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Aspects of the Language in Financial Analysts' Reports: Focus on the Relationship Between Accuracy and the Linguistic Tone Features of Commonality

ABSTRACT


Objective: This study analyzed the relationship between the error in financial analysts' profit forecasts and the linguistic tones that make up their reports, considering different cultural environments (collectivist vs. individualist).


Method: The sample consisted of companies from Brazil and the USA in 2019, totaling 979 observations for Brazil and 17,761 for the USA. The linguistic characteristics considered were: centrality, cooperation, rapport, diversity, exclusion, and liberation, all obtained via Diction®. The tests were performed using Ordinary Least Squares models.

Results: The results indicate that, in the United States, the tones of cooperation, rapport and diversity are associated with a reduction in forecast error, suggesting that corporate language has incremental informational content in more mature institutional environments. In Brazil, only the tone of diversity showed a significant relationship, being associated with a higher forecast error.

Theoretical/Methodological contributions: The findings suggest that the impact of corporate language on analyst accuracy depends on the cultural and institutional context in which information is produced and interpreted, contributing to the literature on behavioral finance, textual analysis, and cultural studies in accounting and capital markets.

Keywords: Analyst Forecast, Commonality, Cultural Differences.

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1 INTRODUCTION

Culture represents a collective programming of thought (Hofstede, 1980), capable of influencing behavioral patterns (Breuer & Quinten, 2009), and shaping individuals (Akkus et al., 2017). This occurs because social values are aspects that identify groups of individuals, allowing them to be classified into distinct cultural areas (Breuer & Quinten, 2009). In this sense, nationality, as part of the shared culture among the members of a community, is an aspect that distinguishes individuals and influences how they think and act (Hofstede, 1980), and therefore, their decisions. This is why comparing the application of theories under different political, economic, social, and cultural circumstances can be of great value for scientific development.

Following this line of thought, Hofstede (1980) classifies countries according to distinct cultural aspects. In this classification, there is a polarization between Brazil and the USA in terms of characteristics such as individualism and collectivism. Indeed, Markus and Kitayama (1991) state that North American individuals emphasize the self and personal assertiveness. Therefore, they have a more independent orientation, where success is evaluated in terms of individual achievement. On the other hand, Latin American culture is more interdependent, prioritizing integration with others, which is referred to as the commonality bias. Thus, culture systematically influences different aspects of cognition.

In fact, Antonczyk and Salzmann (2014) state that individualistic countries also exhibit decisions with higher levels of optimism and overconfidence. This aligns with Hamamura et al. (2009), who showed that North American individuals tend to remember more positive than negative information, while the opposite pattern is observed in collectivist cultures. However, a culture geared towards collectivism tends to maintain decision-making processes that emphasize group relations (Yates & Oliveira, 2016). Consequently, cultural

aspects can help to understanding the differences in decision-making in distinct cultural contexts.

However, far beyond moral attitudes, customs, and economic systems, culture also encompasses language, which is understood as a cognitive entity whose central point is the values that guide individual behavior (Breuer & Quinten, 2009) and therefore decisions. This process is thus influenced by psychological and social factors (Yilmaz, 2023), i.e, biases, demographic characteristics, and individual values (Acciarini et al., 2020). All these aspects imply that different individuals may interpret the environment differently (Ma-Kellams, 2020).

In this context, one can consider the role of financial analysts in the capital market, which operates based on information disclosed by companies, with analysts acting as information intermediaries between companies and investors (Kratz & Wennin, 2016), contributing to communication and assisting in investment decisions (Du & Budescu, 2018). This activity of analysts occurs, among other things, through monitoring company information, interpreting and measuring future performance, and guiding market decisions by issuing profit forecasts for companies, sometimes supported by valuation reports that include the company's future prospects.

Therefore, analysts' reports and profit forecasts influence the allocation of resources in the capital market (Almeida & Dalmácio, 2015) and investor response (Kadous et al., 2009), so that their accuracy can generate real benefits for investors (Mansi et al., 2011) and creditor's decisions (Healy & Palepu, 2001). This means that analysts' forecasts, based on their company analysis reports, may be related to the language of these reports and individual's culture. After all, the linguistic tone used in the reports is especially relevant, as it directly influences the interpretation and response of the target audience (De Franco et al., 2015).

In fact, Cao et al. (2024) observed that analysts embedded in individualistic cultures issue bolder investment recommendations than those from collectivist cultures, suggesting a cultural effect on capital markets. This finding indicates that individualism directly influences how analysts process information. This perspective had already been anticipated by Antonczyk and Salzmann (2014), whose research in cultural finance showed that more individualistic societies exhibit greater confidence in their own abilities, making them more susceptible to overconfidence.

It is worth noting that there is already a body of literature analyzing analysts' biases and the accuracy of their predictions (Krolikowski et al., 2016; Chan et al., 2018; Sun et al., 2020; Cai & Qi, 2021; Hou et al., 2021; Kim et al., 2021; Huang et al., 2022; Liu & Loang, 2023; Fan et al., 2024; Ji et al., 2024; Khare & Kapoor, 2024; Wang & Liu, 2024). However, this body of research focuses predominantly on specific biases, such as anchoring, optimism, and overconfidence. Linguistic biases such as communality bias remain underexplored and may produce different results across cultural contexts such as Brazil and the USA. Furthermore, there is a predominance of studies focused on the Chinese market, which limits the generalization of the findings. Differences in analyst coverage in various markets may explain variations in the relationships between linguistic biases and profit forecasts, making the USA and Brazilian markets a justifiable choice for this investigation. This is also due to the polarity that they occupy on the cultural spectrum proposed by Hofstede (1980).

Specifically regarding the communality bias, there is a tendency to consider the shared experience of a social group (Brah, 2006; Short & Palmer, 2008), that is, it highlights the agreed-upon values of a group and rejects idiosyncratic modes of involvement (Short & Palmer, 2008). It is rooted in Etzioni's (1993, 2001) communitarian thinking, which emphasizes the sharing of values, norms, meanings, history, and identity. This bias

differentiates the cultures of Brazil and the USA. Furthermore, these values are most commonly used to differentiate cultures (Akkus, et al., 2017).

Given this context, an opportunity arises to deepen investigations into the relationship between linguistic aspects and the predictive behavior of financial analysts, exploring biases that are still underexplored in the literature, such as communality. This attribute exhibits relevant variations across different cultural contexts, especially between Brazil and the United States, allowing for in-depth empirical analyses of the effects of different cultures on analysts' profit forecasting decisions. In this sense, the present study aims to answer the following research question: What is the relationship between the linguistic aspects of communality and financial analysts' profit forecasts in different cultural environments?

By exploring the institutional and cultural contexts of the United States and Brazil in an integrated way, this research develops a comparative analysis across multiple centers, broadening the academic debate on the role of linguistic biases in the accuracy of financial forecasts. This perspective contributes to the expansion of a still nascent research agenda focused on understanding the cultural determinants of the language used by financial analysts.

The results obtained corroborate the notion that individual behavior cannot be dissociated from the sociocultural environment, since culture exerts influence on cognitive processes and the communication patterns that guide decision-making. Thus, the study engages with approaches that emphasize bounded rationality and the need to consider the environmental context in the analysis of economic behavior (Simon, 1990). Considering the marked cultural differences between countries, particularly between developed and emerging economies, it becomes relevant to investigate how individuals react differently to similar stimuli, which reinforces the importance of research conducted in diverse cultural contexts.

From an empirical standpoint, the findings reveal significant asymmetries between the two countries analyzed. In the North American market, analysts whose reports show a higher

incidence of terms associated with cooperation, interpersonal relationships, and diversity tend to have lower forecasting errors. In contrast, in the Brazilian context, the use of more diverse language is associated with greater imprecision in their estimates. In short, while in Brazil linguistic tones that deviate from the notion of commonality are positively related to analysts' error, in the United States these same linguistic elements are negatively associated with forecasting errors. These differences can be interpreted in light of predominant cultural traits in North American society, such as the valuing of individuality and self-expression, without excluding the relevance of communicative tones based on cooperation and relationships, which are also associated with greater forecast accuracy in that country.

More broadly, the research contributes to the field of behavioral finance by articulating concepts from intercultural psychology with the analysis of language and the decision-making processes of financial analysts. By incorporating dimensions such as individualism and collectivism, the study offers evidence that cultural factors play a central role in how information is communicated and interpreted in financial markets.

2 THEORETICAL BACKGROUND

The capital market constitutes an important financing mechanism for companies (Perobelli & Famá, 2003), but it is anchored in contractual relationships marked by potential conflicts of interest, opportunism, and informational asymmetries (Jensen & Meckling, 1976). In this context, investors face uncertainties regarding the expected return on their investments. As a way to mitigate such asymmetries, market participants resort to monitoring profit forecasts prepared by financial analysts (Hall & Tacon, 2010; Galanti & Vaubourg, 2017).

The role of the financial analyst in generating value for the capital market fundamentally lies in their ability to produce assessments that go beyond traditional quantitative models for forecasting results. Unlike these models, the analyst's judgment incorporates new qualitative and contextual information, allowing for more flexible and

adaptive interpretations of the economic environment (Kratz & Wennin, 2016). This decision-making process does not occur mechanically, but involves reasoning based on perceptions, feelings, and interpretive alternatives, which reinforces the subjective nature of the forecasts made (Kafayat, 2014).

In this sense, although the analyst's work is based on objective data and information networks, their risk assessment is influenced by individual perceptions, resulting from their cognitive abilities and their particular interpretation of the analyzed context (Boff et al., 2006). This heterogeneity of judgments suggests that outcome forecasts reflect not only economic information, but also biases inherent in the human decision-making process.

The subjectivity present in the analyst's activity creates conditions for the language used in reports to play a central role in transmitting information to the market. By incorporating expectations, beliefs, and qualitative assessments, reports become potential vehicles for impression management practices, in which the choice of how information is presented can influence users' perceptions (Hoberg & Lewis, 2017; Jiang et al., 2019). This phenomenon, widely discussed in the literature, refers to the strategic use of communication to shape external interpretations, and is called impression management (Caserio et al., 2020; Amorim & Souza, 2024).

One of the main impression management strategies observed in analysts' reports is the use of linguistic tone. Empirical evidence indicates that variations in textual tone, positive or negative, affect not only the interpretation of information but also the profit forecasts disclosed by analysts themselves (Zeng et al., 2022). Studies analyzing the content of these reports identify the systematic presence of distinct linguistic tones, which carry interpretive signals relevant to investors (Huang et al., 2014a; Baginski et al., 2018; Liang et al., 2022).

The literature also demonstrates that the content and tone of analysts' reports produce effects on the capital market, especially in contexts where investors are more susceptible to

relying on cognitive heuristics. In these situations, the language adopted in the reports influences market reactions and investor behavior (Baginski et al., 2018; Miwa, 2021). Such evidence reinforces the relevance of studies that consider analysts' reports as important informational mechanisms in the asset price formation process (Asquith et al., 2005; Twedt & Rees, 2012; Huang et al., 2014a; Liang et al., 2022). In particular, research conducted in the Chinese market indicates that the textual tone of reports has significant implications for market reactions, corroborating the idea that the discursive analysis of corporate documents constitutes a relevant tool for investor decision-making (Hájek, 2016; Liang et al., 2022).

However, the use of language and the judgment of analysts do not occur in isolation and are conditioned by the social and institutional context in which these professionals operate. This is because, according to Azmi et al. (2023), individuals' communication is shaped by the rules and values of their specific culture. Analysts are embedded in complex environments in which social norms, economic incentives, and institutional pressures influence their behavior, making them more susceptible to cognitive biases (Brauer & Wiersema, 2018). Furthermore, the incentives faced in this context can lead to the issuance of predictions inconsistent with fully rational expectations, even affecting the linguistic tone used in reports (Löffler, 1998).

Some of these biases stem from demographic characteristics, individual values, and cultural factors, which condition how individuals interpret the environment and make decisions (Acciarini et al., 2020; Ma-Kellams, 2020). The literature suggests that culture exerts a significant influence on cognitive processes, and are shaped by elements such as economic structure, income level, and social norms, which act as determinants of individual judgments (Lechuga & Wiebe, 2011; Yilmaz, 2023).

In this context, Hofstede (1980) proposed a widely used cultural typology, highlighting, among other dimensions, the dichotomy between individualism and

collectivism. Individualistic cultures tend to emphasize autonomy, assertiveness, and individual achievement, while collectivist cultures value group relations, interdependence, and consensus-oriented decisions (Yates & Oliveira, 2016). These cultural differences systematically affect how information is processed and decisions are made.

Empirical evidence indicates that analysts embedded in more individualistic cultures tend to issue bolder investment recommendations when compared to those from collectivist cultures, suggesting that culture directly influences information processing in the capital market (Cao et al., 2024). Similar results were anticipated by Antonczyk and Salzmann (2014), who demonstrated that more individualistic societies exhibit greater confidence in their own abilities, making them more susceptible to overconfidence. Illustratively, Markus and Kitayama (1991) highlight that North American individuals exhibit a more independent orientation, while Latin American cultures show greater interdependence, which affects different dimensions of cognition.

When analyzing the performance of financial analysts, it is important to recognize that these professionals operate in multidimensional contexts, which include institutional quality and the degree of oversight (La Porta et al., 1998; Bhattacharya & Daouk, 2002), the level of development of the capital market (Nardi et al., 2022), the competitive structure and incentives faced by analysts (Clement, 1999; Cao et al., 2024), as well as informational complexity and national cultural traits. This perspective acknowledges that the behavior of analysts results from the interaction between institutions, incentives, informational structures, and cultural factors.

Among the cultural aspects that can be reflected in the language used by analysts, commonality stands out, understood as the individuals' orientation to align their behavior with the perceptions and practices shared by a group (Short & Palmer, 2008). Commonality is associated with phenomena such as herd behavior, especially in adverse scenarios, where

analysts face greater uncertainty when issuing negative sell recommendations for stocks (Jegadeesh & Kim, 2010).

Additional evidence suggests that analysts tend to cluster around common market behavior when the media tone is negative and there is a high dispersion of opinions, increasing uncertainty about the scenario being analyzed (Frijns & Huynh, 2018). Similarly, studies indicate that analysts value consensus as a relevant source of information, demonstrating a tendency towards shared decision-making (Sebastian & Seetharam, 2024; Hirshleifer et al., 2019).

Considering that commonality reflects the incorporation of shared perceptions into the decision-making process, its manifestation in analysts' reports can influence how profit forecasts are made. In environments where consensus is more valued, analysts tend to adjust their estimates based on information disclosed by their peers, which can affect analytical independence and forecast accuracy (Hou et al., 2021). As a consequence, the consensus formed by these forecasts can influence asset prices, reflecting the prevailing sentiment regarding current economic conditions (Biondi et al., 2012).

Given the relevance of the capital market, the role of analysts as informational intermediaries, the possibility of impression management through language, and the influence of cultural context on decision-making behavior, this study investigates whether linguistic tones associated with commonality, present in analysts' reports, have distinct relationships with profit forecasts in different cultural environments. Thus, the following hypothesis is proposed:

H₁: Linguistic tones associated with commonality, present in financial analysts' reports, are linked to systematic differences in profit-forecasting error, varying according to the cultural environment in which the analyst operates.

3 METHODOLOGY

3.1 Sample and Method

The study considered publicly traded non-financial companies in Brazil and the USA during the quarters of 2019, following the Accounting and Biases (2023) database. Although the analysis focuses on a single year, this choice allows for a more precise identification of the relationship between linguistic tone and forecast accuracy, abstracting from period-specific shocks within each country.

Financial companies were excluded from the study due to their specific accounting characteristics. The final sample consisted of 979 observations for Brazil and 17,761 for the USA. Financial data were collected from Refinitiv®, and analyst reports were collected from ThomsonOne®.

Descriptive statistics and Spearman's correlation were used after identifying the non-normality of the variables using the Wooldridge test for normality. Subsequently, the Mann-Whitney U test was applied to analyze the median difference, organizing the values of the language tone aspects in ascending order, and selecting the 1st and 4th quartiles for comparison of the median of the prediction error. For regression analysis, the Ordinary Least Squares (OLS) model was applied, and heteroscedasticity was assessed using the White test and multicollinearity via the Variance Inflation Factor (VIF). All tests were performed using STATA®.

3.2 Definition of Variables and Econometric Model

Commonality is characterized by language that prioritizes shared group values, rejecting individualized engagements. In this sense, Diction® presents scores defined through dictionaries in which certain words are associated with semantic characteristics (Sydserff & Weetman, 2002). This allows the software to offer a quantitative measurement of a narrative style or tone. Therefore, it can be used to analyze linguistic elements (Short & Palmer, 2008).

Furthermore, Wisniewski and Yekini (2015) state that Diction® assesses the frequency of references to consensual values and principles in linguistic tones related to the commonality bias.

To this end, the software links words to dictionaries built based on theories of linguistic influence on discourse (Short & Palmer, 2008; Senave et al., 2023). Regarding commonality, Diction®'s logic considers six aspects of communal language: centrality, cooperation, rapport, diversity, exclusion, and liberation (Stewart, 2020), as shown in Equation 1:

$$\begin{aligned} \text{Commonality}(\text{Common}) = & [\text{Centrality} + \text{Cooperation} + \text{Rapport}] - \\ & -[\text{Diversity} + \text{Exclusion} + \text{Liberation}] \end{aligned} \quad (1)$$

Centrality (*Centr*) refers to terms that presuppose institutional regularities or alignment with essential group values, and includes typical group patterns and terms that express legitimacy, congruence or universalism, systematicity, and predictability.

Cooperation (*Coop*) encompasses terms that designate interactions that can result in a joint effort toward a common outcome, including terms related to work relationships, informal associations, personal interactions, and personal involvement, and even altruism and alignment. This concept is related to the values of collectivist culture (Gudykunst et al., 1996). Markus and Kitayama (1991) addressed this concept under the idea that cooperating is related to the ability to work with others.

Rapport (*Rapp*), which can also be considered empathy, is based on terms of behavioral parity between social groups, including terms that denote affinity, consent, agreement, tolerance, and share identity of something, that is, consensus (Hart, 2001). This concept is used by Spencer-Oatey (2015), using the term rapport, for individuals' perceptions

of harmony and cordiality in interpersonal relationships, similar to the approach of Cohen and Kassis-Henderson (2012).

On the other hand, terms opposed to the idea of commonality are included under. As Diversity (*Divers*) considers words used to describe the individual who differs from the norm; it distinguishes between individuals, including terms of comparison, feelings of pride, rivalry, and opposition between social groups, and describing the heterogeneity between individuals.

Exclusion (*Exclus*) is an aspect formed by the presence of words that express social isolation in the sense of social displacement and repudiation as well as in the sense of self-sufficiency. Even Markus and Kitayama (1991), when addressing exclusion, reiterate the idea that this concept is linked to the failure to connect with other people, and is closer to selfishness.

Finally, Liberation (*Liber*) consists of expressions that express the idea of maximization through individual choices and rejection of social norms (Hart, 2001)

Singelis and Brown (1995) place collectivism as an orientation in which the individual has their identity defined by the group, emphasizing interdependence. This point brings the concept of commonality closer to aspects of centrality and cooperation. They also note communication oriented towards maintaining harmony and social relations, sharing meanings, which brings the concept of rapport closer. These connections are strengthened by the ideas of Azmi et al (2023), who consider collectivist individuals, when dealing with communication styles, as having a sense of interdependence, prioritizing collective goals over personal ones, and valuing cooperation.

Furthermore, Singelis and Brown (1995), when contrasting collectivism with individualism, do so by associating individualism with self-oriented communication and individual autonomy. Therefore, it provides a basis for the relationship with aspects of

diversity and liberation. Thus, when individualism is strengthened, one can understand a tendency towards less orientation toward group inclusion, implying aspects such as exclusion.

Regarding the control variables, the study was based on previous literature, such as: García-Meca and Sánchez-Ballesta (2006); Tong (2007), Behn et al. (2008), Saito et al. (2008), Myring and Wrege (2009), Xie et al. (2012), Corredor et al. (2014), Ledbetter et al. (2014), Magnan et al. (2015), Kothari et al. (2016), Ayres et al. (2017), Du and Budescu (2018) and Broeke et al. (2019).

The company's performance was based on ROA. It is expected that in scenarios of higher company performance the analyst's forecast error will be smaller. This is because companies with better financial results tend to have greater transparency and predictability in their operations, facilitating analysis and reducing the margin of error in analysts' estimates. In addition, superior performance may reflect more effective management and a more solid strategy, which contributes to confidence in the forecasts and analyses performed.

Regarding the volatility (*Volat*) of company results, it is expected that in cases of companies with higher volatility, the analyst's error will be greater (Saito et al., 2008). This is because the uncertainty associated with volatile results makes accurate forecasting difficult, leading to a greater margin of error in the analyses performed. Variability in results can make it difficult to identify trends and patterns, resulting in less reliable estimates.

There is also indebtedness (*Indeb*), such that companies with higher debt imply greater analysts' error (Chan et al., 1996), as it is a scenario of greater perceived risk, making it difficult to assess the company's ability to pay and its financial sustainability, which can lead to inaccurate forecasts.

The company's growth (*Grow*) was also considered. Regarding this aspect, it is expected that in cases of higher growth there will be less analyst error. One explanation for this is that growing companies tend to have more stable and predictable performance, which

facilitates analysis and the formulation of more accurate forecasts. Consistent growth can indicate effective management and a favorable market, reducing uncertainty in estimates.

Another aspect observed in the literature is loss (*Loss*) scenarios, where greater analyst error is expected (Rahman et al., 2019), given the uncertainty about the company's future viability, making it difficult to accurately assess its performance and leading to less reliable estimates.

The company's age (*Age*) is also a factor that may be related to analyst error. The literature suggests that, in the case of older companies, analyst error tends to be lower (Bradshaw et al., 2012). One explanation for this is that more established companies generally have a more robust and predictable financial history, allowing analysts to make forecasts with greater confidence and accuracy.

In addition to aspects of the company, analyst experience (*AnaExp*) with a given company can be considered. This is because the greater the experience, the smaller the analyst's error tends to be (Rahman et al., 2019), as more experienced analysts are more familiar with the particularities of the company, its operations, and the market in which they operate, which allows them to make more informed and accurate forecasts.

Finally, the time (*Time*) at which the analyst's forecast was made seems to be relevant. After all, the more distant the forecast date is from the company's closing date, the greater the analyst's error tends to be (García-Meca & Sánchez-Ballesta, 2006), since forecasts made further in advance may be subject to significant changes in market conditions, company operations, or economic factors, increasing uncertainty and the probability of error in the estimates.

Thus, the research presents, in Equation 2, the model to be tested:

$$\begin{aligned} \text{Erro} = & \alpha_0 + \beta_1 \times \text{Common} + \beta_2 \times \text{ROA} + \beta_3 \times \text{Volat} + \beta_4 \times \text{Indeb} + \beta_5 \times \text{Grow} + \beta_6 \times \text{Loss} + \\ & + \beta_7 \times \text{Age} + \beta_8 \times \text{AnaExp} + \beta_9 \times \text{Time} + \epsilon \end{aligned} \quad (2)$$

Where:

Error = Analyst error, measured by the ratio between the difference between actual and predicted earnings per share (EPS), in absolute value, over the actual EPS;

Common = Variables representing commonality-based writing: centrality, cooperation, relatedness, diversity, exclusion, and liberation;

ROA = Performance measure, calculated by the ratio between net income and total assets;

Volat = Volatility of results, i.e., the standard deviation of earnings per share in period t plus the 4 years prior to the observation, scaled by the share price of company i in period t ;

Indeb = Level of indebtedness of the company, calculated by the ratio between short-term and long-term debts and Total Assets;

Grow = Company growth, measured by the variation in revenue between two periods;

Loss = Dummy variable that assumes 1 if the company had a loss, 0 otherwise;

Age = Variable representing the age of the company, considering the beginning of its operation on the stock exchange;

AnaExp = Considers the analyst's experience with that company, that is, the time the analyst has been issuing forecasts for a given company.

Time = Difference, in days, between the date the analyst's forecast is published and the release of actual earnings per share.

4 RESULTS

Initially, descriptive statistics of the variables were observed, which provide information regarding the distribution and general behavior of the sample data, as shown in Tables 1 and 2.

Table 1

Descriptive statistics - Brazil

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
Error	0,83	0,34	1,11	0,00	5,92
Cent	3,65	3,70	1,82	0,00	24,10
Coop	9,14	8,75	4,46	0,00	39,19
Rapp	2,75	2,29	1,81	0,00	11,94
Divers	3,81	3,19	2,22	0,00	11,34
Exclus	1,76	1,35	1,28	0,00	8,73
Liber	0,95	0,84	0,68	0,00	3,88
Roa	0,01	0,01	0,02	-0,13	0,10
Volat	-0,32	-0,36	0,43	-1,11	1,05
Indeb	0,60	0,63	0,21	0,11	1,46
Grow	0,14	0,11	0,21	-0,40	0,73
Loss	0,11	0,00	0,32	0,00	1,00
Age	56,63	53,00	33,45	9,00	147,00
AnaExp	2,97	3,00	1,35	1,00	7,00
Time	186,98	221,00	99,85	2,00	330,00

Table 2

Descriptive statistics - USA

Variable	Mean	Median	Standard Deviation	Minimum	Maximum
Erro	0,25	0,12	0,34	0,00	2,00
Cent	3,48	3,23	2,12	0,00	18,68
Coop	6,94	6,48	3,68	0,00	44,28
Rapp	2,25	1,73	2,30	0,00	42,24
Divers	3,13	2,89	1,95	0,00	23,77
Exclus	1,71	1,26	1,65	0,00	51,00
Liber	0,85	0,62	0,79	0,00	17,89
Roa	0,01	0,01	0,05	-0,47	0,27
Volat	1,72	1,68	0,76	-0,55	3,70
Indeb	0,63	0,62	0,25	0,07	1,80
Grow	0,05	0,03	0,24	-0,97	1,98
Loss	0,22	0,00	0,42	0,00	1,00
Age	59,41	43,00	42,31	0,00	227,00
AnaExp	3,49	4,00	1,46	1,00	10,00
Time	187,46	200,00	102,41	1,00	360,00

It is observed that the average forecast error is higher for the Brazilian sample compared to the USA, in addition to a higher standard deviation in Brazil. This result suggests greater informational uncertainty and lower predictability of the results of Brazilian companies. This evidence can be explained by the greater maturity, volume of trades, and number of analysts that characterize the environment of the USA capital market. Furthermore,

it is consistent with the literature that points to emerging markets as more opaque environments, with less institutional enforcement and greater informational asymmetry, which tends to make the work of analysts more difficult.

When observing the variables representative of the commonality bias, descriptive statistics show a higher average in the Brazilian sample, particularly highlighting the aspects of centrality (*Cent*), cooperation (*Coop*), and rapport (*Rapp*), which reinforce a collectivist language, in line with Hofstede (2011), according to whom Brazil is characterized by a greater collectivist orientation, while the United States shows a strong predominance of individualistic values.

On the other hand, the linguistic tones associated with individualism (diversity, exclusion, and liberation) have relatively similar averages between the two countries, although, in general, they are slightly higher in Brazil in the case of diversity. However, the greater dispersion of these variables in the USA sample, especially for exclusion (*Exclus*) and liberation (*Liber*), indicates greater heterogeneity in the use of these linguistic tones, possibly reflecting greater discursive and strategic diversity in the North American corporate environment.

In terms of performance (ROA), both samples have similar averages, although the USA exhibits greater variability and more pronounced extremes, indicating greater volatility in the results. This pattern is reinforced by the volatility variable, which is significantly higher in the USA sample compared to Brazil, suggesting a more dynamic market environment that is sensitive to economic and informational variations.

The average indebtedness (*Indeb*) is similar between the two countries, indicating that, in aggregate terms, Brazilian and American companies have comparable capital structures. However, the greater dispersion of debt observed in the USA sample suggests greater

heterogeneity in financing strategies, which is consistent with a more developed institutional environment and greater access to diversified financial instruments.

Regarding growth (*Grow*), Brazilian companies have, on average, higher rates, possibly reflecting typical characteristics of emerging economies, such as greater opportunities for expansion and more intense growth cycles, albeit accompanied by greater macroeconomic risk. In the USA, the more moderate average growth and greater dispersion indicate a more mature market, in which companies at different stages of the life cycle coexist.

The variable loss (*Loss*) shows a higher average in the USA sample, which does not necessarily indicate greater informational uncertainty, but may reflect an institutional environment that tolerates and discloses periods of negative performance with greater transparency, especially in innovation- and growth-intensive sectors. In this context, the occurrence of losses does not compromise the informational quality of the market, but can affect how analysts interpret prospective signals, reinforcing the relevance of corporate language in the construction of expectations.

Regarding the age (*Age*) of the companies, both samples include mature firms, although the dispersion is high, especially in the USA. The analyst's experience is greater in the North American sample compared to Brazil, which may reflect greater professionalization and stability of the analyst career in that market.

The time (*Time*) for disclosing the analyst's error shows similar averages between the countries, suggesting that the differences observed in error and linguistic tones may not stem from temporal effects, but rather from distinct cultural, institutional, and informational characteristics.

In general, descriptive statistics provide preliminary evidence that the linguistic tones used by analysts differ between Brazil and the USA, consistent with the cultural dimensions

of collectivism and individualism. Furthermore, the greater magnitude and variability of analyst error in Brazil suggest that the impact of these tones may be conditioned by the cultural and informational environment, reinforcing the hypothesis that the relationship between corporate language and analyst forecast error is not homogeneous across countries.

These descriptive results support the methodological decision to analyze the two cultural contexts separately and provide an empirical basis for the reformulated hypotheses of the study.

Next, the correlation between the variables was observed (Tables 3 and 4).

Table 3

Spearman correlation – Brazil

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Cent	-0,01													
Coop	0,00	0,41 ***												
Rapp	-0,02	0,32 ***	0,18 ***											
Divers	0,02	0,26 ***	0,37 ***	0,17 ***										
Exclus	-0,05	0,39 ***	0,27 ***	0,18 ***	0,56 ***									
Liber	0,01	0,29 ***	0,73 ***	0,28 ***	0,13 ***	0,07 **								
ROA	-0,19 ***	0,08 **	-0,01	0,07*	-0,02	0,08 **	0,03							
Volat	0,55 ***	-0,01	-0,04	0,05	0,01	-0,02	-0,02	-0,08 **						
Indebv	0,08 **	0,00	0,03	0,02	0,04	-0,07 **	0,05	-0,29 ***	0,22 ***					
Grow	-0,05	-0,01	0,03	0,09**	0,01	0,03	0,03	0,14 ***	0,20 ***	-0,08 **				
Loss	0,29 ***	-0,13 ***	-0,08 **	-0,03	0,03	-0,01	-0,11 ***	-0,39 ***	0,25 ***	0,14 ***	-0,02			
Age	0,04	0,05	0,02	-0,02	0,02	-0,00	-0,02	0,05	0,13 ***	0,12 ***	-0,06 *	0,03		
AnaExp	-0,05	-0,03	0,08 **	0,17 ***	0,05	-0,05	0,03	-0,05	-0,04	0,06 *	-0,05	0,06* *	0,01	
Time	0,02	-0,02	-0,04	0,00	0,03	0,10 ***	-0,03	0,15 ***	-0,05	-0,01	-0,02	-0,05	0,04	-0,10 ***

Note: ***, ** and * are 1%, 5% and 10% statistically significant, respectively; 1-Error; 2-Cent.; 3-Coop.; 4-Relac.; 5-Divers.; 6-Exclus.; 7-Liver.; 8-Roa; 9-Volat.; 10-Indeb.; 11-Grow.; 12-Loss.; 13-Age; 14-AnaExp; 15-Time.

Based on the results in Table 3, it can be observed that, regarding linguistic tones, there is no statistically significant correlation between analysts' error and the variables of centrality, cooperation, rapport, diversity, exclusion, and liberation, indicating that, in isolation, these tones do not show a direct monotonic association with forecast error in the Brazilian sample. Furthermore, the correlation between the control variables does not appear to indicate multicollinearity problems in the sample.

Table 4

Spearman correlation – USA

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Cent.	-0,01													
Coop	-0,02	0,46												
	**	***												
Rapp	-0,02	0,32	0,25											
	***	***	***											
Divers	-0,07	0,43	0,39	0,43										
	***	***	***	***										
Exclus	-0,04	0,48	0,50	0,26	0,39									
	***	***	***	***	***									
Liber	-0,01	0,39	0,39	0,30	0,32	0,43								
		***	***	***	***	***								
ROA	-0,31	-0,00	-0,02	0,02	0,03	0,03	0,02							
	***		**	***	***	***	*							
Volat	-0,05	0,07	0,02	0,10	0,12	0,08	0,04	0,10						
	***	***	***	***	***	***	***	***						
Indebv	-0,12	0,04	0,05	0,04	0,04	0,05	0,03	-0,13	0,17					
	***	***	***	***	***	***	***	***	***					
Grow	-0,08	-0,03	-0,03	-0,03	-0,03	-0,02	-0,02	0,15	-0,01	-0,05				
	***	***	***	***	***	***	***	***	***	***				
Loss	0,29	-0,02	-0,02	-0,03	-0,04	-0,04	-0,02	-0,71	-0,04	-0,02	-0,01			
	***	***	**	***	***	***	**	***	***	**	*			
Age	-0,10	0,04	0,01	0,04	0,07	0,07	-0,00	0,06	0,25	0,11	-0,09	-0,13		
	***	***		***	***	***		***	***	***	***	***		
AnaExp	0,09	-0,01	-0,01	0,01	-0,00	-0,03	0,01	-0,06	-0,01	0,03	0,02	0,09	-0,03	
	***					***	*	***		***	***	***	***	
Time	0,11	0,01	-0,02	0,01	-0,01	0,02	0,02	0,03	-0,01	-0,02	-0,01	-0,02	0,02	-0,04
	***		***			*	**	***	*	**	*	**	**	***

Note: ***, ** and * are 1%, 5% and 10% statistically significant, respectively; 1-Error; 2-Cent.; 3-Coop.; 4-Relac.; 5-Divers.; 6-Exclus.; 7-Liver.; 8-Roa; 9-Volat.; 10-Indeb.; 11-Grow.; 12-Loss.; 13-Age; 14-AnaExp; 15-Time.

Based on Table 4, it was possible to see that the analyst's forecast is negatively and statistically significantly correlated with the tones of cooperation, rapport, diversity, and exclusion, indicating that higher levels of these tones are associated with lower forecast errors

in the North American sample. In contrast, no statistically significant correlation was found between the analyst's error and the tones of centrality and liberation. These results suggest that, in the context of the United States, certain dimensions of corporate language have a monotonic association with the accuracy of analysts' forecasts, although such relationships should be interpreted with caution, given the bivariate nature of the analysis.

Among the control variables, the relationship between Loss and ROA is noteworthy. Consequently, to test for multicollinearity, the Variance Inflation Factor (VIF) was computed.

In order to examine differences in analysts' average error between the highest- and lowest-scoring groups for commonality aspects, the non-parametric Mann-Whitney test was performed; the results are shown in Table 5.

Table 5

Mann-Whitney U Test – Brazil and USA

Variables	Brazil			USA		
	Q1	Q4	z	Q1	Q4	z
Centr	0,89	0,83	0,6980	0,26	0,25	0,77
Coop	0,92	0,72	0,5162	0,26	0,24	2,438**
Rappc	0,87	0,72	1,685*	0,27	0,23	4,529***
Divers	0,90	0,92	0,194	0,29	0,23	8,932***
Exclus	0,92	0,74	2,584***	0,27	0,24	6,290***
Liber	0,88	0,75	0,089	0,26	0,26	0,540

Note: ***, ** and * are 1%, 5% and 10% statistically significant, respectively.

For the Brazilian sample, a statistically significant difference is observed only for the tone of rapport and for the tone of exclusion, indicating that companies positioned in the upper quartile have higher levels of these tones compared to the lower quartile. For the tones of centrality, cooperation, diversity, and liberation, no statistically significant differences are identified between the quartiles, suggesting a relatively homogeneous distribution of these linguistic attributes in the Brazilian sample.

In the United States sample, the results indicate statistically significant differences for the tones of cooperation, rapport, diversity, and exclusion. In all these cases, the values of the upper quartile are statistically distinct from those observed in the lower quartile, evidencing greater discrimination of these linguistic tones among companies with different profiles. On the other hand, no statistically significant differences are observed for the tones of centrality and liberation, indicating that these attributes do not vary substantially between the quartiles analyzed.

Overall, the results suggest that linguistic tones have a greater discriminatory capacity in the North American sample than in the Brazilian sample, especially for dimensions associated with cooperation, rapport, diversity, and exclusion.

As a final analysis, a multiple regression was used for Brazil and the USA (Tables 6 and 7).

Table 6

Multiple regression -Brazil

Variables	(1)Centr. Coef./(t)	(2)Coop. Coef./(t)	(3)Rapp. Coef./(t)	(4)Divers. Coef./(t)	(5)Exclus. Coef./(t)	(6)Liber. Coef./(t)
Common	0,006 (0,39)	-0,002 (-0,39)	-0,005 (-0,34)	0,031** (2,32)	0,008 (0,34)	-0,009 (-0,2)
Roa	-1,646 (-0,86)	-1,638 (-0,086)	-1,605 (-0,84)	-1,685 (-0,88)	-1,685 (-0,88)	-1,629 (-0,84)
Volat	0,891*** (11,4)	0,890*** (11,45)	0,891*** (11,42)	0,891*** (11,53)	0,891*** (11,42)	0,890*** (11,43)
Indeb	0,210 (0,422)	0,210 (0,8)	0,212 (0,81)	0,196 (0,75)	0,211 (0,81)	0,211 (0,8)
Grow	-0,764*** (-5,58)	-0,764*** (-5,63)	-0,763*** (-5,59)	-0,779*** (-5,68)	-0,766*** (-5,62)	-0,765*** (-5,64)
Loss	0,804*** (3,21)	0,796*** (3,17)	0,798*** (3,19)	0,793*** (3,18)	0,795*** (3,18)	0,796*** (3,19)
Age	0,000 (-0,37)	0,000 (-0,34)	0,000 (-0,38)	0,000 (-0,32)	0,000 (-0,37)	0,000 (-0,37)
AnaExp	-0,035* (-1,84)	-0,036* (-1,86)	-0,035* (-1,8)	-0,039** (-2,02)	-0,036* (-1,81)	-0,036* (-1,88)

Variables	(1)Centr. Coef./(t)	(2)Coop. Coef./(t)	(3)Rapp. Coef./(t)	(4)Divers. Coef./(t)	(5)Exclus. Coef./(t)	(6)Liber. Coef./(t)
Time	0,000 (0,59)	0,000 (0,56)	0,000 (0,57)	0,000 (0,42)	0,000 (0,54)	0,000 (0,56)
Constant	0,964*** (5,21)	1,010*** (5,77)	1,000*** (5,57)	0,897*** (5,07)	0,976*** (5,39)	0,999*** (5,55)
F	21,90***	22,17***	21,88***	22,10***	21,89***	22,06***
R ²	0,286	0,286	0,286	0,291	0,286	0,286
White Test	309,07***	313,44***	308,52***	310,57***	309,66***	324,34***
VIF	1,21	1,21	1,21	1,21	1,21	1,21

Note: ***, ** and * represent, respectively: 1%, 5% and 10%.

Table 7

Multiple regression -USA

Variables	(1)Centr. Coef./(t)	(2)Coop. Coef./(t)	(3)Rapp. Coef./(t)	(4)Divers. Coef./(t)	(5)Exclus. Coef./(t)	(6)Liber. Coef./(t)
Common	0,000 (0,29)	-0,001** (-2,23)	-0,002** (-2,20)	-0,008*** (-6,61)	-0,002 (-1,19)	0,005 (0,32)
Roa	0,062* (0,65)	0,066 (0,69)	0,066** (0,69)	0,076 (0,80)	0,063 (0,66)	0,061 (0,64)
Volat	-0,012*** (-3,40)	-0,012*** (-3,36)	-0,012*** (-3,28)	-0,010*** (-2,80)	-0,012*** (-3,35)	-0,012*** (-3,42)
Indeb	-0,099*** (-10,07)	-0,098*** (-10,00)	-0,099*** (-10,05)	-0,098*** (-9,98)	-0,099*** (-10,04)	-0,099*** (-10,09)
Grow	-0,026** (-2,04)	-0,027** (-2,09)	-0,027** (-2,09)	-0,029** (-2,23)	-0,026** (-2,05)	-0,026** (-2,00)
Loss	0,286*** (27,05)	0,286*** (27,06)	0,286*** (27,06)	0,286*** (27,05)	0,286*** (27,03)	0,286*** (27,06)
Age	0,000*** (-7,35)	0,000*** (-7,34)	0,000*** (-7,30)	0,000*** (-7,07)	0,000*** (-7,28)	0,000*** (-7,31)
AnaExp	0,008*** (4,85)	0,008*** (4,83)	0,008*** (4,84)	0,008*** (4,85)	0,007*** (4,82)	0,008*** (4,82)
Time	0,000*** (10,74)	0,000*** (10,69)	0,000*** (10,73)	0,000*** (10,68)	0,000*** (10,75)	0,000*** (10,73)
Constant	0,220*** (18,64)	0,231*** (19,23)	0,225*** (19,83)	0,242*** (20,70)	0,224*** (19,65)	0,218*** (19,13)
F	173,07***	173,17***	173,14***	175,62***	173,08***	173,07***
R ²	0,140	0,140	0,140	0,142	0,140	0,140
White Test	1521,51***	1518,37***	1521,74***	1543,21***	1532,69***	1509,11***
VIF	1,18	1,18	1,18	1,18	1,18	1,17

Note: ***, ** and * represent, respectively: 1%, 5% and 10%.

Tables 6 and 7 present the results of the multiple regressions estimated separately for Brazil and the United States. All models show a significant F-statistic at the 1% level, indicating overall adequacy of the regressions, in addition to VIF values below 2, suggesting the absence of severe multicollinearity problems.

In the Brazilian sample, it is observed that the linguistic tone of diversity (*Divers*) has a positive and statistically significant coefficient, indicating that greater intensity of this tone is associated with greater forecasting errors by analysts. The other linguistic tones, centrality (*Centr*), cooperation (*Coop*), rapport (*Rapp*), exclusion (*Exclus*) and liberation (*Liber*), do not have statistically significant coefficients, suggesting the absence of a direct relationship with forecasting error in the Brazilian context.

On the other hand, in the North American sample, the results indicate a statistically significant relationship between analyst error and various linguistic tones. Specifically, the tones of cooperation (*Coop*), rapport (*Rapp*), and diversity (*Divers*) show significant negative coefficients, indicating that greater intensity of these tones is associated with smaller prediction errors. The tones of centrality (*Centr*), exclusion (*Exclus*), and liberation (*Liber*) do not show statistically significant coefficients.

5 DISCUSSION

Correlation analysis (Tables 3 and 4) reveals relevant evidence about the role of linguistic tones in the accuracy of analysts' forecasts, particularly when considered in distinct cultural contexts. Unlike what was observed in the Brazilian sample, the results for the United States indicate that analysts' forecast error is negatively associated with the tones of cooperation (*Coop*), rapport (*Rapp*), diversity (*Divers*), and exclusion (*Exclus*), suggesting that the intensification of these linguistic dimensions is related to more accurate forecasts in this institutional environment. Thus, even in a market considered efficient, the way

information is linguistically structured seems to contribute to the formation of more accurate expectations.

In contrast, in the Brazilian sample, no statistically significant correlation was observed between analysts' error and the linguistic tones considered individually. This result suggests that, in an environment characterized by greater cultural collectivism and greater informational heterogeneity, the effects of corporate language may not manifest themselves directly or in isolation, but rather be conditioned by other institutional and economic factors. This evidence reinforces the hypothesis that the impact of language depends on the cultural context in which information is produced and interpreted (Hofstede, 1980; Lin & Lou, 2024).

Furthermore, the high correlation observed between the linguistic tones themselves, especially in the United States sample, indicates that companies tend to employ multiple discursive dimensions simultaneously and in an integrated manner. This pattern suggests that corporate communication should not be understood from isolated linguistic attributes, but rather as an articulated set of informational signals (Pineiro et al., 2021).

Taken together, these findings suggest that linguistic tones play distinct roles in shaping analysts' expectations, depending on the cultural and institutional environment. While, in the North American context, certain dimensions of corporate language are associated with greater forecast accuracy, in Brazil these effects appear to be more diffuse and conditional, reinforcing the study's central premise that the relationship between corporate language and analyst error is not uniform across countries.

The results of the mean difference test (Table 5) corroborate the correlation findings. They indicate that linguistic tones differ systematically between Brazilian and North American companies, especially in the United States context, where greater discrimination is observed across the extreme quartiles for multiple discursive dimensions. This evidence suggests that corporate language is used more heterogeneously and strategically in markets

characterized by greater institutional and informational maturity. Studies such as Hope (2003) demonstrate that stronger institutional environments encourage more informative and differentiated disclosures, which may be reflected in more pronounced variations in the linguistic patterns used by firms.

In contrast, the absence of statistically significant differences for most linguistic tones in the Brazilian sample indicates a more homogeneous use of corporate language. This pattern is consistent with empirical evidence that suggests that in emerging markets, corporate communication tends to be less discriminatory and more standardized, reflecting institutional limitations and greater dependence on quantitative information (Jaggi & Low, 2000; Hope, 2003).

The results of the multiple regressions reinforce the central premise that the impact of corporate language on analyst forecast error is conditioned by the cultural and institutional environment. In the North American context, it is observed that linguistic tones associated with cooperation (*Coop*), rapport (*Rapp*), and diversity (*Divers*) contribute to the reduction of forecast error, suggesting that corporate language acts as a complementary mechanism for reducing informational asymmetry, even in markets considered efficient.

Cooperation (*Coop*) and the rapport (*Rapp*) language are not automatic pattern; they can convey strategic information. Thus, in an individualistic environment like the US, emphasizing these attributes can be a deliberate, relational, and informative strategy for analysts.

These findings are consistent with empirical evidence demonstrating that textual properties of corporate disclosures carry relevant incremental information for analysts and investors. For example, Li (2010) demonstrates that the language used in forward-looking disclosures influences the market's ability to anticipate future results. Complementarily,

Loughran and McDonald (2011) show that the use of clearer and less ambiguous language improves the interpretation of financial information.

In contrast, in the Brazilian sample, only the diversity tone (*Divers*) shows a significant and positive relationship with analyst error. This result suggests that, in emerging markets, greater complexity or discursive heterogeneity can hinder the interpretation of information, increasing forecast error. Empirical evidence indicates that, in environments with less institutional enforcement, corporate language tends to be less disciplined and less informative. Hope (2003) and Jaggi and Low (2000) demonstrate that the institutional context directly affects the quality and usefulness of corporate disclosures.

On the other hand, communal language in Brazil did not show significance. This may occur if analysts tend to use communal language, so that tones related to this aspect do not help discriminate between quality and future performance.

Taken together, the results indicate that corporate language plays a relevant informational role, but that its effects are not universal. They depend on the ability of the market and analysts to interpret and incorporate textual signals, reinforcing the importance of considering cultural and institutional factors in the analysis of the relationship between language and investment decisions. More specifically, language that deviates from the cultural standard in Brazil implies greater analyst error, while in the USA market multiple tones are informative, including communal ones.

Regarding the control variables, the results indicated that, for both countries, companies with higher growth have lower forecast error, while those with losses lead to greater analyst error. This result is consistent with Hwang et al. (1996), who state that the greater the loss observed in a company, the greater the analyst's forecasting error will be, due to the temporary components present in the loss, which are more difficult to estimate.

In Brazil, the results suggest that more volatile companies are associated with greater forecast error for the analyst, possibly due to the greater uncertainty generated. However, in the USA, it seems that analysts appear able to predict profits with less error for companies that have greater volatility.

An intriguing result concerns to the influence of analyst experience on profit forecasts. In Brazil, the data indicate that more experienced analysts tend to present a smaller forecast error. This relationship is understandable, as experience can provide a better understanding of economic contexts and the nuances of the local market, allowing analysts to make more informed and accurate forecasts (Mikhail et al., 1997). Indeed, in less efficient markets, specific knowledge can be even more relevant (Clement, 1999). Familiarity with the specific characteristics of the Brazilian market, which can be more volatile and less predictable, may be a factor that contributes to this effectiveness.

On the other hand, in the USA, the results suggest that greater analyst experience is associated with an increase in forecast errors. This phenomenon can be attributed to several factors. Firstly, more experienced analysts may be more likely to rely on their intuition or pre-existing models, which can lead to resistance to adjusting their forecasts to new information or changes in the economic environment, resulting in overconfidence (Daniel et al., 1998). Furthermore, the greater complexity and diversity of information available in the American market may hinder analysts' ability to keep up to date, resulting in less accurate forecasts (Tetlock, 2007).

Regarding indebtedness, the results indicate that, for USA companies, a higher level of indebtedness is associated with a lower forecast error by analysts. This finding is consistent with existing literature (Xie et al., 2012), which suggests that analysts may have a clearer understanding of the risks and financial dynamics of indebted companies, especially in a mature market like the USA. The transparency and stricter regulation of the US capital market

may provide more reliable data, allowing analysts to make more accurate forecasts, even in high-leverage scenarios.

Finally, the analysis reveals that older companies and forecasts made with a longer time interval before the disclosure of actual profit tend to result in a higher forecast error. This result can be interpreted in two ways. First, older companies may have a more complex and varied financial history, which can make accurate analysis by analysts more difficult. Second, the further into the future the forecast is made, the greater the uncertainty associated with external factors and market changes that can impact financial results, thus increasing the margin of error in the forecasts.

These dynamics highlight the importance of considering not only the individual characteristics of analysts, but also the economic and cultural context in which they operate, allowing for a deeper understanding of the variables that influence the accuracy of financial forecasts.

Given the large size of the USA sample, it was decided to perform additional robustness tests using random subsamples of 3,000 observations, instead of smaller subsamples. This choice allows for the assessment of the stability of the coefficients under a substantial, yet still informative, reduction in sampling power, preserving the multivariate structure of the model and avoiding purely statistical instability resulting from excessively small samples. One hundred independent random subsamples were generated, the model was estimated in each of them, and the coefficients and their respective levels of statistical significance were recorded. The results indicate that, for the tones of centrality, cooperation, rapport, exclusion, and liberation, the coefficients are not statistically significant at the 5% level in 90%, 84%, 89%, 88%, and 94% of the subsamples, respectively. In contrast, the tone of diversity shows a statistically significant coefficient in 85% of the subsamples analyzed. Although these findings partially diverge from the results obtained with the complete sample

from the USA, especially regarding the tones of cooperation and rapport, they reinforce the robustness of the effect associated with the tone of diversity. Therefore, the results highlight a structural difference between the markets analyzed: while in Brazil a greater tone of diversity in analysts' reports is associated with a greater forecast error, in the USA the opposite effect is observed, with a reduction in forecast error. This contrast is consistent with widely documented cultural differences between more individualistic economies, such as the American one, and relatively more collectivist economies, such as the Brazilian one, in which the interpretation, use, and credibility of narratives associated with diversity can take on distinct economic meanings.

6 CONCLUSION

This study aimed to investigate whether the linguistic tones used in corporate communication are associated with financial analysts' forecasting errors, considering cultural differences between Brazil and the United States. By integrating automated textual analysis, cross-sectional multiple regression models, and cultural variables based on Hofstede (1980), the work sought to contribute to understanding how linguistic and cultural factors interact in the formation of expectations in capital markets.

The results indicate that the informational impact of corporate language is not homogeneous across countries. In the United States, tones associated with cooperation, rapport, and diversity are negatively related to forecasting errors, suggesting that language functions as a complementary mechanism for reducing informational asymmetry in an information-dense environment. This finding is consistent with the literature on textual analysis in finance (Li, 2010; Loughran & McDonald, 2011; Huang et al., 2014b), and highlights that linguistic characteristics carry informational content relevant to the market.

On the other hand, in Brazil, only the diversity tone showed a significant relationship, being associated with a greater prediction error. This result suggests that, in culturally collectivist and institutionally distinct environments, language that deviates from the normative standard can increase interpretative complexity, increasing analysts' forecast error. Thus, the study contributes to the literature by demonstrating that the informational value of linguistic tones depends on the cultural and institutional context in which they are produced and interpreted, expanding empirical evidence on the role of culture in the usefulness of corporate disclosures (Hope, 2003).

From a theoretical point of view, the research contributes to three main strands of the literature: a) textual analysis in finance, by examining linguistic dimensions associated with commonality and individualism; b) behavioral finance, by exploring how discursive signals influence the formation of expectations; c) cultural studies applied to accounting and capital markets, by demonstrating that the effect of language is conditioned by predominant cultural values.

In practical terms, the results suggest that managers should consider the cultural environment when structuring their disclosures, especially when seeking to reduce informational uncertainty among analysts and investors. For financial analysts, the findings indicate that interpreting corporate language may require greater sensitivity to the institutional and cultural context.

As a limitations, the analysis is concentrated on a single period (2019), which restricts the temporal generalization of the results. Future research could broaden the time horizon, include other countries with different cultural configurations, and explore dynamic interactions between language, performance, and forecast revisions.

In summary, the study demonstrates that corporate language does not have a universal effect on forecast accuracy. Its impact depends on the interaction between culture,

institutional environment, and the market's information-processing capacity, offering new evidence for the debate on disclosure, culture, and informational efficiency.

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Aspectos da Linguagem do Relatório dos Analistas Financeiros: Enfoque na Relação Entre a Acurácia e as Características que Compõem o Tom Linguístico da Comunalidade

RESUMO


Objetivo: Analisar a relação entre o erro das previsões de lucro dos analistas financeiros e os tons linguísticos que compõem seus relatórios, considerando distintos ambientes culturais (coletivista x individualista).

Método: Utilizou-se como amostra as empresas do Brasil e EUA, no ano de 2019, totalizando de 979 observações para o Brasil e 17.761 para os EUA. As características linguísticas consideradas foram: centralidade, cooperação, relacionamento, diversidade, exclusão e liberação, todas obtidas via Diction®. Os testes foram realizados em modelos de Mínimos Quadrados Ordinários.

Resultados: Os resultados indicam que, nos Estados Unidos, os tons de cooperação, relacionamento e diversidade estão associados à redução do erro de previsão, sugerindo que a linguagem corporativa possui conteúdo informacional incremental em ambientes institucionais mais maduros. No Brasil, apenas o tom de diversidade apresentou relação significativa, estando associado a maior erro de previsão.

Contribuições Teóricas/Metodológicas: Os achados sugerem que o impacto da linguagem corporativa sobre a acurácia dos analistas depende do contexto cultural e institucional no qual a informação é produzida e interpretada, contribuindo para a literatura de finanças comportamentais, análise textual e estudos culturais em contabilidade e mercado de capitais.

Palavras-Chave: Previsão de Analista, Comunalidade, Diferenças Culturais.

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