding of reaction to textual disclosures by retail investors. Furthermore, we resolve the trader's classification issue in the prior literature (Baginski, Demers, Kausar, and Yu 2018) by employing rich transaction-level data from the Bombay Stock Exchange (BSE).

Second, this study contributes to a growing literature on trading by retail investors (Lawrence 2013; Ben-David, Birru, and Prokopenya 2018; Kelley and Tetlock 2016; Kelley and Tetlock 2013). The novel and rich transaction-level data also allows us to examine how retail investors interpret textual disclosures which are a noisy signal about firm fundamentals.

## **DATA**

We focus on earnings conference call transcripts to capture textual disclosures as they are one of the most important avenues through which the management communicates significant information to investors (Brown, Call, Clement, and Sharp 2017; Li, Minnis, Nagar, and Rajan 2014; Frankel, Mayew, and Sun 2010). We obtain the transcripts of earnings conference calls from ProwessIQ, Capital IQ, and Researchbyte<sup>6</sup> website. Since this process involves hand-collection, we focus only on those firms which were part of the S&P BSE 500 index during the period 2004 to 2019. There are 1,094 unique firms which were part of the S&P BSE 500 during this period. We collect accounting and daily stock trading data from Prowessdx.

Additionally, we employ a rich tick-by-tick transaction data from the Bombay Stock Exchange (BSE)<sup>7</sup> in India. The dataset has all orders and trades during the period from January, 2009 to March, 2016. It also contains the categories of traders and their masked identity. This allows us to identify trades of different categories of investors easily. We combine this transaction-level data with the earnings conference call data.

We parse conference call transcripts by writing Python programs and count the frequency of optimistic and pessimistic words. For this purpose, we employ a financial dictionary of

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<sup>6</sup> Researchbyte (Link: <https://www.researchbytes.com/>) is one of leading websites that provides information on annual reports, earnings conference calls, management interviews, and investor presentations for Indian companies.

<sup>7</sup> The Bombay Stock Exchange (BSE) is the world's tenth-largest stock exchange in terms of market capitalization.

optimistic and pessimistic words from Loughran and McDonald (2011).<sup>8</sup> We define *TONE* as the difference between the count of optimistic words and pessimistic words and scale it by the total count of optimistic words and pessimistic words. We also calculate *TONE* of forward-looking disclosures, *FLS-TONE*, after identifying forward-looking disclosures in the conference call transcripts using the dictionary of phrases from Muslu, Radhakrishnan, Subramanyam, and Lim (2014).

**[INSERT TABLE 1 HERE]**

The summary statistics of the sample are presented in Table 1. There are 8,273 quarterly earnings conference call transcripts from 559 unique firms during the period 2004 to 2019. We winsorize all continuous variables at 1 percent and 99 percent level. As seen in Table 1, we find that on average there are 7,032 words in the earnings conference call transcripts out of which 80 words are optimistic and 86 words are pessimistic. Thus, *TONE* on average is pessimistic. However, average *FLS-TONE* is optimistic.

**[INSERT TABLE 2 HERE]**

The distribution of conference call sample is shown in Table 2. Panel A shows the industry distribution using the three-digit NIC codes and Panel B shows the quarterly distribution. As can be seen from Panel B, the number of firms hosting earnings conference calls have increased overtime. We present the pairwise correlation matrix in Table 3. The univariate correlation of *TONE* with firm performance measures, earnings (*ROA*) and stock returns (*QUARTERLY\_RET*), is low. Refer to Appendix A for a detailed definition of variables.

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<sup>8</sup> This financial dictionary contains 354 optimistic words (e.g. “achieve”, “benefit”, “enhance”) and 2,355 pessimistic words (e.g. “adverse”, “damage”).

[INSERT TABLE 3 HERE]

## RESULTS AND DISCUSSION

We start by examining the determinants of *TONE*. We run the following specification:

$$\begin{aligned} TONE = & \alpha + \beta_1 * ROA + \beta_2 * SIZE + \beta_3 * MTB + \beta_4 * QUARTERLY\_RET + \beta_5 * \\ & STDDEV\_ROA + \beta_6 * STDDEV\_RET + Industry\ FE + Quarter\ FE + \epsilon \end{aligned} \quad (1)$$

We control for firm performance, Earnings (*ROA*) and stock returns (*QUARTERLY\_RET*), *SIZE*, Market-to-Book ratio (*MTB*), and proxies for information uncertainty, standard deviation of earnings (*STDDEV\_ROA*) and standard deviation of monthly returns (*STDDEV\_RET*). We also control for industry fixed effects and quarter fixed effects. The results are presented in Table 4. We find that current *ROA* is not significantly associated with *TONE* but *QUARTERLY\_RET* is positively associated with *TONE*. Thus, managers use more optimistic *TONE* when recent stock returns are higher.

[INSERT TABLE 4 HERE]

Prior evidence in the USA setting suggest that *TONE* of the disclosure is informative about firm's future performance (Davis, Piger, and Sedor 2012; Li 2010). As firms' performance cannot be completely captured by the quantitative disclosures in the financial statements, managers employ *TONE* to provide a signal of future firms' performance. However, Huang, Teoh, and Zhang (2014) provide strong evidence that managers strategically employ *TONE* to mislead investors. We examine if *TONE* of the earnings conference call of the Indian firms is informative about future operating performance. Thus, we test the association of *TONE* with future *ROA* and sales growth. We run the following specification:



$$ROA_{t+1} = \alpha + \beta_1 * TONE + \beta_2 * ROA + \beta_3 * SIZE + \beta_4 * MTB + \beta_5 * QUARTERLY\_RET + \beta_6 * STDDEV\_ROA + \beta_7 * STDDEV\_RET + Industry\ FE + Quarter\ FE + \epsilon \quad (2)$$

The results are presented in Table 5. Since earnings are persistence, we find that higher *ROA* in the current period predicts higher *ROA* in the next quarter as well. We also find that higher quarterly returns in the current period predicts higher future *ROA*. However, we find that the association of *TONE* with the next quarter's earnings, *ROA (t+1)*, to be negative (specification 1). Thus, more optimistic *TONE* predicts lower future operating performance. Specifically, when *TONE* increases from 25<sup>th</sup> percentile to 75<sup>th</sup> percentile, *ROA(t+1)* decreases by 0.114 percent which is equal to 5.7 percent of its average value. Thus, the negative association is economically significant as well. In addition to *ROA (t+1)*, we also examine the association of *TONE* with *ROA (t+2)* and *ROA (t+3)* (specifications 2 and 3). We find that *TONE* does not predict *ROA (t+2)* but negatively predicts *ROA (t+3)*. Thus, evidence in Table 5 suggests that managers employ *TONE* to obfuscate expected poor operating performance.

**[INSERT TABLE 5 HERE]**

As a robustness test, we use sales growth, *SALES\_GROWTH*, as another proxy for operating performance. The results are presented in Table 6. We still find the association of *TONE* with future *SALES\_GROWTH* to be negative and statistically significant. Taken together, evidence in Tables 5 and 6 are consistent with the obfuscation motive of the managers of the poorly performing firms.

**[INSERT TABLE 6 HERE]**

As an additional test, we also examine the informativeness of *FLS-TONE*. Refer to Table 7. We still find a negative and significant association between *FLS-TONE* and *ROA* up to next three quarters. Thus, linguistic tone of forward-looking disclosures is also misleading.

**[INSERT TABLE 7 HERE]**

Next, we investigate how investors react to *TONE* by looking at the stock price changes around the earnings conference call disclosure date. We calculate abnormal returns as the difference between daily stock returns from Prowess and market returns. We use the S&P BSE 200 returns as a proxy for market returns. We calculate cumulative abnormal returns (*CAR*) across different windows and run the following specification:

$$CAR[-1, t] = \alpha + \beta_1 * TONE + \beta_2 * ROA + \beta_3 * SIZE + \beta_4 * MTB + \beta_5 * QUARTERLY\_RET + \beta_6 * STDDEV\_ROA + \beta_7 * STDDEV\_RET + Industry\ FE + Quarter\ FE + \epsilon \quad (3)$$

We analyze investors' reaction during the three short-term windows [-1, +1], [-1, +3], and [-1, +5] where 0 is the date when the conference call transcripts are made available to investors. Our main coefficient of interest is  $\beta_1$ . The results from equation (3) are presented in Table 8. We find a positive association between *TONE* and *CAR*, which is statistically significant at the 1 percent across all the specifications (1)-(3). We find that as *TONE* increases from 25<sup>th</sup> percentile to 75<sup>th</sup> percentile, *CAR* [-1, +1] increases by 1.4 percent. Thus, the association is also economically meaningful. This shows that investors react positively to optimistic *TONE*. While *TONE* does not predict positive future operating performance, it predicts positive stock returns in the short-window around the earnings conference calls. Thus, investors are misled by the *TONE* of the conference call. In an unreported test, we find similar results when use *FLS-TONE* in place of *TONE*.

**[INSERT TABLE 8 HERE]**

After documenting the investors reaction, we analyze the reaction of retail investors separately. We are interested to know if retail investors are the net buyers or the net sellers when *TONE* is more optimistic. We identify all the trades executed by the retail investors in the tick-by-tick dataset and use the following two proxies to measure the net trading activity around the conference call date:

- $ORDER\_IMBALANCE\_1 = (\text{number of buy orders} - \text{number of sell orders}) / (\text{number of buy orders} + \text{number of sell orders})$
- $ORDER\_IMBALANCE\_2 = (\text{number of shares bought} - \text{number of shares sold}) / (\text{total shares outstanding}) * 100$

In the tick-by-tick dataset, we consider a particular order as a buy order if that buy order was initiated by a retail investor. Similarly, we consider a particular order as a sell order if that sell order was initiated by a retail investor. If retail investors are misled by *TONE* of the earnings conference call, then we should expect retail investors to be net buyers of the stock when *TONE* is more optimistic as optimistic *TONE* does not predict higher operating performance in future. Thus, in this case, we should expect a positive association between *TONE* and *ORDER\_IMBALANCE\_1* and *ORDER\_IMBALANCE\_2*. We run the following specification:

$$ORDER\_IMBALANCE = \alpha + \beta_1 * TONE + \beta_2 * ROA + \beta_3 * SIZE + \beta_4 * MTB + \beta_5 * QUARTERLY\_RET + \beta_6 * STDDEV\_ROA + \beta_7 * STDDEV\_RET + IndustryFE + QuarterFE + \epsilon \quad (4)$$

**[INSERT TABLE 9 HERE]**

The results are presented in Table 9. Surprisingly, we find a negative and significant association between *TONE* and *ORDER\_IMBALANCE*. This means that retail investors are net sellers of the stocks when managers employ more optimistic *TONE*. This evidence suggests that

average retail investor is not necessarily misled by optimistic *TONE*. We further test the ownership of retail investors using the quarterly ownership data from Prowess. As can be seen in Table 10, while *TONE* is negatively associated with non-institutional investors' ownership with a share capital of 1 lakh rupees or more (specification 3), it is not significantly associated with that non-institutional investors' ownership with a share capital of less than 1 lakh rupees (specification 2).

**[INSERT TABLE 10 HERE]**

Evidence from Table 9 and 10 suggest that retail investors with large share capital are net sellers of the stock when *TONE* is more optimistic. This evidence suggest that large retail investors may not be misled by *TONE*. Further research should investigate the different trading behavior of small and large retail investors.

**[INSERT TABLE 11 HERE]**

Finally, we examine determinants of complexity of the language used in the earnings conference call and how investors interpret it. These results are presented in Table 11. We calculate gunning fog index (*FOG*) of the conference call transcripts to capture complexity of the language. We find a negative association between *ROA* and *FOG* (Panel A). Thus, managers use more complex language when firm performance is poor. This evidence is consistent with the prior findings (Li 2008) in the USA setting. Next, we find that after controlling for the effect of *TONE*, investors react negatively when *FOG* is higher. Thus, investors penalize the firm when managers increase the complexity of the disclosures.

## **CONCLUSION**

Most of the early evidence on the behavior of retail investors show that retail investors are unsophisticated, behaviorally biased, and otherwise uninformed. Using rich and transaction-level data from the stock market, we examine how retail investors react to textual information which is a noisy signal about firm fundamentals. Our evidence suggests that the managers use linguistic tone in the earnings conference call to mislead investors by obfuscating future poor performance. However, the average retail investor is not necessarily misled. Further research could examine the different trading behavior of small and large retail investors.

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## APPENDIX A: VARIABLE DEFINITION

Variable	Definition/Measurement
<i>TONE</i>	(Optimistic words - Pessimistic words) / (Optimistic words + Pessimistic words) in the earnings conference call transcripts
<i>FLS-TONE</i>	<i>TONE</i> calculated from the forward-looking disclosures in the earnings conference call transcript. Classification into forward-looking disclosures is done using the dictionary of phrases from Muslu, Radhakrishnan, Subramanyam, and Lim (2014)
<i>FOG</i>	Complexity of the textual disclosures in the earnings conference call transcripts measured using the gunning-fog index
<i>SIZE</i>	ln (market capitalization)
<i>MTB</i>	Market-to-book ratio
<i>ROA</i>	Net profit after tax from continuing operations / Beginning total assets
<i>STDDEV_ROA</i>	Standard deviation of quarterly <i>ROA</i> over the last three years with at least five non-missing values
<i>SALES_GROWTH</i>	Growth in total sales
<i>QUARTERLY_RET</i>	Quarterly stock returns calculated by compounding monthly returns
<i>STDDEV_RET</i>	Standard deviation of monthly returns
<i>CAR</i>	Cumulative abnormal returns
<i>% of non-institutional investors</i>	Percentage of non-institutional investors
<i>% of non-institutional investors (&lt;1 lakh)</i>	Percentage of non-institutional investors with a share capital of less than 1 lakh rupees
<i>% of non-institutional investors (&gt; 1 lakh)</i>	Percentage of non-institutional investors with a share capital of more than 1 lakh rupees
<i>ORDER_IMBALANCE_1</i>	(Total buy orders - Total sell orders) / (Total buy orders + Total sell orders)
<i>ORDER_IMBALANCE_2</i>	(Number of shares bought - Number of shares sold) / Total shares outstanding * 100



**TABLE 1: SUMMARY STATISTICS**

This table provides summary statistics of our sample. Refer to Appendix A for variable definitions. All continuous variables are winsorized at top and bottom 1% to mitigate the effect of outliers.

	N	Mean	S.D.	0.25Q	Median	0.75Q
<b>Conference call characteristics:</b>						
<i>TOTAL WORDS</i>	8,273	7032.28	2075.09	5666.00	7046.00	8251.00
<i>OPTIMISTIC WORDS</i>	8,273	79.64	33.90	55.00	75.00	99.00
<i>PESSIMISTIC WORDS</i>	8,273	85.74	31.43	64.00	83.00	104.00
<i>TOTAL SENTENCES</i>	8,273	405.16	130.55	314.00	397.00	483.00
<i>TOTAL FLS-SENTENCES</i>	8,273	60.44	22.65	45.00	58.00	74.00
<i>TONE</i>	8,273	-0.05	0.21	-0.19	-0.05	0.10
<i>FLS-TONE</i>	8,271	0.10	0.28	-0.09	0.11	0.29
<i>FOG</i>	8,273	12.24	1.84	10.93	12.04	13.30
<b>Other variables:</b>						
<i>SIZE</i>	8,166	10.96	1.51	9.93	10.78	11.90
<i>MTB</i>	8,108	4.16	4.26	1.58	2.86	5.04
<i>ROA</i>	8,106	0.02	0.02	0.01	0.02	0.03
<i>STDDEV_ROA</i>	8,092	0.02	0.04	0.01	0.01	0.02
<i>SALES_GROWTH</i>	8,141	0.06	0.30	-0.05	0.03	0.11
<i>QUARTERLY_RET</i>	5,037	0.05	0.24	-0.09	0.03	0.16
<i>STDDEV_RET</i>	5,037	0.10	0.07	0.05	0.08	0.13
<i>% of non-institutional investors</i>	7,786	12.62	9.66	5.54	9.81	17.24
<i>% of non-institutional investors (&lt;1 lakh)</i>	3,734	8.55	6.67	3.40	6.72	11.72
<i>% of non-institutional investors (&gt; 1 lakh)</i>	3,700	3.73	4.31	0.77	2.09	5.14
<i>ORDER_IMBALANCE_1 [-3, +5]</i>	3,530	-0.01	0.17	-0.07	0.01	0.07
<i>ORDER_IMBALANCE_1 [-3, +10]</i>	3,530	-0.02	0.17	-0.07	0.00	0.06
<i>ORDER_IMBALANCE_2 [-3, +5]</i>	3,530	0.01	0.12	-0.01	0.00	0.01
<i>ORDER_IMBALANCE_2 [-3, +10]</i>	3,530	0.02	0.16	-0.01	0.00	0.01

**TABLE 2: DISTRIBUTION OF CONFERENCE CALL SAMPLE**

This table provides the distribution of our conference call sample. Panel A displays the industry distribution based on the three digits of the NIC codes. Panel B displays the quarterly distribution of the sample.

**Panel A: Industry Distribution**

<b>Industry</b>	<b>Frequency</b>	<b>Percent</b>
Agriculture, forestry and fishing	48	0.6
Mining and quarrying	60	0.75
Manufacturing	3,393	42.25
Electricity, gas, steam and air conditioning supply	165	2.05
Construction	705	8.78
Wholesale and retail trade; repair of motor vehicles	377	4.69
Transportation and storage	235	2.93
Accommodation and Food service activities	37	0.46
Information and communication	1,599	19.91
Financial and insurance activities	1,170	14.57
Professional, scientific and technical activities	56	0.7
Administrative and support service activities	71	0.88
Education	23	0.29
Human health and social work activities	62	0.77
Arts, entertainment and recreation	29	0.36

**Panel B: Quarterly Distribution**

<b>Year</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Total</b>
<b>2004</b>	1	5	2	1	<b>9</b>
<b>2005</b>	6	3	11	14	<b>34</b>
<b>2006</b>	16	19	20	17	<b>72</b>
<b>2007</b>	26	29	35	36	<b>126</b>
<b>2008</b>	51	40	49	64	<b>204</b>
<b>2009</b>	78	85	93	92	<b>348</b>
<b>2010</b>	90	117	120	138	<b>465</b>
<b>2011</b>	126	134	131	132	<b>523</b>
<b>2012</b>	146	141	153	129	<b>569</b>
<b>2013</b>	149	152	151	162	<b>614</b>
<b>2014</b>	173	178	181	193	<b>725</b>
<b>2015</b>	219	223	251	249	<b>942</b>
<b>2016</b>	258	265	262	240	<b>1,025</b>
<b>2017</b>	262	287	285	318	<b>1,152</b>
<b>2018</b>	311	323	298	277	<b>1,209</b>
<b>2019</b>	145	111			<b>256</b>
<b>Total</b>	<b>2,057</b>	<b>2,112</b>	<b>2,042</b>	<b>2,062</b>	<b>8,273</b>

**TABLE 3: CORRELATION TABLE**

This table provides the pairwise correlation coefficients of the key variables. Refer to Appendix A for variable definition.

	<i>FOG</i>	<i>TONE</i>	<i>ROA</i>	<i>SIZE</i>	<i>MTB</i>	<i>QUARTERLY_RET</i>	<i>STDDEV_ROA</i>	<i>STDDEV_RET</i>
<i>FOG</i>	1.00							
<i>TONE</i>	0.23	1.00						
<i>ROA</i>	-0.01	0.02	1.00					
<i>SIZE</i>	0.02	-0.11	0.05	1.00				
<i>MTB</i>	0.04	0.05	0.01	0.16	1.00			
<i>QUARTERLY_RET</i>	-0.02	0.10	0.02	0.04	0.06	1.00		
<i>STDDEV_ROA</i>	0.01	0.03	0.11	-0.02	0.04	-0.01	1.00	
<i>STDDEV_RET</i>	-0.04	-0.04	-0.04	-0.19	-0.05	-0.04	0.01	1.00

**TABLE 4: DETERMINANTS OF TONE**

This table presents the determinants of tone. The dependent variable is *TONE* of the earnings conference call transcripts. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) <i>TONE</i>
<i>ROA</i>	-0.219 [-0.769]
<i>SIZE</i>	-0.010* [-1.929]
<i>MTB</i>	0.006** [2.434]
<i>QUARTERLY_RET</i>	0.066** [2.683]
<i>STDDEV_ROA</i>	0.093 [0.475]
<i>STDDEV_RET</i>	-0.180* [-2.077]
Industry FE	YES
Quarter FE	YES
Observations	4,880
R-squared	0.169

**TABLE 5: ASSOCIATION OF TONE WITH FUTURE EARNINGS**

This table presents the association of *TONE* with future earnings. The dependent variables are future *ROA*. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) <i>ROA (t+1)</i>	(2) <i>ROA (t+2)</i>	(3) <i>ROA (t+3)</i>
<i>TONE</i>	-0.003** [-2.249]	-0.002 [-1.013]	-0.004* [-1.914]
<i>ROA</i>	0.560*** [15.753]	0.533*** [17.886]	0.482*** [16.149]
<i>SIZE</i>	0.001** [2.419]	0.001* [2.059]	0.001 [1.607]
<i>MTB</i>	0.001*** [6.823]	0.001*** [5.574]	0.001*** [5.659]
<i>QUARTERLY_RET</i>	0.004*** [3.070]	0.003 [1.736]	0.002 [1.528]
<i>STDDEV_ROA</i>	-0.010 [-0.586]	-0.015 [-0.882]	-0.015 [-0.884]
<i>STDDEV_RET</i>	0.002 [0.308]	-0.005 [-1.264]	-0.006 [-1.099]
Industry FE	YES	YES	YES
Quarter FE	YES	YES	YES
Observations	4,756	4,736	4,714
R-squared	0.583	0.566	0.523

**TABLE 6: ASSOCIATION OF TONE WITH FUTURE SALES GROWTH**

This table presents the association of *TONE* with future sales growth. The dependent variable is *SALES\_GROWTH* in the next period. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)
	<i>SALES_GROWTH</i> ( <i>t+1</i> )
<i>TONE</i>	-0.042** [-2.670]
<i>ROA</i>	-2.679*** [-7.705]
<i>SIZE</i>	-0.001 [-0.259]
<i>MTB</i>	0.010*** [5.752]
<i>QUARTERLY_RET</i>	0.064*** [3.002]
<i>STDDEV_ROA</i>	0.296* [2.010]
<i>STDDEV_RET</i>	-0.026 [-0.236]
Industry FE	YES
Quarter FE	YES
Observations	4,741
R-squared	0.068

**TABLE 7: ASSOCIATION OF FLS-TONE WITH FUTURE EARNINGS**

This table presents the association of tone from the forward-looking disclosures, *FLS-TONE*, with future earnings. The dependent variables are future *ROA*. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	<i>ROA (t+1)</i>	<i>ROA (t+2)</i>	<i>ROA (t+3)</i>
<i>FLS-TONE</i>	-0.001* [-1.923]	-0.002** [-2.153]	-0.003** [-2.175]
<i>ROA</i>	0.559*** [15.760]	0.532*** [17.960]	0.482*** [16.150]
<i>SIZE</i>	0.001** [2.434]	0.001* [2.004]	0.001 [1.607]
<i>MTB</i>	0.001*** [6.994]	0.001*** [5.627]	0.001*** [5.700]
<i>QUARTERLY_RET</i>	0.004** [2.965]	0.003 [1.725]	0.002 [1.425]
<i>STDDEV_ROA</i>	-0.010 [-0.602]	-0.015 [-0.895]	-0.016 [-0.920]
<i>STDDEV_RET</i>	0.002 [0.327]	-0.006 [-1.297]	-0.006 [-1.083]
Industry FE	YES	YES	YES
Quarter FE	YES	YES	YES
Observations	4,756	4,736	4,714
R-squared	0.583	0.566	0.523

**TABLE 8: INVESTORS' REACTION TO TONE**

This table presents investors' reaction to *TONE*. The dependent variable is cumulative abnormal returns, *CAR*, around the disclosure date of earnings conference call transcripts. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	<i>CAR [-1, +1]</i>	<i>CAR [-1, +3]</i>	<i>CAR [-1, +5]</i>
<i>TONE</i>	0.037*** [13.563]	0.041*** [8.033]	0.042*** [6.606]
<i>ROA</i>	0.338*** [8.932]	0.410*** [10.164]	0.427*** [12.163]
<i>SIZE</i>	0.000 [0.340]	0.001 [0.911]	0.001 [1.399]
<i>MTB</i>	-0.001** [-2.444]	-0.001*** [-3.014]	-0.001*** [-3.514]
<i>QUARTERLY_RET</i>	-0.002 [-0.442]	-0.004 [-0.505]	-0.001 [-0.062]
<i>STDDEV_ROA</i>	-0.008 [-0.212]	-0.012 [-0.362]	-0.016 [-0.457]
<i>STDDEV_RET</i>	-0.022 [-1.380]	-0.037** [-2.155]	-0.029 [-1.296]
Industry FE	YES	YES	YES
Quarter FE	YES	YES	YES
Observations	4,878	4,878	4,878
R-squared	0.043	0.044	0.041



**TABLE 9: ORDER IMBALANCE OF TRADES BY RETAIL INVESTORS**

This table presents the net trading activities of the retail investors in response to *TONE*. The dependent variables are order imbalance around the disclosure date of earnings conference call transcripts. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	<i>ORDER_IMBALANCE_1</i>	<i>ORDER_IMBALANCE_1</i>	<i>ORDER_IMBALANCE_2</i>	<i>ORDER_IMBALANCE_2</i>
	<i>[-3, +5]</i>	<i>[-3, +10]</i>	<i>[-3, +5]</i>	<i>[-3, +10]</i>
<i>TONE</i>	-0.033* [-1.835]	-0.038** [-2.230]	-0.026*** [-2.811]	-0.035*** [-2.692]
<i>ROA</i>	-0.011 [-0.060]	-0.152 [-1.004]	-0.069 [-0.449]	-0.130 [-0.739]
<i>SIZE</i>	0.013*** [4.142]	0.010*** [3.657]	-0.002 [-0.772]	-0.003 [-0.860]
<i>MTB</i>	-0.001 [-0.670]	-0.000 [-0.314]	-0.001 [-1.028]	-0.001 [-0.617]
<i>QUARTERLY_RET</i>	-0.031** [-2.185]	-0.030** [-2.236]	0.005 [0.432]	0.009 [0.599]
<i>STDDEV_ROA</i>	0.173 [0.998]	0.293* [1.864]	0.025 [0.380]	0.017 [0.187]
<i>STDDEV_RET</i>	0.123** [2.512]	0.123*** [2.626]	0.208*** [3.365]	0.290*** [3.374]
Industry FE	YES	YES	YES	YES
Quarter FE	YES	YES	YES	YES
Observations	2,628	2,628	2,628	2,628
R-squared	0.055	0.057	0.051	0.053

**TABLE 10: OWBERSHIP STRUCTURE**

This table presents the association of *TONE* with the ownership of non-institutional investors in the next quarter. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	<i>Percentage of non-institutional investors</i>	<i>Percentage of non-institutional investors (&lt;1 lakh)</i>	<i>Percentage of non-institutional investors (&gt; 1 lakh)</i>
<i>TONE</i>	-2.077* [-1.790]	-1.166 [-1.068]	-1.176* [-1.909]
<i>ROA</i>	-32.387*** [-2.686]	-17.923* [-1.955]	-8.747 [-1.432]
<i>SIZE</i>	-3.064*** [-9.395]	-1.844*** [-6.817]	-1.272*** [-6.415]
<i>MTB</i>	0.041 [0.418]	-0.043 [-0.458]	0.051 [1.066]
<i>QUARTERLY_RET</i>	1.389*** [2.744]	0.171 [0.407]	0.937*** [3.198]
<i>STDDEV_ROA</i>	-4.880 [-0.642]	-10.509** [-2.209]	-3.425 [-0.778]
<i>STDDEV_RET</i>	-0.213 [-0.090]	1.897 [0.976]	-3.704** [-2.534]
Industry FE	YES	YES	YES
Quarter FE	YES	YES	YES
Observations	4,638	2,736	2,709
R-squared	0.379	0.406	0.276

**TABLE 11: COMPLEXITY OF DISCLOSURES**

Panel A presents the determinants of complexity of disclosures. The dependent variable is *FOG* of the earnings conference call transcripts. Panel B presents investors' reaction to *FOG*. The dependent variable is cumulative abnormal returns, *CAR*, around the disclosure date of earnings conference call transcripts. Refer to Appendix A for variable definitions. t-statistics (in brackets) are based on heteroscedasticity-robust standard errors that are clustered at the firm and year level. \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% levels, respectively.

<b>Panel A: Determinants of Complexity</b>	
	(1) <i>FOG</i>
<i>ROA</i>	-4.904* [-1.882]
<i>SIZE</i>	0.052 [0.953]
<i>MTB</i>	0.031 [1.538]
<i>QUARTERLY_RET</i>	-0.278 [-1.274]
<i>STDDEV_ROA</i>	0.914 [0.669]
<i>STDDEV_RET</i>	-0.559 [-0.735]
Industry FE	YES
Quarter FE	YES
Observations	4,880
R-squared	0.074

**Panel B: Investors' Reaction to Complexity of Disclosures**

	(1) <i>CAR [-1, +1]</i>	(2) <i>CAR [-1, +3]</i>
<i>FOG</i>	-0.001*** [-3.477]	-0.001* [-1.754]
<i>TONE</i>	0.040*** [13.634]	0.043*** [8.362]
<i>ROA</i>	0.332*** [8.612]	0.406*** [9.668]
<i>SIZE</i>	0.000 [0.480]	0.001 [0.989]
<i>MTB</i>	-0.001** [-2.420]	-0.001*** [-2.971]
<i>QUARTERLY_RET</i>	-0.003 [-0.546]	-0.004 [-0.561]
<i>STDDEV_ROA</i>	-0.007 [-0.191]	-0.011 [-0.345]
<i>STDDEV_RET</i>	-0.022 [-1.427]	-0.037** [-2.212]
Industry FE	YES	YES
Quarter FE	YES	YES
Observations	4,878	4,878
R-squared	0.044	0.045