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Financial Narratives and Analysts Behaviour

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Resumo

Este estudo analisa o impacto das narrativas financeiras, nomeadamente o tom e as *forward-looking words*, no comportamento dos analistas. Utilizando modelos de regressão linear em empresas transacionadas na *London Stock Exchange* (LSE), analisamos estas características em duas secções do relatório: mensagem do *Chairman* e CEO *Review*.

Enquanto o comportamento do analista não é genericamente afetado pelas *forward-looking words* (com exceção da métrica do coeficiente de variação), os resultados relativos ao tom são inconclusivos.

Palavras-chave: narrativas financeiras; análise textual; tom; *forward-looking*; relatórios anuais; comportamento dos analistas

Abstract

This study analyses the impact of financial narratives, specifically tone and the number of forward-looking words, on analyst behaviour. Using a multivariate model in firms listed on the London Stock Exchange (LSE), we analyse these features on two report sections: Chairman´s Statement and CEO Review.

While analyst behaviour is not explained by forward-looking words (with the exception of coefficient of variation metric), the results regarding tone are inconclusive.

Keywords: financial narratives; textual analysis; tone; forward-looking; annual reports; analyst behaviour

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1. Introduction

Analyst behaviour typically refers to the actions and approaches that analysts employ at their analysis. In our study, we quantify analyst behaviour as the mean, median and coefficient of variation value for the next three years estimates for a company.

The relationship between financial narratives and analyst behaviour is an extremely interesting and pertinent issue nowadays since, as Elliot (1998) predicted, qualitative data has gained exponential importance in the last two decades, not being unreasonable to say, at this moment, that is more important than quantitative data for financial analysts. For this reason, our study focuses on understanding whether financial narratives influence analysts' behaviour. In our case, financial narratives are measured through the tone and forward-looking words present in two sections of the annual report: Chairman's Statement and CEO Review.

Literature puts forward several reasons why financial narratives can potentially impact analysts' behaviour. Breton & Taffler (2001) show that financial analysts rely on non-financial qualitative and accounting narratives when are constructing and making their stock recommendations. It also gives great importance to the Chairman's Statement and the CEO Review sections (the latter in a more measured form). Arnold & Moizer (1984) state that, for analysts, the Chairman´s Statement is the most influential information source (after financial statements). In addition, from all the 17 sections of the annual report, the Chairman´s Statement is the most read and is ranked second in overall performance (Bartlett & Chandler, 1977). More recently, Das & Das (2017) demonstrate that annual reports components are considered essential for investors, providing valuable information for making investment decisions.

In more detail, literature seems to indicate that tone and forward looking words have the capacity to influence analysts' behaviour. Druz et al. (2020) suggest that

analysts do indeed respond to changes in tone with a more negative tone leading to lower estimates and a less negative tone resulting in raised estimates. Clarkson et al. (1999) suggest "the quality of analysts' earnings forecasts increase with the quality of forward-looking disclosures" which indicates that forward-looking words shape analysts and their decisions.

In order to make our analysis, we utilize an updated version of the database obtained from El-Haj et al. (2019b) comprising firms listed on the London Stock Exchange (LSE). Here, the tone measure represents the difference between the number of positive and negative words scaled by their sum (according to LM dictionary) and the forward-looking measure represents the number of forward-looking words according to a revised edition of the word list proposed by (Hussainey et al, 2003). Our sample comprises 1,867 firms from 2010 to 2022. The dataset was generated by the CFIE–FRSE, a software that classifies annual report sections and extracts sentiment based on different lists of words developed for Accounting and Finance research.

We plan to contribute to the literature by not only conduct a joint analysis of the financial narrative measures (tone and forward-looking words) and sections (CEO review and chairman statement) but also examining each financial narrative measure and section individually. Additionally, to provide more robustness to our analysis, we made a similar analysis with year fixed-effects and both year and fixed-effects.

The results obtained show that the influence of tone on analyst behaviour is not consistent across all models and metrics. While there is evidence suggesting that tone may influence analyst behaviour (especially in the coefficient of variation metric), the results are ambiguous and vary depending on the specific estimation periods and metrics considered. Regarding forward-looking words there is evidence to say that they do not influence analyst behaviour in the mean and median metrics, however, we cannot extend this conclusion to coefficient of variation metric.

Further robustness tests incorporating year and firm fixed-effects confirm the nuanced nature of the results. While the impact of tone remains relatively consistent, the effect of forward-looking words weakens with the inclusion of firm fixed-effects.

The remainder of the thesis is organized as follows. Chapter 2 contemplate the literature review presenting a theoretical framework on automated content analysis, financial narratives and analyst behaviour. Chapter 3 presents the methodology, where we describe the process of sample selection, explain the models used and variables included in those models. Chapter 4 presents and discusses the results. Chapter 5 concludes the thesis.

2. Literature Review

We study the impact of the financial narratives on analyst behaviour via application of automated content analysis. Thus, we start the literature review by explaining how measures of financial narratives are extracted from text collections, their features and applications.

2.1 Automated content analysis

Automated content analysis has emerged as a vital tool in various disciplines, including accounting and finance. This approach involves trying to find text patterns, which has a long history in textual analysis (Loughran & McDonald, 2016). In recent years, it has become increasingly popular due to its ability to efficiently extract and analyse information from large volumes of textual data (Bochkay et al., 2023).

Traditionally, researchers employed manual content analysis in financial disclosure studies (Li, 2010a). However, this approach has limitations, including high costs associated with data collection and subjectivity in the coding process (Core, 2001; Li, 2010b). In contrast, automated content analysis offers several advantages. It reduces data collection expenses and increases statistical power by accommodating larger sample sizes, thus enabling more comprehensive empirical testing (Li, 2010b; El-Haj et al., 2019a). Furthermore, it enhances replicability across studies, as algorithms can quickly score text compared to human annotators (Li, 2010b).

Researchers approach automated content analysis through different methodologies, each with its strengths and limitations. One common distinction is between the dictionary approach and the statistical approach (Li, 2010a).

The dictionary approach involves classifying words or phrases into predefined categories using a mapping algorithm (Li, 2010a). In order to conduct a correct analysis exist the need to use dictionaries specific to the area. This approach has some different

word lists[1] commonly used for accounting and finance research: Harvard's General Inquirer (Harvard's GI), Loughran & McDonald (2011) – also known as LM dictionary, Diction and Henry (2008).

The Harvard's GI is a dictionary created in 1966 for psychology and social sciences analysis containing words tagged with optimistic and pessimistic labels (Das, 2014). After understanding that ¾ of the words identified by Harvard's GI as negative were actually not negative in financial context, Loughran & McDonald (2011) created domain specific word lists tailored for financial and accounting analysis: LM dictionary. Different sentiments: negative, positive, uncertainty, litigious, strong modal, and weak modal categorize these specific word lists (Loughran & McDonald, 2016). After studying the Diction dictionaries- 35 different dictionary subcategories that characterize words based on their sentiment, Loughran & McDonald (2015) discovered that "83% of the Diction optimism and 70% of the Diction pessimism frequencies are misclassified, based on LM classifications". The authors conclude saying that most researchers used Diction dictionaries because were the first ones readily available. Finally, the Henry (2008) word list was developed for analysing sentiment in financial texts particularly earnings press releases in the telecommunications and computer services industries. Walker et al. (2020) argue that Henry wordlists outperform LM-dictionary but also find that superiority applies mainly to positive sentences.

The Statistical Approach include machine learn methods such as Naïve–Bayes classifications, Cosine Similarity and Topic modelling using Latent Drichet Allocation (LDA). Their application is complex and hard to replicate across studies, due to the numerous unpublished rules and filters used. Consequently, verifying their accuracy is more complicated compared to the dictionary approach methods (see McCallum & Nigam, 1998; Brown & Tucker, 2011; and Blei et al., 2003).

[1] Loughran & McDonald (2016) define word lists as a compilation of words categorized based on sentiments, themes, or attributes.

Tone analysis is among the most widely use textual characteristic in social science. It assesses whether the sentiment conveyed in text is positive, negative, or neutral. The predominant approach to tone analysis is with a dictionary method. For instance, out of the surveyed accounting publications that conduct sentiment analysis, 97.4% utilize this technique (Bochkay et al., 2023).

Researchers have extensively analysed the tone conveyed in various forms of communication, such as earnings press releases ((Henry 2008), Management's Discussion and Analysis (MD&A [Li 2010b]), analyst reports (Huang et al. 2014) and conference calls (Bochkay et al. 2020).

Forward-looking words, as outlined by Hussainey et al. (2003), include expressions indicative of future expectations and foresight, such as projections, anticipations, or outlooks. As with tone analysis, the most commonly employed approach for forward-looking analysis is the dictionary approach and this type of analysis has attracted significant attention in the field of accounting (Bochkay et al., 2023). Li (2010b) employs a set of future-oriented verbs (such as "will," "plan," and "expect") to determine the forward-looking nature of a sentence. Building upon this approach, Muslu et al. (2015) enhance the methodology by incorporating bigrams (e.g., "next year" and "coming year"), various conjugations of future-oriented verbs (e.g., "we project" and "company expects") and references to future dates. Additionally, Bozanic et al. (2018) upgrade the dictionary by removing phrases commonly associated with cautious language (e.g., "coming period" and "coming year").

In this thesis, the tone and forward-looking measures used to explain the analyst behaviour were extract from the financial narratives of the companies who compose our sample. As such, we will now turn our focus to financial narratives and for those who analyze them.

2.2 Financial Narratives and analyst role

Annual reports are structured into two primary components, as per the methodology outlined in El-Haj et al. (2020). A front end and the financial statements. The financial statements section also includes the auditor's report, the statement of directors' responsibilities, and generic shareholder details, such as the financial calendar and form of proxy.

The front end is composed by the chairman´s statement (or letter to shareholders), management commentary (or MD&A), report of directors, governance statement, remuneration report, principal risk and uncertainties, and other stakeholder disclosures, such as environmental and social responsibility commentary (El-Haj et al., 2020).

Retrieving and analysing the information on financial and narratives components is easier in the United States (US) than in the European Union (EU). In the US, the Securities and Exchange Commission (SEC) serve as the capital market regulator and operates the EDGAR system[2] , facilitating relatively easy information retrieval and consequently annual reports follow a standardized and comparable format (El-Haj et al., 2020). Gisbert (2020) adds that in the US this information is accessible in an open format and is more easily comparable across companies, especially in the MD&A section. On the contrary, in Europe, annual report documents have a free structure, diverse extensions, and are uploaded in PDF format. Additionally, graphs and pictures often accompany text in these reports. Each company determines the structure of its annual report, making it challenging to create a corpus of comparable sub-sections. The only commonly standardized section is the letter to shareholders, which is easily identifiable. Other sections, such as corporate governance and corporate social responsibility, are challenging to extract. She concludes by saying that annual reports

[2] Electronic Data Gathering, Analysis, and Retrieval system (EDGAR) is the primary system for US companies and others submitting documents (https://www.sec.gov/edgar/search-and-access)

are increasingly becoming online and interactive, adding complexity to retrieving all the text from these reports.

While financial statements were the primary source of information there is a paradigm shift. Elliot (1998) foresaw qualitative data[3] surpassing its quantitative counterpart, a prediction confirmed by the substantial growth in the last two decades. Qualitative data, including narrative elements in periodic reports, press releases, webpage content, and social media posts, has become integral for valuation, monitoring, and stewardship (Lewis & Young, 2019). Substantial expansion in qualitative content is observable in both the narratives and financial statements components, though the mechanisms vary. The majority of the increase in financial statements content happened between 2006 and 2008, aligning with the obligatory adoption of IFRS by London Stock Exchange (LSE) Main Market and Alternative Investment Market (AIM) firms. In contrast, the narrative component experiences a more consistent and linear growth, reflecting the advances in stakeholder reporting (El-Haj et al., 2019a).

Language plays a crucial role in understanding how people see the world, reflecting their mental processes, as suggested by Chomsky (2006). Analysing language provides valuable insights into how individuals think of and understand their surroundings (Kabanoff et al., 1995). Essentially, studying how people express themselves through language gives us a look into their thoughts and perspectives on the world. Gisbert (2020) says that financial narratives are consider the language of an organization, providing a window into how managers see the company's current situation and its future path—whether it is thriving or encountering challenges. These narratives serve as the means through which companies communicate with users, showing managers' perspectives and analysing the company's performance.

As Shiller (2019) defend, to enhance our understanding of the economy and financial markets, economists must broaden their scope beyond typical economic

[3] Lewis and Young (2019) consider unstructured and qualitative as indistinguishable. I used the term qualitative.

indicators. They should incorporate narratives that influence individual and collective economic behaviour. While market participants are influenced by what they see, hear, and talk about, narratives are intangible and hard to measure.

Designed to specific audiences, financial narratives primarily address financial analysts, investors and shareholders (Gisbert, 2020). According to her, we found financial narratives in various sources within a company's reporting framework. Two common locations are the chairman´s statement in the EU and the MD&A section in the US´ 10-K[4], both important features of annual reports.

However, managers, especially in Europe, have discretion over what narrative information to disclose, and they may strategically release or withhold information to shape perceptions and influence both analyst and investor behaviour. Following that line of thinking, Clatworthy & Jones (2003) explain how companies use the chairman´s statement to practise impression management by showing that company management have incentives to represent their company's performance "in the best possible light".

Nevertheless, financial narratives can also serve as an important of supplementary information. For example, investors rely on the insights offered in the president's letter to assess the quality of earnings, indicating its importance in their decision-making process (Abrahamson & Amir, 1996). They affirm that association between the information provided in the president's letter and various performance measures, such as the percentage change in sales, earnings levels, book rate of return, and dividend changes, highlights the importance of narratives.

The tone conveyed in financial narratives, whether optimistic about current performance or suggesting positive outlooks beyond quantitative disclosures due to regulatory constraints, offers additional insights (Loughran & McDonald, 2011). However, it is important to acknowledge that it can also be employed by managers to conceal underperformance, exemplifying what is known as tone management: tendency for managers to manipulate the linguistic tone of their financial narratives to

[4] In the US, the 10-K represents the annual report and the 10-Q is the interim annual report.

present a more favourable depiction of the company's performance and prospects (Huang et al., 2011).

Considering the significant dependency of analysts on financial narratives and their influence on investment decisions, now we will explore the analysts' role: Financial analysts play a vital role in predicting and forecasting the future performance of companies, extending beyond the mere assessment of their current financial health (Clatworthy & Lee, 2018). The analysts generate and inspect a diverse variety of information to evaluate the companies they monitor Bhushan (1989) in order to make well-informed predictions about a company's future prospects, contributing to an efficient allocation of capital and increasing investor confidence through their valuation and monitoring activities.

According to Yezegel (2015), financial analysts are saw as information intermediaries fulfilling their duties by providing advice in response to investor demand and opportunities to inform clients. This role is widely recognized and valued by investors, the financial media, and regulators, who concur that sell-side analysts offer valuable advice to their clients.

In the analysis process, analysts conduct a comprehensive evaluation using factors such as a company's strategic approach, accounting policies, historical financial performance, and future prospects for sales and earnings growth. The ultimate goal is to arrive at a valuation and provide a clear recommendation to either purchase or sell by making short-term earnings forecasts and long-term growth forecasts for the firms that they follow (Bhushan, 1989). Although the analyst's often express conclusions through a brief stock recommendation, the decision-making process is detailed, considering various factors. These conclusions are communicated to a diverse audience, including clients, investors, company management, and other market participants (Chakri et al., 2023).

Analysts use both formal channels, such as formal reports and morning broker notes archived by data providers like Institutional Brokers´ Estimate System (I/B/E/S) and informal channels, including brokerage client communication, press interviews,

industry meetings, and conferences. This multifaceted communication approach ensures that the conclusions of the analysis reach various stakeholders in the financial landscape (Bradshaw, 2011).

2.3 Research Question: financial narratives influence analyst behaviour

Alves et al. (2016) propose three arguments supporting the hypotheses that different sections of a company's annual report hold varying predictive abilities for future performance. These arguments highlight the necessity of conducting a simultaneous analysis of multiple sections of annual reports.

Firstly, each section of the annual report serves a distinct purpose, and therefore the information provided might vary depending on the section. Analysing these sections separately allows for a more nuanced understanding of the company's performance and prospects. Secondly, a single person or team does not author the entire annual report. Different departments or individuals within the company may prepare different sections. This diversity in authorship could lead to variations in the quality and depth of information provided in each section. Thirdly, the incentives of preparers, as well as the governance mechanisms in place, can significantly influence the quality and relevance of disclosures in annual reports. Ball et al. (2003) demonstrated the impact of preparers' incentives on financial reporting quality, suggesting that sections of the annual report may be subject to different levels of investigation and diligence based on the incentives of those responsible for their preparation. Additionally, Osma & Guillamón–Saorín (2011) highlighted the influence of governance mechanisms on management disclosures. Companies with strong governance policies tend to provide higher quality disclosures.

Our goal is to understand if financial narratives influence analyst behaviour. Specifically, we aim to investigate if specific measures (tone and forward-looking words), within different sections of the annual report (namely, the Chairman's Statement and CEO Review) influence analyst behaviour.

To achieve this, we will test financial narratives with different models that will be explained in the methodology. We will simultaneously assess the analyst behaviour across three estimation periods (next fiscal year, two fiscal years ahead and three fiscal years ahead) with three variable variations (mean, median and coefficient of variation) for all estimates for a company in each estimation period.

To ensure a more complete analysis, we ran two extra tests. In the first test, we included year fixed-effects. In the second test, we incorporated both firm and year fixed-effects.

Therefore, we formulated the following hypotheses:

H_1) Financial narratives influence analyst behaviour

H_1a) Tone influence analyst behaviour

H_1b) Forward-looking words influence analyst behaviour

Breton & Taffler (2001) show that financial analysts rely on non-financial qualitative and accounting narratives when are constructing and making their stock recommendations. Arnold & Moizer (1984) support this idea by stating that, for analysts, the Chairman´s Statement is the most influential information source (after financial statements). Furthermore, Smith & Taffler (2000) demonstrated that the Chairman's Statement is highly predictive of insolvency, an extreme measure that analysts take into consideration when conducting their analysis. In addition, from all the 17 sections of the annual report, the Chairman´s Statement is the most read and is ranked second in overall performance (Bartlett & Chandler, 1977).

Skarlicki et al. (2023) suggest that analysts are inclined to offer optimistic forecasts for companies when CEOs utilize a self-serving strategy. In essence, when CEOs

attribute unfavourable outcomes to internal factors they can control and favourable outcomes to external factors beyond their control, analysts tend to perceive the company more positively, thus influencing their predictions.

Druz et al. (2020) suggest that analysts do indeed respond to changes in tone. Specifically, analysts adjust their earnings estimates based on the tone used by managers, with a more negative tone leading to lower estimates and a less negative tone resulting in raised estimates, although to a lesser extent.

Hussainey et al. (2003) identified forward-looking terms as those linked with "forecasts and prognostications." Clarkson et al. (1999) suggest "the quality of analysts' earnings forecasts increase with the quality of forward-looking disclosures" which indicates that forward-looking shape analyst and their decisions.

Therefore, we believe that the financial narratives will influence the analyst behaviour.

3. Methodology

3.1 Sample selection

For the sample selection phase, we utilized an updated version of the database obtained from El-Haj et al. (2019b) comprising firms listed on the London Stock Exchange (LSE). The CFIE–FRSE software, responsible for generating the dataset for textual analysis, processed the digital PDF annual reports. To collect the sample, we excluded data prior to 2010. Subsequently, we retrieve the remaining data from Datastream. Our sample comprises 1,867 firms. The number of observations varies across annual report sections and Datastream variables.

Table 1: Sample Construction

Initial number of firms	3,049
Lack of data	-1,182
Final number of firms	**1,867**

3.2 Research design

To test our hypotheses, we formulated several OLS regression models. To understand the impact of the financial narratives on analyst behaviour, we regressed analyst behaviour, which is quantified by EPSMN, EPSMD and EPSCV (for three different estimation periods) on financial narrative measures and analyst behaviour determinants founded in the literature (that served as control variables). To enhance the comprehensiveness of our analysis, we conducted two additional tests. In the first test, we introduced year fixed-effects, while in the second test, we incorporated both firm and year fixed-effects.

Tests on our hypothesis focused on estimates of β8 from the following regression model:

$$\begin{aligned}\text{Analyst's Behaviour}_{it} &= \beta_0 + \beta_1 \text{EPS1MN}_{it} + \beta_2 \text{EPS2NE}_{it} + \beta_3 \text{EPS3NE}_{it} \\ &+ \beta_4 \text{RETURNS}_{it} + \beta_5 \text{MV}_{it} + \beta_6 \text{MTBV}_{it} + \beta_7 \text{AGE}_{it} \\ &+ \beta_8 \text{Narrative Characteristics} + \varepsilon_{it}\end{aligned}$$

The difference among the regression models used to test our hypotheses occur in the dependent and independent variables:

- The dependent variables vary in metrics: mean, median, and coefficient of variation and vary in estimation period: next fiscal year, the second fiscal year ahead and three fiscal years ahead.
- The independent variables vary depending on the narrative measure and section being tested which resulted in different regressions.

The models are presented in the following way:

Table 2: Model explanation for tone

Model	Represent the mean metric in the three estimation periods for tone
1.1	Test individual tone for the CEO review (CEO) section in the next fiscal year
1.2	Test individual tone for the chairman statement (CH ST) section in the next fiscal year
1.3	Test tone for both CH ST and CEO section in the next fiscal year
1.4	Test individual tone for the CEO section two fiscal years ahead
1.5	Test individual tone for the CH ST section two fiscal years ahead
1.6	Test tone for both CH ST and CEO section two fiscal years ahead
1.7	Test individual tone for the CEO section three fiscal years ahead
1.8	Test individual tone for the CH ST section three fiscal years ahead
1.9	Test tone for both CH ST and CEO section three fiscal years ahead

*All tests are made for firm i in year t.

Models 2.1 to 2.9 and models 3.1 to 3.9 represent, respectively, the tone analysis for the median and coefficient of variation metrics.

Table 3: Model explanation for forward-looking

Model	Represent the mean metric in the three estimation periods for forward-looking (FL) words
4.1	Test individual FL words for the CEO review (CEO) section in the next fiscal year
4.2	Test individual FL words for the chairman statement (CH ST) section in the next fiscal year
4.3	Test FL words for both CH ST and CEO section in the next fiscal year
4.4	Test individual FL words for the CEO section two fiscal years ahead
4.5	Test individual FL words for the CH ST section two fiscal years ahead
4.6	Test FL words for both CH ST and CEO section two fiscal years ahead
4.7	Test individual FL words for the CEO section three fiscal years ahead
4.8	Test individual FL words for the CH ST section three fiscal years ahead
4.9	Test FL words for both CH ST and CEO section three fiscal years ahead

*All tests are made for firm i in year t.

Models 5.1 to 5.9 and models 6.1 to 6.9 represent, respectively, the tone analysis for the median and coefficient of variation metrics.

Table 4: Model explanation for both tone and forward-looking

Model	Represent all narrative measures (mean, median and coefficient of variation) and sections (CEO and CH ST) in the three estimation periods (next fiscal year, two and three fiscal years ahead
7.1	Test the sections in EPS1MN
7.2	Test the sections in EPS2MN
7.3	Test the sections in EPS3MN
7.4	Test the sections in EPS1MD
7.5	Test the sections in EPS2MD
7.6	Test the sections in EPS3MD
7.7	Test the sections in EPS1CV
7.8	Test the sections in EPS2CV
7.9	Test the sections in EPS3CV

*All tests are made for firm i in year t.

The same structure was implemented for the two additional tests, whose tables and models are presented in the appendix. Table 13 to 19 is referent to the analysis with firm fixed effects. Table 20 to 26 referent to the analysis with both year and firm fixed effects

Following the literature by Bhushan (1989), Marston (1997), Hamers et al. (2016), Hirshleifer (2020), Druz et al. (2020) and Clarkson et al. (1999), we conducted panel data regression models on analyst behaviour determinants. The logarithm of market value is a proxy for the size of the firm. The logarithm of age is a proxy value for firm´s life cycle. The number of estimates in the mean is a proxy of the number of analysts. The returns are a proxy of performance evaluation. The market to book value is a risk proxy. The financial narratives are measure by the tone and the logarithm of forward looking words on both Chairman´s statement section and CEO Review section. According to the literature referred in the previous paragraph all the variables should impact analyst behaviour.

$EPS1NE_{it}$ is the logarithm of the 12-month fiscal year mean of total number of estimates in the mean associated with FY1 forecast of firm i in year t; $EPS2NE_{it}$ is the logarithm of the 12-month fiscal year mean of total number of estimates in the mean associated with FY2 forecast of firm i in year t; $EPS3NE_{it}$ is the logarithm of the 12-

month fiscal year mean of total number of estimates in the mean associated with FY3 forecast of firm i in year t; $RETURNS_{it}$ is the traded price of bonds of 4 months after fiscal year t end scaled by the average traded price of bonds of 4 months after fiscal year t-1 end of firm i ($P_{FYE+4moths}/P_{FYE+4moths}$ -1); MV_{it} is the logarithm of share price multiplied by the number of ordinary shares in issue at the fiscal year end of firm i in year t; $MTBV_{it}$ is market value of the ordinary (common) equity scaled by the balance sheet value of the ordinary (common) equity at the fiscal year end of firm i in year t; AGE_{it} is the logarithm of the age (measured by incorporation data) of firm i in year t; $TONE\_CHAIR_{it}$ is the difference between the number of positive and negative words scaled by their sum in chairman´s statement section of firm i in year t according Loughran and McDonald (2011) dictionary; $TONE\_CEO_{it}$ is the difference between the number of positive and negative words scaled by their sum in CEO Review section of firm i in year t according Loughran and McDonald (2011) dictionary; FL_CHAIR_{it} is the logarithm of the number of forward-looking words in Chairman´s Statement according a revised edition of the word list proposed by Hussainey et al. (2003) of firm i in year t; FL_CEO_{it} is the logarithm of the number of forward-looking words in CEO Review section according a revised edition of the word list proposed by Hussainey et al. (2003) of firm i in year t.

Each variable is defined in table 27 in appendix.

4. Results

Table 5 presents the descriptive statistics of the sample including the dependent and independent variables.

The median EPSMN and EPSMD both show a steady increase over the forecasted years, with median values rising consistently. However, there is significant dispersion in EPS estimates across firms, as indicated by a high median CV value, such as EPS3CV: 9.412. The median firm has almost three analysts in all forecasted years and it has 17 years. It has a substantial size (MV of 128.85) and returns of zero. However, there exists a wide range of values, indicating diverse firm sizes and returns. Additionally, the median firm has a market value higher than the book value (MTBV of 1.47). Moreover, the median firm exhibits a positive tone (tone higher than zero), with the CEO's review section displaying the highest levels (0.714). Forward-looking discourse follows the same pattern, with more forward-looking words in the CEO's review section (15 words) compared to the Chairman's Statement section (10 words).

Table 5: Descriptive statistics

Variable Name	N	Mean	Std. Dev.	Min	p25	Median	p75	Max
EPS1MN	10,392	0.292	0.682	-1.606	0.012	0.109	0.329	4.049
EPS2MN	10,265	0.374	0.744	-0.781	0.030	0.138	0.391	4.590
EPS3MN	9,267	0.473	0.875	-0.33	0.054	0.183	0.483	5.592
EPS1MD	10,392	0.292	0.683	-1.643	0.012	0.109	0.328	4.069
EPS2MD	10,265	0.374	0.743	-0.775	0.030	0.138	0.387	4.601
EPS3MD	9,267	0.470	0.866	-0.324	0.053	0.183	0.482	5.484
EPS1CV	7,773	27.819	60.446	0.000	3.522	7.122	20.131	410.029
EPS2CV	7,677	28.351	62.335	0.000	4.533	8.255	20.108	436.100
EPS3CV	6,674	25.861	56.933	0.000	5.464	9.308	18.731	415.385
EPS1NE	10,392	6.059	6.597	1.000	1.083	2.917	8.750	36.833
EPS2NE	10,265	6.065	6.599	1.000	1.000	2.917	8.833	36.583
EPS3NE	9,267	5.214	5.392	1.000	1.000	2.583	7.917	30.583
RETURNS	12,790	0.065	0.539	-0.853	-0.250	0.000	0.265	2.571
MV	12,790	2,130.599	7,327.258	0.440	22.390	135.825	875.840	52,903.940
MTBV	12,790	3.008	6.321	-8.810	0.800	1.480	3.100	49.760
AGE	12,790	28.919	30.230	1.000	10.000	17.000	33.000	165.000
TONECHAIR	10,994	0.621	0.250	-0.818	0.500	0.673	0.810	0.981
TONE CEO	7,126	0.664	0.221	-0.75	0.563	0.714	0.822	0.983
FL CHAIR	11,531	11.609	8.331	0.000	6.000	10.000	15.000	44.000
FL CEO	7,072	17.405	12.292	0.000	9.000	15.000	23.000	64.000

The sample consists of firm-years for companies listed on The London Stock Exchange with fiscal year-ends spanning from January 2010 to December 2022. Source: Market and accounting data are extracted from Datastream. Tone variables are part of the updated dataset obtained from El-Haj et al, 2019b).

Due to the presence of outliers, we dropped the extreme bottom and top one percentiles for the following variables: EPS1MN, EPS2MN, EPS3MN, EPS1MD, EPS2MD, EPS3MD, RETURNS, MV, and MTBV. For the EPS1CV, EPS2CV, EPS3CV, FL_CHAIR and FL_CEO we only dropped the observations above percentile 99. Finally, we excluded observations with values of 1 and -1 for the variables TONE_CEO and TONE_CHAIR.

4.1 Tone

To evaluate if tone influence analyst behaviour, we focus on table 6 to table 9.

The outcomes of the individual regressions (model 1.1, 1.2, 1.4, 1.5, 1.7 and 1.8 of table 6; model 2.1, 2.2, 2.4, 2.5, 2.7 and 2.8 of table 7; model 3.1, 3.2, 3.4, 3.5 and 3.7 and 3.8 of table 8) indicate that the tone of the two sections, independently, does not have the ability to influence analyst behaviour in any estimation period when considering mean and median metrics. However, for the coefficient of variation metric, tone does influence analyst behaviour in each section and for the three estimation periods.

When we observe the tone in both sections simultaneously (model 1.3, 1.6 and 1.9 of table 6; model 2.3, 2.6 and 2.9 of table 7; model 3.3, 3.6 and 3.9 of table 8), we encounter ambiguous results. Specifically, the Chairman's Statement section in the first estimation period and the CEO Review section in the second and third estimation periods influence analyst behaviour with some statistical significance for the mean and median metrics. For the coefficient of variation metric, tone does influence analyst behaviour in both sections in all metrics and estimation periods.

Bringing together each narrative measure for each section (model 4.1 to 4.9 of table 9), we also encountered ambiguous results. Specifically, the Chairman's section in the first estimation period and the CEO Review section in the second and third estimation periods influence analyst behaviour with some statistical significance. For the coefficient of variation metric, tone influence analyst behaviour in both sections and estimation periods.

The influence of tone on analyst behaviour is not consistent across all models and metrics. While there is evidence suggesting that tone may influence analyst behaviour (especially in the coefficient of variation metric), the results are ambiguous and vary depending on the specific estimation periods and metrics considered.

Given the mixed findings and the ambiguity in the results, it would be prudent to be cautious before making a definitive conclusion. It may be premature to accept or

reject the hypotheses (H_1a: Tone influences analyst behaviour) based solely on these results.

Table 6: OLS coefficients estimates of tone (EPSMN)

	Tone								
	EPS1MN			EPS2MN			EPS3MN		
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
INTERCEPT	-0.616***	-0.488***	-0.584***	-0.579***	-0.404***	-0.552***	-0.575***	-0.389***	-0.510***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-0.012		-0.033	-0.034		-0.060 **	-0.034		-0.061 *
	(0.541)		(0.251)	(0.110)		(0.026)	(0.194)		(0.065)
TONE_CHAIR		0.019	0.045 **		-0.002	0.027		-0.002	0.023
		(0.190)	(0.032)		(0.924)	(0.240)		(0.912)	(0.407)
LnEPS1NE	0.010	0.021 **	0.011	0.012	0.034***	0.012	0.014	0.026 *	0.023
	(0.461)	(0.041)	(0.696)	(0.392)	(0.003)	(0.437)	(0.438)	(0.093)	(0.250)
RETURNS	-0.049***	-0.046***	-0.050***	-0.070***	-0.072***	-0.069***	-0.086***	-0.095***	-0.084***
	(0.002)	(0.000)	(0.006)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
LnMV	0.131***	0.114***	0.131***	0.135***	0.111***	0.134***	0.145***	0.124***	0.137***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.009***	-0.009***	-0.005***	-0.007***	-0.005***	-0.004 **	-0.006***	-0.004 *
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.005)	(0.019)	(0.000)	(0.071)
LnAGE	0.063***	0.060***	0.057***	0.059***	0.053***	0.053***	0.057***	0.049***	0.047***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	292.178	369.843	200.622	254.735	290.565	169.971	189.238	195.650	120.568
Adjusted *R*2	21.42%	20.07%	21.02%	19.30%	16.63%	18.47%	15.96%	12.97%	14.61%
N	6,410	8,813	5,252	6,367	8,709	5,222	5,949	7,835	4,892

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 7: OLS coefficients estimates of tone (EPSMD)

	Tone								
	EPS1MD			EPS2MD			EPS3MD		
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
INTERCEPT	-0.617***	-0.498***	-0.587***	-0.582***	-0.405***	-0.555***	-0.576***	-0.391***	-0.512***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-0.012		-0.033	-0.033		-0.059 **	-0.036		-0.066 **
	(0.546)		(0.174)	(0.128)		(0.029)	(0.167)		(0.043)
TONE_CHAIR		0.019	0.046 **		-0.001	0.028		-0.002	0.026
		(0.178)	(0.029)		(0.967)	(0.234)		(0.916)	(0.339)
LnEPS1NE	0.009	0.021 **	0.010	0.011	0.033***	0.010	0.014	0.027 *	0.023
	(0.476)	(0.038)	(0.466)	(0.464)	(0.005)	(0.510)	(0.430)	(0.077)	(0.240)
RETURNS	-0.049***	-0.046***	-0.050***	-0.069***	-0.071***	-0.068***	-0.085***	-0.095***	-0.083***
	(0.002)	(0.000)	(0.006)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
LnMV	0.131***	0.113***	0.131***	0.136***	0.111***	0.135***	0.144***	0.123***	0.137***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.009***	-0.009***	-0.005***	-0.007***	-0.005***	-0.004 **	-0.006***	-0.004 *
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.005)	(0.021)	(0.000)	(0.074)
LnAGE	0.063***	0.061***	0.058***	0.060***	0.054***	0.054***	0.058***	0.051***	0.049***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	291.298	368.337	200.438	255.077	289.942	170.283	190.930	199.108	121.902
Adjusted *R*2	21.37%	20.01%	21.00%	19.32%	16.60%	18.50%	16.08%	13.17%	14.75%
N	6,410	8,813	5,252	6,367	8,709	5,222	5,949	7,835	4,892

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 8: OLS coefficients estimates of tone (EPSCV)

	Tone								
	EPS1CV			EPS2CV			EPS3CV		
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9
INTERCEPT	63.843***	67.643***	59.577***	72.575***	76.868***	68.950***	74.261***	81.240***	68.557***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-19.362***		-12.746***	-15.115***		-9.230***	-10.437***		-5.479 **
	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)		(0.012)
TONE_CHAIR		-15.536***	-13.064***		-11.019***	-9.013***		-10.212***	-7.554***
		(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
LnEPS1NE	0.981	-1.059	-0.306	2.261	-0.967	0.723	3.012 **	0.369	1.695
	(0.512)	(0.401)	(0.845)	(0.122)	(0.452)	(0.632)	(0.027)	(0.773)	(0.226)
RETURNS	5.868***	2.736 *	7.888***	2.141	-2.854 *	0.263	-3.033 *	-3.994 **	-3.172 *
	(0.001)	(0.077)	(0.000)	(0.222)	(0.074)	(0.890)	(0.065)	(0.015)	(0.072)
LnMV	-4.654***	-4.134***	-4.220***	-5.642***	-4.852***	-5.075***	-6.443***	-5.999***	-5.77***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.079	-0.062	-0.262	0.070	0.321 **	-0.039	0.075	0.425***	-0.042
	(0.601)	(0.638)	(0.107)	(0.640)	(0.019)	(0.809)	(0.587)	(0.002)	(0.775)
LnAGE	-5.877***	-7.162***	-6.087***	-6.964***	-8.057***	-7.005***	-5.593***	-7.795***	-5.280***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	55.573	74.750	47.740	60.909	79.394	48.200	64.024	84.464	47.788
Adjusted *R*2	5.71%	6.31%	6.83%	6.29%	6.75%	6.94%	7.24%	8.19%	7.50%
N	5,405	6,576	4,467	5,360	6,497	4,431	4,859	5,615	4,005

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 9: OLS coefficients estimates of tone and forward-looking

	Tone and Forward-Looking								
	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9
	EPS1MN	EPS2MN	EPS3MN	EPS1MD	EPS2MD	EPS3MD	EPS1CV	EPS2CV	EPS3CV
INTERCEPT	-0.516 ***	-0.495 ***	-0.442 ***	-0.517 ***	-0.498 ***	-0.446 ***	48.001 ***	62.779 ***	62.459 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-0.032	-0.056	-0.053	-0.032	-0.055 *	-0.059 *	-12.519***	-9.549 ***	-5.637 **
	(0.208)	(0.046)	(0.121)	(0.210)	(0.051)	(0.085)	(0.000)	(0.000)	(0.012)
TONE_CHAIR	0.044 **	0.023	0.016	0.044 **	0.023	0.019	-12.034***	-8.219 ***	-7.087 ***
	(0.045)	(0.340)	(0.585)	(0.042)	(0.332)	(0.502)	(0.000)	(0.000)	(0.000)
LnFL_CEO	-0.017	-0.012	-0.012	-0.017	-0.012	-0.012	2.216 **	1.022	0.495
	(0.150)	(0.363)	(0.434)	(0.147)	(0.376)	(0.446)	(0.048)	(0.358)	(0.616)
LnFL_CHAIR	-0.010	-0.011 ***	-0.012	-0.011	-0.012	-0.012	2.442 *	1.870	2.825 **
	(0.443)	(0.451)	(0.497)	(0.421)	(0.442)	(0.486)	(0.054)	(0.135)	(0.013)
LnEPS1NE	0.012	0.013	0.025	0.011	0.011	0.025	-0.536	0.877	2.514 *
	(0.440)	(0.420)	(0.224)	(0.451)	(0.494)	(0.216)	(0.734)	(0.572)	(0.077)
RETURNS	-0.051 ***	-0.073	-0.089 ***	-0.051 ***	-0.072 ***	-0.088 ***	7.241 ***	-0.250	-2.666
	(0.007)	(0.000)	(0.001)	(0.007)	(0.001)	(0.001)	(0.000)	(0.897)	(0.134)
LnMV	0.132 ***	0.135 ***	0.138 ***	0.132 ***	0.136 ***	0.137 ***	-4.023 ***	-5.071 ***	-5.732 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.009 ***	-0.005	-0.004 *	-0.009 ***	-0.005 **	-0.004 *	-0.235	-0.052	-0.231
	(0.000)	(0.009)	(0.087)	(0.000)	(0.009)	(0.093)	(0.149)	(0.748)	(0.123)
LnAGE	0.053 ***	0.050 ***	0.043 ***	0.054 ***	0.050 ***	0.044 ***	-6.129 ***	-7.178 ***	-5.507 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	146.590	123.897	87.841	146.431	124.114	88.788	35.800	35.976	37.560
Adjusted *R*2	20.81%	18.23%	14.36%	20.79%	18.25%	14.49%	6.83%	6.91%	7.90%
N	4,987	4,963	4,663	4,987	4,963	4,663	4,272	4,239	3,838

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

4.2 Forward-looking

To evaluate if forward-looking words influence of the analyst behaviour, we focus on table 9 to 12.

The outcomes of the two individual regressions (model 5.1, 5.2, 5.4, 5.5, 5.7 and 5.8 of table 10; model 6.1, 6.2, 6.4, 6.5, 6.7 and 6.8 of table 11; model 7.1, 7.2, 7.4, 7.5, 7.7 and 3.9 of table 12) indicate that the forward-looking words of the two sections, independently, does not have the ability to influence analyst behaviour in any estimation period when considering mean and median metrics. However, for the coefficient of variation metric, forward-looking words (only in the Chairman´s Statement Section) influence analyst behaviour for the three estimation periods.

When we observe the forward-looking words in both sections simultaneously (model 5.3, 5.6 and 5.9 of table 10; model 6.3, 6.6 and 6.9 of table 11; model 7.3, 7.6 and 7.9 of table 12) we see that these do not have the ability to influence analyst behaviour in any estimation period when considering mean and median metrics. However, for the coefficient of variation metric, forward-looking words (only in the Chairman's Section) do influence analyst behaviour.

Bringing together each narrative measured for each section (model 4.1 to 4.9 of table 9), we see that forward-looking words do not have the ability to influence analyst behaviour in any estimation period when considering mean and median metrics. However, for the coefficient of variation metric, forward-looking words explain analyst behaviour for the CEO Review section in the first estimation period and the Chairman's Statement section in the third period.

There is evidence to reject the hypotheses (H_2a: Forward-looking words influences analyst behaviour) in the mean and median metrics. However, we cannot extend this conclusion to coefficient of variation metric since, mostly in the Chairman´s Statement section, exist evidence that forward-looking words may influence analyst behaviour.

Table 10: OLS coefficients estimates of forward-looking (EPSMN)

	Forward-Looking								
	EPS1MN			EPS2MN			EPS3MN		
	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9
INTERCEPT	-0.569***	-0.502***	-0.512***	-0.523***	-0.408***	-0.476***	-0.494***	-0.362***	-0.418***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	-0.006		-0.012	-0.001		-0.007	-0.001		-0.008
	(0.786)		(0.279)	(0.929)		(0.571)	(0.953)		(0.589)
LnFL_CHAIR		-0.003	-0.008		-0.001	-0.003		-0.005	0.003
		(0.731)	(0.532)		(0.949)	(0.808)		(0.671)	(0.867)
LnEPS1NE	0.013	0.029***	0.013	0.018	0.045***	0.015	0.028	0.047***	0.033 *
	(0.320)	(0.004)	(0.383)	(0.217)	(0.000)	(0.342)	(0.112)	(0.002)	(0.097)
RETURNS	-0.045***	-0.046***	-0.053***	-0.065***	-0.073***	-0.072***	-0.079***	-0.097***	-0.084***
	(0.004)	(0.000)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
LnMV	0.126***	0.112***	0.126***	0.128***	0.107***	0.128***	0.132***	0.116***	0.128***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.008***	-0.009***	-0.005	-0.006***	-0.005***	-0.004 **	-0.005***	-0.004 **
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.002)	(0.024)	(0.001)	(0.048)
LnAGE	0.062***	0.064***	0.056***	0.059***	0.057***	0.052***	0.055***	0.052***	0.044***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	281.911	389.114	193.980	243.031	305.669	164.145	173.580	203.793	114.489
Adjusted *R*2	20.86%	20.14%	19.92%	18.60%	16.69%	17.46%	14.84%	12.89%	13.56%
N	6,395	9,236	5,430	6,356	9,125	5,401	5,945	8,225	5,065

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 11: OLS coefficients estimates of forward-looking (EPSMD)

	Forward-Looking								
	EPS1MD			EPS2MD			EPS3MD		
	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9
INTERCEPT	-0.571***	-0.505***	-0.514***	-0.528***	-0.410***	-0.479***	-0.497***	-0.361***	-0.420***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	-0.006		-0.012	-0.001		-0.007	0.001		-0.008
	(0.574)		(0.277)	(0.951)		(0.593)	(0.921)		(0.601)
LnFL_CHAIR		-0.003	-0.008		0.000	-0.004		-0.006	0.002
		(0.771)	(0.509)		(0.967)	(0.770)		(0.624)	(0.879)
LnEPS1NE	0.013	0.030***	0.012	0.016	0.044***	0.013	0.028	0.048***	0.033 *
	(0.331)	(0.003)	(0.393)	(0.264)	(0.000)	(0.405)	(0.110)	(0.001)	(0.093)
RETURNS	-0.045***	-0.046***	-0.053***	-0.064***	-0.072***	-0.071***	-0.078***	-0.097***	-0.083***
	(0.004)	(0.000)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
LnMV	0.126***	0.111***	0.126***	0.128***	0.107***	0.129***	0.131***	0.115***	0.127***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.008***	-0.009***	-0.005***	-0.006***	-0.005***	-0.004 **	-0.005***	-0.004 *
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.027)	(0.001)	(0.052)
LnAGE	0.063***	0.065***	0.057***	0.059***	0.057***	0.053***	0.056***	0.053***	0.046***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	281.184	387.543	193.659	243.284	304.853	164.329	175.172	207.164	115.647
Adjusted *R*2	20.82%	20.07%	19.90%	18.62%	16.65%	17.47%	14.95%	13.07%	13.68%
N	6,395	9,236	5,430	6,356	9,125	5,401	5,945	8,225	5,065

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 12*:* OLS coefficients estimates of forward-looking (EPSCV)

	Forward-Looking								
	EPS1CV			EPS2CV			EPS3CV		
	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9
INTERCEPT	66.001***	71.364***	58.355***	76.130 ***	76.286***	69.124***	78.142***	80.765***	71.873***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	2.407 **		2.235 **	1.516		1.116	1.194		0.614
	(0.019)		(0.041)	(0.139)		(0.300)	(0.200)		(0.530)
LnFL_CHAIR		3.742***	4.128***		4.235***	3.319***		4.044***	3.069***
		(0.000)	(0.001)		(0.000)	(0.006)		(0.000)	(0.006)
LnEPS1NE	1.325	0.854	0.778	2.605 *	0.622	1.508	3.319 **	1.480	2.962 **
	(0.373)	(0.497)	(0.616)	(0.078)	(0.624)	(0.320)	(0.016)	(0.240)	(0.037)
RETURNS	4.152 **	0.616	4.241 **	1.183	-4.647***	-1.259	-4.040 **	-5.641***	-5.241***
	(0.017)	(0.692)	(0.024)	(0.500)	(0.003)	(0.499)	(0.015)	(0.001)	(0.003)
LnMV	-4.673***	-5.101***	-4.739***	-5.801***	-5.638***	-5.665***	-6.701***	-6.593***	-6.623***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.171	-0.132	-0.300 *	0.066	0.322 **	0.148	-0.177	0.336 **	-0.259 *
	(0.247)	(0.320)	(0.061)	(0.660)	(0.018)	(0.351)	(0.205)	(0.015)	(0.081)
LnAGE	-6.090***	-7.367***	-6.122***	-7.132***	-8.245***	-6.916***	-5.733***	-7.995***	-5.573***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
F statistic	39.195	63.537	33.337	49.794	79.120	41.045	60.713	86.379	49.285
Adjusted *R*2	4.09%	5.18%	4.69%	5.21%	6.46%	5.79%	6.93%	8.02%	7.55%
N	5,372	6,869	4,601	5,327	6,785	4,563	4,816	5,876	4,121

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

4.3 Robustness

In addition to the main tests, we will now present a subchapter featuring additional tests. These additional tests are conduct by taking the regressions and models previously used and adding year fixed-effects first, followed by both year and firm fixed-effects. To evaluate if tone or forward-looking words influence analyst behaviour, we focus on table 13 to 16 when using year fixed-effects and table 16 to 19 when using both year and firm fixed-effects.

4.3.1 Year fixed-effects

When adding year fixed-effects the results regarding tone are very similar to those observed in 4.1. As such, we continue to consider it premature to accept or reject the hypothesis (H1a: Tone influences analyst behaviour) based on the results obtained. Regarding forward-looking words, we reject the hypothesis (H_2a: Forward-looking words influences analyst behaviour) for the mean and median metrics. For the coefficient of variation metric, we accept the hypothesis (H_2a: Forward-looking words influences analyst behaviour).

4.3.2 Year and Firm fixed-effects

When adding year and company fixed-effects, the results regarding tone are similar to those observed in 4.1. However, the coefficient of variation metric has lost some explanatory strength. As such, there is a greater predisposition to reject the hypotheses

Regarding forward-looking words, we reject the hypothesis (H_2a: Forward-looking words influences analyst behaviour) for the all metrics (mean, median and coefficient of variation metrics.

5. Conclusions

Do to the increasing importance and amount of qualitative information in annual reports, we proposed to study if financial narratives influence analyst behaviour. Although the literature says that financial narratives (measured by tone and forward looking words in the Chairman's Statement and CEO Review sections) influence analysts' behaviour, our study presents different conclusions:

Overall, the findings regarding the impact of tone on analyst behaviour remain inconclusive. While there are situations where tone appears to have some influence, especially in the coefficient of variation metric, the results are ambiguous across different estimation periods and metrics. Thus, it would be premature to conclude that tone significantly affects analyst behaviour based solely on these findings.

Similarly, the examination of forward-looking words also presents a complex picture. While there are indications that this type of words don´t influence analyst behaviour, the specific case of the coefficient of variation metric for some estimation periods don't let us make a general conclusion. Consequently, we only reject the hypotheses that forward-looking words influence analyst behaviour for mean and median metrics.

Furthermore, the inclusion of year fixed-effects and both year and firm fixed-effects in the analysis provides additional insights. While these adjustments maintain the overall trends observed in the initial analysis, they also highlight nuances in the explanatory power of tone and forward-looking words. The influence of tone remains uncertain, with some weakening of explanatory strength in certain cases. On the other hand, we reject the hypotheses regarding forward-looking words' influence on analyst behaviour for all metrics when adding year and firm fixed effects.

During the preparation of this work, I used CHAT GPT in order to make code in STATA and discover synonyms for some words. After using this tool, I reviewed and edited the content as needed and I take full responsibility for the content of the publication.

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Appendix

Table 13: OLS coefficients estimates of tone (EPSMN) w/ YFE

	Tone (Year Fixed Effects)								
	EPS1MN			EPS2MN			EPS3MN		
	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9
INTERCEPT	-0.646***	-0.489***	-0.603***	-0.555***	-0.377***	-0.513***	-0.558***	-0.360***	-0.479***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-0.015		-0.032	-0.036 *		-0.058 **	-0.036		-0.058 *
	(0.437)		(0.197)	(0.097)		(0.033)	(0.176)		(0.078)
TONE_CHAIR		0.013	0.038 *		-0.006	0.021		-0.008	0.015
		(0.373)	(0.072)		(0.733)	(0.383)		(0.684)	(0.589)
LnEPS1NE	-0.003	0.011	0.001	-0.003	0.021 *	0.000	0.002	0.014	0.012
	(0.812)	(0.274)	(0.948)	(0.821)	(0.075)	(0.976)	(0.934)	(0.371)	(0.535)
RETURNS	-0.044***	-0.041***	-0.044 **	-0.072***	-0.072***	-0.070***	-0.092***	-0.095***	-0.087***
	(0.009)	(0.003)	(0.020)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
LnMV	0.137***	0.118***	0.135***	0.143***	0.117***	0.140***	0.151***	0.131***	0.142***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.009***	-0.008***	-0.005***	-0.007***	-0.005***	-0.004 **	-0.006***	-0.004 *
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.007)	(0.025)	(0.000)	(0.096)
LnAGE	0.065***	0.061***	0.058***	0.061***	0.055***	0.054***	0.058***	0.050***	0.048***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	99.863	125.525	75.290	86.963	98.957	63.806	64.391	66.840	45.110
Adjusted *R*2	21.73%	20.28%	21.19%	19.55%	16.84%	18.60%	16.10%	13.14%	14.63%
N	6,410	8,813	5,252	6,367	8,709	5,222	5,949	7,835	4,892

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 14: OLS coefficients estimates of tone (EPSMD) w/ YFE

	Tone (Year Fixed Effects)								
	EPS1MD			EPS2MD			EPS3MD		
	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9
INTERCEPT	-0.648***	-0.491***	-0.556***	-0.377***	-0.377***	-0.515***	-0.559***	-0.360***	-0.482***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-0.015		-0.034			-0.057 **	-0.038		-0.063 *
	(0.441)		(0.112)			(0.037)	(0.153)		(0.053)
TONE_CHAIR		0.014		-0.005	-0.006	0.021		-0.008	0.019
		(0.346)		(0.777)	(0.733)	(0.374)		(0.708)	(0.496)
LnEPS1NE	-0.003	0.012	-0.005	0.020 *	0.021 *	-0.002	0.002	0.015	0.013
	(0.807)	(0.262)	(0.737)	(0.091)	(0.075)	(0.889)	(0.913)	(0.324)	(0.507)
RETURNS	-0.044***	-0.041***	-0.071***	-0.071***	-0.072***	-0.069***	-0.091***	-0.095***	-0.086***
	(0.009)	(0.003)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
LnMV	0.137***	0.118***	0.143***	0.117***	0.117***	0.141***	0.150***	0.129***	0.141***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.009***	-0.005***	-0.007***	-0.007***	-0.005***	-0.004 **	-0.006***	-0.003
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.007)	(0.028)	(0.000)	(0.101)
LnAGE	0.065***	0.062***	0.062***	0.055***	0.055***	0.055***	0.059***	0.051***	0.049***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	99.523	125.014	87.042	98.742	98.957	63.909	64.912	67.951	45.571
Adjusted *R*2	21.67%	20.21%	19.57%	16.81%	16.84%	18.63%	16.21%	13.33%	14.76%
N	6,410	8,813	6,367	8,709	8,709	5,222	5,949	7,835	4,892

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 15: OLS coefficients estimates of tone (EPSCV) w/ YFE

	Tone (Year Fixed Effects)								
	EPS1CV			EPS2CV			EPS3CV		
	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9
INTERCEPT	73.019***	76.245***	69.756***	73.529***	82.016***	71.476***	75.813***	84.669***	71.923***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-18.306***		-12.555***	-14.525***		-9.245***	-9.934***		-5.508 **
	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)		(0.013)
TONE_CHAIR		-14.154***	-11.684***		-10.283***	-8.530***		-9.734***	-7.383***
		(0.000)	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)
LnEPS1NE	1.676	-0.708	0.223	2.282 *	-0.933	0.956	2.995 **	0.462	1.731
	(0.276)	(0.584)	(0.890)	(0.061)	(0.481)	(0.539)	(0.031)	(0.723)	(0.225)
RETURNS	2.827	0.173	5.311***	0.226	-4.538***	-0.997	-4.755 *	-5.271***	-4.401 **
	(0.126)	(0.914)	(0.008)	(0.902)	(0.007)	(0.615)	(0.006)	(0.002)	(0.018)
LnMV	-4.919***	-4.224***	-4.338***	-5.910***	-4.855***	-5.159***	-6.516***	-6.079***	-5.851***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.074	-0.060	-0.258	0.061	0.314 **	-0.050	0.069	0.419***	-0.057
	(0.623)	(0.646)	(0.112)	(0.684)	(0.022)	(0.757)	(0.616)	(0.003)	(0.701)
LnAGE	-5.923***	-7.133***	-6.072***	-7.007***	-8.053***	-7.030***	-5.566***	-7.753***	-5.260***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	23.254	28.576	20.678	22.508	27.694	18.514	22.348	29.144	18.263
Adjusted *R*2	6.90%	7.02%	7.72%	6.60%	6.89%	6.99%	7.35%	8.28%	7.57%
N	5,405	6,576	4,467	5,360	6,497	4,431	4,859	5,615	4,005

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 16: OLS coefficients estimates of tone and forward-looking w/ YFE

	Tone and Forward-Looking (Year Fixed Effects)								
	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9
	EPS1MN	EPS2MN	EPS3MN	EPS1MD	EPS2MD	EPS3MD	EPS1CV	EPS2CV	EPS3CV
INTERCEPT	-0.509***	-0.409***	-0.373***	-0.511***	-0.410***	-0.376***	53.186***	64.324***	65.148***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-0.029	-0.052 *	-0.049	-0.029	-0.051 *	-0.054	-12.241***	-9.535***	-5.657 **
	(0.259)	(0.065)	(0.156)	(0.261)	(0.071)	(0.113)	(0.000)	(0.000)	(0.012)
TONECHAIR	0.037 *	0.016	0.007	0.038 *	0.016	0.011	-10.639***	-7.744***	-6.909***
	(0.095)	(0.522)	(0.808)	(0.087)	(0.512)	(0.702)	(0.000)	(0.000)	(0.000)
LnFL_CEO	-0.015	-0.008	-0.008	-0.015	-0.008	-0.008	1.798	0.926	0.571
	(0.222)	(0.520)	(0.606)	(0.215)	(0.536)	(0.609)	(0.111)	(0.409)	(0.566)
LnFL_CHAIR	-0.009	-0.010	-0.011	-0.009	-0.011	-0.011	2.105 *	1.727	2.688 **
	(0.497)	(0.486)	(0.542)	(0.473)	(0.456)	(0.527)	(0.096)	(0.168)	(0.018)
LnEPS1NE	0.000	-0.002	0.013	0.000	-0.004	0.014	0.023	1.085	2.556 *
	(0.977)	(0.909)	(0.535)	(0.977)	(0.820)	(0.511)	(0.989)	(0.499)	(0.078)
RETURNS	-0.047 **	-0.075***	-0.092***	-0.047 **	-0.073***	-0.092***	4.576 **	-1.580	-3.805
	(0.017)	(0.001)	(0.001)	(0.018)	(0.001)	(0.001)	(0.024)	(0.436)	(0.042)
LnMV	0.137***	0.142***	0.143***	0.137***	0.143***	0.142***	-4.154***	-5.147***	-6.067***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.009***	-0.004 **	-0.003 *	-0.009***	-0.004 **	-0.003	-0.244	-0.068	-0.245
	(0.000)	(0.012)	(0.118)	(0.000)	(0.012)	(0.125)	(0.132)	(0.679)	(0.102)
LnAGE	0.054***	0.051***	0.043***	0.055***	0.051***	0.045***	-6.104***	-7.197***	-5.506***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	64.216	54.398	38.413	64.112	54.448	38.792	17.752	16.088	16.809
Adjusted $R2$	21.03%	18.43%	14.42%	21.00%	18.46%	14.55%	7.61%	6.96%	7.96%
N	4,987	4,963	4,663	4,987	4,963	4,663	4,272	4,239	3,838

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 17: OLS coefficients estimates of forward-looking (EPSMN) w/ YFE

	Forward-Looking (Year Fixed Effects)								
	EPS1MN			EPS2MN			EPS3MN		
	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9
INTERCEPT	-0.587***	-0.508***	-0.499***	-0.494***	-0.389***	-0.404***	-0.462***	-0.335***	-0.335***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	-0.002		-0.009	-0.003		-0.003	-0.006		-0.004
	(0.834)		(0.426)	(0.755)		(0.807)	(0.668)		(0.808)
LnFL_CHAIR		-0.001	-0.007		-0.001	-0.003		-0.003	0.003
		(0.907)	(0.597)		(0.945)	(0.806)		(0.803)	(0.837)
LnEPS1NE	0.001	0.021 **	0.000	0.003	0.033***	0.000	0.017	0.037 **	0.022
	(0.957)	(0.043)	(0.978)	(0.839)	(0.004)	(0.977)	(0.339)	(0.013)	(0.268)
RETURNS	-0.040 **	-0.041***	-0.049***	-0.068***	-0.073***	-0.076***	-0.085***	-0.096***	-0.089***
	(0.014)	(0.002)	(0.008)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnMV	0.132***	0.116***	0.132***	0.135***	0.113***	0.136***	0.138***	0.121***	0.134***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.008***	-0.008***	-0.005***	-0.006***	-0.005***	-0.004 **	-0.005***	-0.004 *
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.002)	(0.031)	(0.002)	(0.061)
LnAGE	0.063***	0.065***	0.057***	0.060***	0.058***	0.053***	0.055***	0.052***	0.044***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	96.311	132.207	73.413	83.008	104.032	62.238	59.041	69.419	43.217
Adjusted *R*2	21.16%	20.37%	20.22%	18.85%	16.89%	17.74%	14.95%	13.02%	13.67%
N	6,395	9,236	5,430	6,356	9,125	5,401	5,945	8,225	5,065

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 18: OLS coefficients estimates of forward-looking (EPSMD) w/ YFE

	Forward-Looking (Year Fixed Effects)								
	EPS1MD			EPS2MD			EPS3MD		
	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9
INTERCEPT	-0.589***	-0.512***	-0.502***	-0.497***	-0.390***	-0.406***	-0.464***	-0.333***	-0.337***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	-0.002		-0.009	-0.004		-0.003	0.006		-0.004
	(0.817)		(0.419)	(0.734)		(0.832)	(0.650)		(0.812)
LnFL_CHAIR		-0.001	-0.007		0.001	-0.004		-0.004	0.003
		(0.946)	(0.573)		(0.927)	(0.768)		(0.744)	(0.854)
LnEPS1NE	0.001	0.021 **	0.000	0.001	0.032***	-0.001	0.018	0.038 **	0.022
	(0.960)	(0.040)	(0.980)	(0.923)	(0.005)	(0.935)	(0.328)	(0.010)	(0.254)
RETURNS	-0.040 **	-0.041***	-0.049***	-0.067***	-0.071***	-0.075***	-0.084***	-0.096***	-0.088***
	(0.015)	(0.002)	(0.009)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnMV	0.132***	0.116***	0.132***	0.136***	0.113***	0.137***	0.137***	0.120***	0.133***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.000***	-0.008***	-0.008***	-0.005***	-0.006***	-0.005***	-0.004 **	-0.005***	-0.004 *
	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.002)	(0.034)	(0.002)	(0.066)
LnAGE	0.064***	0.066***	0.058***	0.060***	0.059***	0.054***	0.057***	0.053***	0.045***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	96.018	131.681	73.255	83.066	103.758	62.350	59.529	70.514	43.618
Adjusted *R*2	21.10%	20.30%	20.18%	18.86%	16.86%	17.75%	15.06%	13.21%	13.79%
N	6,395	9,236	5,430	6,356	9,125	5,401	5,945	8,225	5,065

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 19: OLS coefficients estimates of forward-looking (EPSCV) w/ YFE

	Forward-Looking (Year Fixed Effects)								
	EPS1CV			EPS2CV			EPS3CV		
	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9
INTERCEPT	70.871***	79.725***	62.696***	79.974 ***	80.728***	72.436***	79.740***	83.313***	75.164***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	1.619		1.646	1.109		0.964	1.105		0.657
	(0.115)		(0.134)	(0.284)		(0.375)	(0.241)		(0.505)
LnFL_CHAIR		3.153***	3.536***		3.925***	3.013 **		3.879***	2.865 **
		(0.002)	(0.004)		(0.000)	(0.013)		(0.000)	(0.011)
LnEPS1NE	1.983	1.222	1.425	3.101 **	0.518	1.668	3.338 **	1.559	3.029 **
	(0.195)	(0.344)	(0.372)	(0.042)	(0.690)	(0.286)	(0.017)	(0.223)	(0.036)
RETURNS	0.522	-2.032	1.092	-1.090	-6.370***	-3.103	-6.054***	-6.918***	-6.797***
	(0.773)	(0.207)	(0.575)	(0.552)	(0.000)	(0.110)	(0.001)	(0.000)	(0.000)
LnMV	-4.916***	-5.175***	-4.884***	-6.020***	-5.553***	-5.708***	-6.772***	-6.672***	-6.710***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.162	-0.124	-0.296 *	0.063	0.319 **	0.139	-0.181	0.332 **	-0.276 *
	(0.270)	(0.348)	(0.062)	(0.672)	(0.019)	(0.382)	(0.195)	(0.017)	(0.064)
LnAGE	-6.171***	-7.330***	-6.122***	-7.207***	-8.234***	-6.934***	-5.724***	-7.944***	-5.557***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	No	No	No	No	No	No	No	No
F statistic	18.456	25.458	16.245	18.620	27.729	16.239	21.619	29.845	19.064
Adjusted *R*2	5.53%	6.02%	5.92%	5.62%	6.62%	5.97%	7.16%	8.12%	7.69%
N	5,372	6,869	4,601	5,327	6,785	4,563	4,816	5,876	4,121

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 20: OLS coefficients estimates of tone (EPSMN) w/ Y & F FE

	Tone (Year and Firm Fixed Effects)								
	EPS1MN			EPS2MN			EPS3MN		
	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9
INTERCEPT	-0.091	-0.047	-0.210 **	0.009	0.177 **	-0.189 **	-0.085	0.166	-0.218 *
	(0.308)	(0.562)	(0.033)	(0.920)	(0.040)	(0.050)	(0.417)	(0.110)	(0.056)
TONE_CEO	0.012		0.005	0.014		0.010	0.025		0.010
	(0.402)		(0.778)	(0.301)		(0.556)	(0.127)		(0.609)
TONE_CHAIR		0.007	0.032 **		-0.009	0.006		-0.011	-0.010
		(0.499)	(0.014)		(0.415)	(0.618)		(0.382)	(0.498)
LnEPS1NE	0.135***	0.108***	0.124***	0.115***	0.099***	0.095***	0.128***	0.103***	0.111***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RETURNS	-0.039***	-0.027***	-0.026 **	-0.065***	-0.045***	-0.045***	-0.064***	-0.061***	-0.051***
	(0.000)	(0.002)	(0.015)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnMV	0.105***	0.110***	0.107***	0.128***	0.129***	0.141***	0.155***	0.162***	0.160***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.006***	-0.008***	-0.007***	-0.006***	-0.005***	-0.008***	-0.006***	-0.006***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnAGE	-0.153***	0.140***	-0.104***	-0.192***	0.215***	-0.136***	-0.184***	0.250***	-0.141***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	28.349	28.589	20.328	34.384	31.609	25.177	32.247	31.840	22.330
Adjusted *R*2	79.48%	73.41%	80.94%	82.67%	75.71%	84.51%	83.60%	78.38%	85.22%
N	6,410	8,813	5,252	6,367	8,709	5,222	5,949	7,835	4,892

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 21: OLS coefficients estimates of tone (EPSMD) w/ Y & F FE

	Tone (Year and Firm Fixed Effects)								
	EPS1MD			EPS2MD			EPS3MD		
	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9
INTERCEPT	-0.071	-0.031	-0.190 *	0.020	0.187 **	-0.173 *	-0.075	0.191 *	-0.205 *
	(0.426)	(0.702)	(0.053)	(0.827)	(0.030)	(0.074)	(0.466)	(0.060)	(0.065)
TONE_CEO	0.010		0.004	0.015		0.010	0.020		0.000
	(0.462)		(0.828)	(0.266)		(0.531)	(0.204)		(0.982)
TONE_CHAIR		0.009	0.033 **		-0.008	0.006		-0.012	-0.006
		(0.390)	(0.012)		(0.482)	(0.630)		(0.353)	(0.660)
LnEPS1NE	0.134***	0.109***	0.123***	0.114***	0.100***	0.993***	0.126***	0.102***	0.109***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RETURNS	-0.039***	-0.027***	-0.026 **	-0.064***	-0.044***	-0.044***	-0.064***	-0.062***	-0.052***
	(0.000)	(0.002)	(0.016)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnMV	0.103***	0.108***	0.105***	0.128***	0.129***	0.141***	0.153***	0.160***	0.159***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.006***	-0.008***	-0.007***	-0.005***	-0.005***	-0.008***	-0.006***	-0.006***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnAGE	-0.157***	-1.444***	-0.108***	-0.195***	-0.219***	-0.142***	-0.185***	-0.254***	-0.144***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	27.933	28.175	20.036	34.101	31.700	25.033	32.853	33.788	23.217
Adjusted *R*2	79.50%	73.30%	81.00%	82.58%	75.65%	84.39%	83.99%	79.00%	85.76%
N	6,410	8,813	5,252	6,367	8,709	5,222	5,949	7,835	4,892

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 22: OLS coefficients estimates of tone (EPSCV) w/ Y & F FE

	Tone (Year and Firm Fixed Effects)								
	EPS1CV			EPS2CV			EPS3CV		
	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9
INTERCEPT	71.454***	72.952***	72.152***	70.619***	75.131***	73.230***	74.024***	46.422***	51.859***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TONE_CEO	-8.411***		-6.630***	-5.421***		-3.659	-1.626		-0.116
	(0.000)		(0.010)	(0.010)		(0.135)	(0.345)		(0.953)
TONE_CHAIR		-7.867***	-6.814***		-2.129	-0.366		-1.692	-0.164
		(0.000)	(0.001)		(0.176)	(0.845)		(0.231)	(0.912)
LnEPS1NE	-4.373 *	-1.312	-2.994	4.966 **	3.234	5.649 **	1.247	1.527	0.394
	(0.080)	(0.554)	(0.261)	(0.035)	(0.134)	(0.024)	(0.515)	(0.435)	(0.845)
RETURNS	6.661***	4.450***	8.572***	5.989***	3.017 **	3.874 **	2.347 *	1.549	1.051
	(0.000)	(0.002)	(0.000)	(0.000)	(0.037)	(0.025)	(0.077)	(0.257)	(0.464)
LnMV	-11.672***	-10.077***	-11.423***	-13.535***	-10.599***	-13.460***	-12.669***	-9.950***	-12.232***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	0.505***	0.510***	-0.289	0.270	0.394 **	0.080	0.421***	0.587***	0.507***
	(0.006)	(0.002)	(0.149)	(0.133)	(0.019)	(0.680)	(0.004)	(0.000)	(0.001)
LnAGE	10.364 **	5.184	8.469 *	6.542	1.976	6.068	7.196 **	12.290***	15.071***
	(0.017)	(0.222)	(0.073)	(0.117)	(0.637)	(0.179)	(0.033)	(0.001)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	15.623	13.613	12.400	11.922	7.105	7.395	11.084	7.352	8.509
Adjusted *R*2	44.59%	42.10%	45.36%	47.68%	46.76%	47.49%	58.05%	55.82%	58.56%
N	5,405	6,576	4,467	5,360	6,497	4,431	4,847	5,615	4,005

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 23: OLS coefficients estimates of tone and forward-looking w/ Y & F FE

	Tone and Forward-Looking (Year and Firm Fixed Effects)								
	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9
	EPS1MN	EPS2MN	EPS3MN	EPS1MD	EPS2MD	EPS3MD	EPS1CV	EPS2CV	EPS3CV
INTERCEPT	-0.187 *	-0.173	-0.205 *	-0.167	-0.154	-0.192	62.819 ***	79.909 ***	62.874 ***
	(0.081)	(0.102)	(0.100)	(0.119)	(0.146)	(0.121)	(0.000)	(0.000)	(0.000)
TONE_CEO	0.005	0.009	0.009	0.004	0.010	-0.001	-6.659 **	-3.874	0.440
	(0.756)	(0.587)	(0.652)	(0.806)	(0.561)	(0.972)	(0.011)	(0.130)	(0.824)
TONE_CHAIR	0.034 **	0.007	-0.011	0.034 ***	0.007	-0.007	-5.21 ***	0.041	0.088
	(0.011)	(0.572)	(0.462)	(0.010)	(0.591)	(0.614)	(0.008)	(0.983)	(0.952)
LnFL_CEO	0.004	0.006	0.010	0.004	0.006	0.011	0.916	0.192	0.552
	(0.575)	(0.434)	(0.236)	(0.597)	(0.436)	(0.216)	(0.428)	(0.865)	(0.522)
LnFL_CHAIR	-0.006	-0.004	-0.007	-0.007	-0.005	-0.008	1.447	0.396	1.465
	(0.494)	(0.641)	(0.442)	(0.402)	(0.588)	(0.405)	(0.260)	(0.753)	(0.136)
LnEPS1NE	0.119 ***	0.094 ***	0.111 ***	0.118 ***	0.092 ***	0.109 ***	-2.892	6.670 **	1.981
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.287)	(0.010)	(0.321)
RETURNS	-0.029 ***	-0.047 ***	-0.052 ***	-0.029 **	-0.046 ***	-0.053 ***	7.602 ***	4.437 **	2.349 *
	(0.010)	(0.000)	(0.000)	(0.010)	(0.000)	(0.000)	(0.000)	(0.013)	(0.097)
LnMV	0.112 ***	0.146 ***	0.164 ***	0.111 ***	0.147 ***	0.163 ***	-12.249***	-13.967***	-13.993 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008 ***	-0.005 ***	-0.005 ***	-0.008 ***	-0.005 ***	-0.005 ***	-0.258	0.170	0.257
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.205)	(0.932)	(0.100)
LnAGE	0.114 ***	-0.145 ***	-0.15 ***	-0.117 ***	-0.152 ***	-0.153 ***	10.560 **	4.182	13.535 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.029)	(0.377)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	17.686	21.978	19.391	17.438	21.889	20.214	11.128	6.476	9.571
Adjusted *R*2	80.96%	84.35%	85.09%	81.01%	84.22%	85.66%	45.09%	46.58%	60.68 %
N	4,987	4,963	4,663	4,987	4,963	4,663	4,272	4,239	3,838

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 24: OLS coefficients estimates of forward-looking (EPSMN) w/ Y & F FE

	Forward-Looking (Year and Firm Fixed Effects)								
	EPS1MN			EPS2MN			EPS3MN		
	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9
INTERCEPT	-0.113	0.011	-0.096	-0.028	0.223***	-0.008	0.171	0.252 **	-0.085
	(0.215)	(0.896)	(0.356)	(0.756)	(0.009)	(0.940)	(0.109)	(0.014)	(0.484)
LnFL_CEO	0.009		0.005	0.010		0.006	0.011		0.013
	(0.210)		(0.494)	(0.148)		(0.406)	(0.145)		(0.133)
LnFL_CHAIR		0.005	-0.002		0.007	-0.001		0.008	-0.003
		(0.419)	(0.774)		(0.297)	(0.944)		(0.359)	(0.760)
LnEPS1NE	0.116***	0.113***	0.129***	0.100***	0.112***	0.113***	0.112***	0.120***	0.130***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RETURNS	-0.035***	-0.035***	-0.036***	-0.061***	-0.051***	-0.056***	-0.058***	-0.064***	-0.054***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnMV	0.114***	0.106***	0.109***	0.141***	0.124***	0.136***	0.176***	0.151***	0.166***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.007***	-0.009***	-0.007***	-0.007***	-0.007***	-0.008***	-0.006***	-0.007***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnAGE	-1.580***	-1.161***	-0.151***	-0.201***	-0.238***	-0.193***	-0.195***	-0.268***	-0.201***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	27.743	30.853	20.907	36.480	35.369	25.386	36.053	33.285	24.980
Adjusted *R*2	79.14%	73.32%	79.10%	82.69%	75.73%	82.39%	83.65%	78.56%	83.62%
N	6,395	9,236	5,430	6,356	9,125	5,401	5,945	8,225	5,065

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 25: OLS coefficients estimates of forward-looking (EPSMD) w/ Y & F FE

	Forward-Looking (Year and Firm Fixed Effects)								
	EPS1MD			EPS2MD			EPS3MD		
	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9
INTERCEPT	-0.093	0.025	-0.075	-0.018	0.232***	0.009	-0.159	0.276***	-0.070
	(0.308)	(0.762)	(0.469)	(0.843)	(0.007)	(0.934)	(0.126)	(0.006)	(0.558)
LnFL_CEO	0.008		0.005	0.010		0.006	0.012		0.013
	(0.243)		(0.515)	(0.152)		(0.406)	(0.117)		(0.116)
LnFL_CHAIR		0.005	-0.003		0.008	-0.001		0.007	-0.003
		(0.423)	(0.684)		(0.286)	(0.881)		(0.400)	(0.728)
LnEPS1NE	0.116***	0.115***	0.128***	0.098***	0.113***	0.111***	0.109***	0.119***	0.127***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RETURNS	-0.035***	-0.035***	-0.036***	-0.059***	-0.050***	-0.055***	-0.059***	-0.065***	-0.055***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnMV	0.112***	0.104***	0.107***	0.141***	0.124***	0.137***	0.174***	0.148***	0.165***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	-0.008***	-0.007***	-0.009***	-0.007***	-0.007***	-0.007***	-0.007***	-0.006***	-0.007***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnAGE	-0.162***	-0.164***	-1.555***	-0.204***	-0.241***	-1.198***	-0.196***	-0.271***	-0.203***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	27.308	30.327	20.577	36.252	35.376	25.239	37.121	34.224	25.918
Adjusted *R*2	79.13%	73.20%	79.12%	82.60%	75.68%	82.26%	84.14%	79.15%	84.18%
N	6,395	9,236	5,430	6,356	9,125	5,401	5,945	8,225	5,065

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 26: OLS coefficients estimates of forward-looking (EPSCV) w/ Y & F FE

	Forward-Looking (Year and Firm Fixed Effects)								
	EPS1CV			EPS2CV			EPS3CV		
	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9
INTERCEPT	74.363***	84.961***	79.243***	84.619***	76.894***	82.857***	86.995***	50.676***	64.408***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnFL_CEO	0.427		0.725	0.364		0.297	0.679		0.558
	(0.680)		(0.520)	(0.718)		(0.784)	(0.405)		(0.504)
LnFL_CHAIR		0.589	1.238		0.834	0.828		2.214 **	1.609 *
		(0.571)	(0.325)		(0.408)	(0.495)		(0.015)	(0.091)
LnEPS1NE	-3.231	-0.388	-2.809	5.029 **	2.445	4.394 *	2.515	2.094	1.613
	(0.194)	(0.860)	(0.291)	(0.034)	(0.247)	(0.080)	(0.189)	(0.271)	(0.408)
RETURNS	5.283***	3.904***	5.541***	5.229***	3.274 **	3.027 *	2.940 **	1.717	2.900 **
	(0.001)	(0.007)	(0.002)	(0.001)	(0.021)	(0.078)	(0.025)	(0.198)	(0.035)
LnMV	-12.384***	-12.404***	-13.224***	-14.146***	-11.476***	-13.311***	-14.159***	-11.018***	-14.023***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MTBV	0.519***	0.544***	0.371 *	0.406 **	0.460***	0.317 *	0.276 *	0.577***	0.237
	(0.005)	(0.001)	(0.059)	(0.025)	(0.005)	(0.099)	(0.059)	(0.000)	(0.112)
LnAGE	10.524 **	6.051	8.997 *	4.720	3.201	3.420	6.234 *	11.219***	12.802***
	(0.016)	(0.152)	(0.057)	(0.266)	(0.436)	(0.452)	(0.068)	(0.002)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F statistic	14.559	14.130	11.833	10.971	8.242	6.689	12.445	8.861	11.384
Adjusted *R*2	43.99%	41.90%	43.94%	47.82%	47.53%	46.97%	59.54%	56.84%	62.47%
N	5,372	6,869	4,601	5,327	6,785	4,563	4,816	5,876	4,121

P–values reported in parentheses are computed using the robust standard errors to obtain unbiased OLS coefficients. *p–value < 0.1; **p–value < 0.05; ***p–value < 0.01

Table 27: Variables Definition

Variable Name	Definition
EPS1MN	Mean value for all FY1 (next fiscal year end to be reported) estimates for a company (Datastream)
EPS2MN	Mean value for all FY2 estimates for a company (Datastream)
EPS3MN	Mean value for all FY3 estimates for a company (Datastream)
EPS1MD	Median value for all FY1 estimates for a company(Datastream)
EPS2MD	Median value for all FY2 estimates for a company (Datastream)
EPS3MD	Median value for all FY3 estimates for a company (Datastream)
EPS1CV	Coefficient of variation of all FY1 estimates (Datastream)
EPS2CV	Coefficient of variation of all FY2 estimates (Datastream)
EPS3CV	Coefficient of variation of all FY3 estimates (Datastream)
EPS1NE	Total number of estimates in the mean associated with FY1 forecast (Datastream)
EPS2NE	Total number of estimates in the mean associated with FY2 forecast (Datastream)
EPS3NE	Total number of estimates in the mean associated with FY1 forecast (Datastream)
RETURNS	12–month raw stock return ending four months after the fiscal year–end
MV	Market value: Log (market value)
MTBV	Market to book value: market value of the equity scaled by the balance sheet value of equity
AGE	Log (Age)
TONE_CHAIR	Chairman´s statement section: Net Tone: The difference between the number of positive and negative words scaled by their sum. (according LM dictionary)
TONE_CEO	CEO Review section: Net Tone: The difference between the number of positive and negative words scaled by their sum. (according LM dictionary)
FL_CHAIR	Chairman´s statement section: number of forward-looking words according a revised edition of the word list proposed by (Hussainey et al, 2003)
FL_CEO	CEO Review section: number of forward-looking words according a revised edition of the word list proposed by (Hussainey et al, 2003)