

DEPARTMENT OF ACCOUNTING AND FINANCE

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in corporate narratives and
institutional environment**

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ABSTRACT:

We study rhetorical impression management in the letter to shareholders using linguistic style properties of text and investigate whether the company's institutional environment affects the rhetorical style of the CEO in the shareholder letter. The effect of the institutional environment is examined by comparing linguistic style of US and UK companies in a longitudinal setting. We use automated text analysis procedures to capture linguistic style characteristics and discern three distinct linguistic style profiles with rhetorical effect: an acclaiming or assertive stance, a more defensive framing position and a logic-based cognitive impression management orientation. Consistent with our expectations of higher intrinsic incentives for rhetorical impression management in the US, we find that, after controlling for company-specific determinants, all three composite linguistic style profiles show to be significantly more prominent in US companies than in UK companies. Our results further show that credibility concerns and litigation risk affect the rhetorical style of the shareholder letter in the US where higher institutional scrutiny tends to sharpen sensitivity to credibility issues and litigation risk.

Keywords: letter to shareholder, linguistic property, rhetorical style, institutional scrutiny, credibility, litigation risk.

1. INTRODUCTION

In this paper we investigate rhetorical style patterns in the letter to shareholders (also known as the president's letter, the CEO letter or the chairman's statement) in the corporate annual report and whether differences in the institutional environment affect the verbal stance of the CEO¹. Linguistic properties of text have been used in prior research to substantiate self-presentational tendencies in corporate reporting (Cho, Roberts & Patten, 2010; Li, 2010; Merkl-Davies, Brennan & McLeay, 2010) and are deemed to sustain the persuasive quality of corporate disclosure. The effect of the institutional environment on rhetorical style is examined by comparing linguistic characteristics of the letter to shareholders between US and UK companies in a longitudinal setting.

The letter to shareholders, although not mandated, is an integral and prominent part of the corporate annual report. It typically figures as the first item in the annual report and focuses on key messages of the annual report narratives. As the letter is personalized and signed, it is taken to represent top management's construal of the most prominent corporate events and achievements, their context and embedded beliefs and values. The presentational and linguistic content of the CEO letter may provoke interpretive and affective reactions that go beyond a mere factual overview of the company's position and progress. In that regard, the shareholder letter may have significant rhetorical impact in building support and credibility, convincing investors and other stakeholders and sustaining confidence (Amernic, Craig & Tourish, 2010; Carter & Dukerich, 1998; Conrad & Poole, 2005; Ginzel, Kramer & Sutton, 1993). By providing both the content of presumed important corporate outcomes and events and the appropriate cues for interpreting and appreciating them, the letter to shareholders is a key sensemaking instrument (Conaway & Wardrope, 2010), with informational as well as self-presentational value (Abrahamson & Park, 1994; Brown, 1997). In that sense, the CEO letter is expected to serve mixed purposes, conveying information on the company's position and progress and signal top management's

¹ In this paper we will refer to the CEO as the author of the letter to shareholders, although in some cases the letter was signed by the Chairman of the Board. Although the authorship of the shareholder letter may well be a team effort, it is the CEO who signs and authorizes the letter and, thus, takes responsibility for its content.

beliefs, cognitions and attitudes. Its persuasive strength partially resides in this duality: the veneer of objectivity as a conveyer of institutionally embedded information may add credibility to the presentational content of the CEO letter.

In this study we focus on linguistic style properties of the text of the CEO letter that rhetorical scholars have argued to signal the presence of the communicator and underpin the persuasiveness of a text. These linguistic properties are typically interactional and go beyond the text's thematic and propositional content (Hyland & Tse, 2004). They tend to moderate the expressiveness of the text and can be used to affect the way the audience reacts to communicated content. Interactional linguistic resources involve the audience in the argument by alerting the readers to the communicator's views on the propositional content and its importance for the audience. Such rhetorical devices establish rational, affective and interpersonal appeal towards the audience (Hyland, 2005). Applied linguistics tends to differentiate in this regard style words from content words. Style words reflect the 'how' of communication, whereas content words establish the 'what' of the message (Tausczik & Pennebaker, 2010). Style words indicate mechanisms by which meaning is conveyed to the audience and add a kind of sense-giving layer to content words. The linguistic style properties that we investigate in this study, are analyzed in order to identify linguistic impression management (or rhetorical) profiles.

Differences in the institutional context of US and UK companies are argued to affect both incentives for and constraints of persuasive CEO communication. Although the US and the UK institutional and capital market environment are generally perceived to be highly similar in many respects, there exist salient differences between US and UK corporate governance arrangements that may differently affect managerial incentives for more pronounced rhetorical positions. Country differences in private shareholdings and shareholder engagement, in nature of institutional investor involvement, in constraints on CEO power and nature of CEO compensation may in the aggregate differently affect relationships between the company and its investors (debt and equity investors) and are argued to promote purposeful impression management of the CEO towards external audiences in US companies. In addition, higher litigation risk and stronger institutional scrutiny are expected to affect these tendencies to a considerable extent in the US.

Our results show a number of distinguishing features of the linguistic style of the letter to shareholders in US and UK companies. We find an overwhelming country effect in almost all linguistic property models investigated. In general, the letters to shareholders of US companies incorporate significantly more rhetorical devices of a linguistic nature than those of UK companies. We discern three dominant linguistic style profiles with rhetorical effect, which we label *Emphatic assertiveness*, *Cautious sensegiving* and *Rational appeal*. They sustain distinct rhetorical positions, in part depending on the propositional content of the text. They represent different dimensions of rhetorical coping behavior: an acclaiming or assertive orientation (*Emphatic assertiveness*), a more defensive framing position (*Cautious sensegiving*) and a somewhat detached, logic-based cognitive orientation (*Rational appeal*). After controlling for company-specific determinants of communication content, all three composite profiles are significantly more prominent in US companies than in UK companies, suggesting that CEO incentives for rhetorical impression management are significantly stronger in US companies. These tendencies are however attenuated (for the assertive and cognitive impression management profile) or strengthened (for the defensive impression management profile) by potential institutional scrutiny issues in the US setting. In the US, companies in high-litigation risk industries score significantly less on the potentially costly assertive and cognitive impression management profiles, and significantly stronger on the defensive impression management which, by its nature, is more litigation-proof. Our results also indicate that higher institutional scrutiny constrains the rhetorical stance of a company through the impact of credibility concerns on rhetorical behavior. This manifests itself by lower assertive and lower cognitive impression management in US companies with a more erratic performance history which suggests lack of managerial control over performance and lowers the credibility of causality-based and self-promoting rhetorics.

The remainder of the paper is structured as follows: Section 2 presents a literature review and develops hypotheses. Section 3 introduces the research design and describes our data. Section 4 analyses the data and presents the results. Section 5 discusses results and concludes.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Presentational content of the letter to shareholders

As part of an ongoing discourse with high external prominence, the letter to shareholders may have a significant rhetorical importance in building support, convincing investors, and sustaining confidence and credibility (Amernic, Craig & Tourish, 2010; Conrad & Poole, 2005; Yuthas, Rogers & Dillard, 2002). Although the content of the letter is unaudited and highly discretionary, it tends to define the essential elements of the corporate performance environment, to describe the context in which the company operates and to portray the normative and empirical bases on which to judge a company's actions. In doing so, the letter offers multiple ways to establish rationality, direction and appropriateness for external audiences. Moreover, prior research shows that the letter to shareholders is one of the most widely read sections of the annual report (Curtis, 2004; Clatworthy & Jones, 2006; Jones, 1988) and is especially focused on by private shareholders (Bartlett & Chandler, 1997; McInnes, Beattie & Pierpont, 2007). In general, private shareholders prefer an overview of the company and its financial and operational performance over detailed factual and technical disclosures of accounting information. The shareholder letter, however, is not merely an extension of the financial reporting package. A striking observation is the mix of themes and the sometimes relative paucity of financial reporting information in the CEO document. Conaway and Wardrope (2010), studying both US and Latin-American CEO reports, identify the following list of recurring themes that may be somewhat generalizable in this respect: Corporate governance, Customer relations, External environment (economic, political, natural forces), Financial reporting, Infrastructure and expansion, Leadership, Social responsibility, Vision, mission and outlook. It is within the context of these themes that issues of priority, agency, blame, control, responsibility, etc. are being elaborated.

Several mechanisms have been identified to affect audience perception through selectivity and bias of the narrative's content (e.g., Merkl-Davies & Brennan, 2007). One of the most persistent research results on presentational content is that both good and bad performing companies are predisposed to present favorable information

(Abrahamson & Park, 1994; Aerts, 2001; Clatworthy & Jones, 2001; Kohut & Segars, 1992). In a somewhat related way, attributional disclosure studies generally demonstrate a robust tendency to attribute positive effects or outcomes to the company's initiative and negative outcomes to external events or chance factors (Aerts, 2001, 2005; Bettman & Weitz, 1983; Clatworthy & Jones, 2003; Hooghiemstra, 2003; Salancik & Meindl, 1984). This explanation pattern is considered self-serving as it leads to define situations (tactically or strategically) to the company's own advantage.

Although prior research on self-presentational content of accounting narratives primarily relied on the thematic and propositional content of narrative disclosures, there exist other linguistic devices which are deemed to be helpful in organizing and evaluating that content in such a way that readers are guided and directed to how they should understand, appraise and respond to the information presented (Crismore, Markkanen & Steffensen, 1993). The use of such interactional linguistic devices is reflected in characteristics of text structure which go beyond thematic and propositional content and signal the communicator's stance to the message. Hyland (1998) refers to these linguistic devices as metadiscourse and connects these elements with rhetorical patterns in letters to shareholders through which rational, credible and affective appeals materialize that support the persuasiveness of the message. This perspective resonates with Goffman's (1959) arguments on the importance of 'face' in impression management, which largely depends on communicative devices to control audience reactions to communicated content (Solomon, Solomon, Joseph & Norton, 2013). Until recently, these rhetorical features remained largely unexplored in the empirical literature regarding narrative accounting disclosures, although some variants of readability research (Curtis, 1995, 1998; Li, 2008), tone analysis (e.g., Demers & Vega, 2010; Henry, 2008), research on transitivity (Sydserff & Weetman, 2002; Thomas, 1997) and deceptive communication (Goel & Gangolly, 2012) could be linked to the rhetorical research stream.

2.2 Linguistic style properties of the shareholder letter

Rhetorical scholars argue that linguistic devices holding cues of rational, affective

and interpersonal appeal may be as vital to the persuasive success of a text as its thematic and propositional content. Such interactional linguistic markers go beyond matter-of-fact reporting and reflect purposive editorializing, guiding the audience towards a preferred mindset. Editorializing reveals knowledge, beliefs and attitudes as embedded in cognitive processes and affective appraisals of the communicator. Consistent with prior research on presentational linguistics (Crismore et al., 1993; Hyland, 1998), we will focus on the use of causal language and other cognitive markers (insight and directive language, hedges and certainty expressions), net affective tone and personalization as rhetorical style markers.

Causal language: Causal reasoning is instrumental to establish meaning by signaling logical connections (additive, resultative and contrastive) between propositional content. It builds a rational appeal to readers (Hyland, 1998). It has been argued that entities which operate in an environment with considerable uncertainty, are generally perceived as more effective when they are able to demonstrate evidence of rational behavior and provide appropriate explanations (Staw, 1980). Increasing cognitive effort and causal reasoning may be to a large extent a response to accountability demands (Ciani & Kaplan, 2010; Merkl-Davies & Brennan, 2007). From a rhetorical point of view, causal reasoning brings the reader to interpret pragmatic connections according to the author's preferred interpretation, and this may be done both in a retrospective and prospective fashion.

Use of insight and directive language, hedges, exclusions and certainty expressions: Persuasive messages not only depend on rational appeals, but also on cognitive mechanisms that create an interpersonal context for sustaining the image of a credible and considerate communicator (Hyland, 1998). These cognitive marking mechanisms embody linguistic devices that mark and signal the presence of an authoritative, capable and honest communicator. It is effected by the use of sensegiving language by referring to insight processes suggestive of learning and understanding (e.g., 'inform', 'consider', 'know') and the use of obligation modals (e.g., 'ought', 'must', 'should'), hedges (or tentative/cautious language such as 'probably', 'perhaps', 'guess' and 'might') that create distance from the content and signal that the propositional information is only presented tentatively, critical thinking in terms of identifying inhibition and making distinctions (exclusion words, such as

‘but’, ‘without’, exclude’) and expressions of certainty (like ‘certainly’, ‘definite’, ‘obvious’) that signal the communicator’s assurance of the propositional content. Comparing the content of shareholder letters and management commentary (or directors’ reports), Hyland (1998) reveals significantly more use of these cognitive markers in shareholder letters than in management commentary, pointing to the distinctive rhetorical nature of both documents and the stronger impression management content of the former.

Net affective tone: The tone of a text is a function of both content and word choice. A more positive tone can be achieved by selectively focusing on positive content and by describing events and outcomes in a positive way (Henry, 2008). Most prior research on tone in accounting narratives has stressed content-based selectivity and search for positive news. Prior research suggests that the level of negativity of narrative content is generally more responsive to performance (changes) than the level of positivity. Abrahamson and Park (1994) reveal that change in company’s financial performance has a significant impact on the number of negative words in the president’s letters. The greater the decline in the financial performance of the company, the greater was the disclosure of negative outcomes in the annual narratives. This is not the case for the positive news disclosure. Aerts (2001) corroborates these tendencies when studying the attributional framing of performance outcomes in management commentary. The non-responsiveness of the level of positivity in the accounting narratives to performance points to discretionary presentational management of positive news. The relatively loose relationship between performance and tone of reported content is not that surprising for a letter to shareholders which is a relatively self-contained document covering a range of subjects (performance, strategy, corporate governance issues, environmental descriptions, etc.). The mix of different types of positive news is particularly relevant in this context. Positive categorizations of non-accounting news are by themselves less sensitive to changes in financial performance and can selectively direct and focus attention to image enhancing aspects of corporate behavior. Such structural positivity can be seen as a packaging of information in order to express general optimism as to the future, despite short-term fluctuations in performance outcomes that have to be dealt with in a discretionary ad hoc way.

From a linguistic style perspective, we stress the use of affective qualifiers (positive and negative emotion words) instead of content-based tone measures. Positive and negative emotion words capture words with positive (e.g. 'pride', 'bright', 'confident') and negative connotation (e.g., 'blame', 'unpleasant', 'sad') respectively, independent of the nature of the content discussed (e.g., good versus bad performance news). Prior research using automated content analyses tools has also implicitly used this type of tone analysis. For instance, Davis et al. (2011) find that managers use optimistic and pessimistic tone in earnings press releases to provide investors with information about expected future performance and that the market responds to these disclosures.

Personalization: Through the use of personal pronouns, the message become more affective and personal. It explicitly connects the communicator with the message and increases the personal identification with message content. Hyland (1998) reveals extensive use of personal pronouns, especially of the first-person pronouns like 'I', 'we', 'our', in the shareholder letter of US companies. Especially the plural form ('we', 'our') is highly prominent in CEO letters (Conaway & Wardrope, 2010). Thomas (1997) demonstrates a positive association between company performance and the use of the pronoun 'we'. Clatworthy and Jones (2006) show that, for a UK sample, profitable companies are significantly more likely to use personal pronouns than unprofitable companies. Yuthas et al. (2002) show that companies with negative earnings surprises use less self-references, suggesting that in a negative performance environment companies focus more on groups and events outside the company. Taken together, these authors generally argue that the use of personal pronouns and related self-referencing allows the company to acclaim and internalize positive outcomes. By contrast, omitting personal pronouns in case of bad performance tends to disconnect the messenger from the message.

In practice, linguistic style features are usually not used in isolation, but are combined to arrive at a convenient rhetorical stance. In that regard, we will use factor analysis procedures to identify dominant rhetorical styles.

2.3 Country-level institutional incentives for rhetorical impression management

Although the US and the UK are generally perceived to have highly similar institutional and capital market characteristics, there exist salient differences in their respective corporate governance arrangements that may differently affect managerial incentives for impression management (Beattie & Jones, 1997) and related rhetorical styles. In this regard, we can discern differences between the US and the UK setting in constraints on CEO power, in CEO compensation, in private shareholders and shareholder engagement, and in nature of institutional investor involvement, which differently affect relationships between the CEO and the board of directors (internal governance relationships) and between the company and its investors (debt and equity investors). In the aggregate, these differences are argued to promote a more active rhetorical position of company top management team (CEO) towards external audiences in US companies.

The predominance of a dual leadership structure in which the roles of the CEO and the Chairman of the Board are split, tends to considerably constrain CEO power in the UK compared to the US. Dedman (2000, 2002) shows that after the implementation in the UK of the recommendations of the Cadbury Committee in 1992, companies' governance practices effectively reduced the agency cost of managerial entrenchment, enhanced board oversight with respect to financial reporting and top executive discipline and improved effective monitoring of executive action. In the US, however, the majority of the CEOs is also the Chairman of the Board, leading to more concentration of power in the persona of the CEO and inhibiting effective monitoring from outside the corporate hierarchy. Consistent with greater CEO power in the US, CEO pay and share-based compensation are also much higher in the US than in the UK (Murphy & Conyon, 2000). The prevalence of share-based compensation holds direct incentives to promote an environment capable of sustaining a high share price, at least in the short run.

In general, US share ownership tends to be less engaged and more dispersed than its UK counterpart. Aguilera, Williams, Conley and Rupp (2006) argue that differences in the attitude and behaviour of shareholder value oriented institutional investors may be considerable and affect incentives for impression management. Although institutional ownership has grown considerably in both capital markets (Binay, 2005; Mallin, Mullineux & Wihlborg, 2005), it is still considerably larger in

the UK than in the US. Moreover, the nature of institutional ownership tends to be different in these countries, and these differences may hold implications for how they interact with company management. In the UK, pension funds and insurance companies, which are long-term oriented, are the dominant categories of institutional investors. On the other hand, in the US, mutual funds, which have a shorter-term outlook, tend to be more prominent. The short-term outlook of investors in US listed companies makes that US companies are more frequently confronted with shareholders who want to influence corporate management both directly through activism, and indirectly, by provoking further arguments for government regulation (Copland, 2011).

Taken together, these country-level institutional differences in external and internal governance systems, are expected to hold stronger incentives for rhetorical impression management in US companies than in UK companies.

2.4 Credibility concerns, institutional scrutiny and litigation risk

Although rhetorical scholars argue that linguistic devices that establish affective, rational and interpersonal appeal may be as vital to the persuasive success of a text as its propositional content, the argument rests on the premise that the rhetorical devices are perceived as credible signals. Their credibility will depend in part on the degree to which they resonate with the audience's background expectations, which may largely depend on prior evidence of company-specific performance. In this regard, corporate impression management in accounting narratives has been shown to be particularly sensitive to the relative stability of the company's performance history (Aerts, 2001; Salancik & Meindl, 1984). High volatility of past performance and, thus, a less stable performance track record suggests lack of managerial control (Salancik & Meindl, 1984). This may undermine the plausibility and credibility of self-serving communication and, thus, the effectiveness of promotional types of rhetorical impression management with regard to corporate achievement (Aerts, 1994, 2001; Hooghiemstra, 2003; Mercer, 2004). Credibility concerns may be especially restraining when institutional scrutiny forces are strong. Litigation risk may also considerably constrain self-serving behaviour and overt rhetorical strategies. The UK

and the US tend to differ in these respects (Aerts & Tarca, 2010).

The UK and the US are both common law countries with a strong capital market orientation, but they hold marked differences in expected regulatory and litigation costs of disclosure (Aerts, Cheng & Tarca, 2013). In this regard, the US represents a much more litigious environment with stronger regulatory and investor monitoring than the UK. Graham, Harvey and Rajgopal (2005) show that litigation concerns with regard to financial disclosure rank high in the US, whereas in the UK disclosure-related risk of lawsuits is considered to be of less or now importance (Beattie & Smith, 2012).

In the accounting literature, it has been suggested that litigation risk may bring companies to write longer reports or offer more extensive elaboration to shield them from litigation more effectively when they report poor performance or expect to do so in the future (Bloomfield, 2008). Nelson and Pritchard (2007) find that companies facing higher litigation risk use longer cautionary disclosures. Institutional scrutiny and litigation concerns has been shown to affect properties of explanatory behavior as well. It tends to attenuate self-serving causal disclosures and feeds a preference for formal language explanations of performance outcomes (Aerts et al., 2013).

Overall, these considerations bring us to expect that in the US, where litigation risk is significantly higher than in the UK, the impact of litigation concerns on the rhetorical style of the CEO letter is stronger than in UK companies. Moreover, given that credibility issues will be more easily detected and exposed in a high scrutiny environment, we expect that that the effect of performance history on rhetorical behavior will be stronger for US companies than for UK companies.

3. DATA AND METHOD

3.1 Sample selection

Our sample relates to two countries (the USA and the UK) with a strong capital markets orientation, but with marked differences in institutional scrutiny. Our sample covers 100 US and 100 UK companies from four broad industries categories (Food, Retail, Pharmacy and High tech) over a five year period. We select a multi-period

sample in order to examine inter-temporal effects. Restraining our sample to four industries provides an additional control for diversity between industry and, given data processing restrictions in content analysis, allows more variation within industry. The choice of the industry groups allows us to compare companies from high intangible asset industries (pharmaceutical and high technology companies) and companies from low intangible asset industries (food and retail companies). We use SIC codes to select and identify the four industry groups for our sample: two low intangible-intensive industries (Food – SIC 20 and Retail – SIC 52 to 59) and two high intangible-intensive industry groups (Hitech - SIC 35/73/36/38/48 and Pharma – SIC 283). Sample selection is triggered using the data available in the Compustat Global database, comprising 2091 US companies and 367 UK companies for the selected industries for which at least six years of data were available up to 2010. We ranked the companies in each country and industry group according to size (total assets at the end of fiscal year 2009) and divided the population into quartiles. In each quartile we randomly selected six to seven companies in order to arrive at a sample comprising a variety of company size within each country. Following this procedure, we obtain a sample of 50 companies in each industry group and of 100 companies for each country. As US companies are on average larger than UK companies, this is also reflected in our sample. We decided not to match the sample between countries in order to representatively cover the whole population in each country. Moreover, company size differences are appropriately controlled for in the multivariate data analyses.

3.2 Data collection

For each company, we download the annual reports in pdf-format for the fiscal years 2006 to 2010 from the company's website. After deleting photographs, graphs, charts, logos and tables, forms of address (such as 'Dear shareholders') and greetings (e.g., 'Yours faithfully'), file name references and text continuation indicators, the letter to shareholders is converted into computer readable text format. Due to missing statements, our final sample of shareholder letters comprises 498 company-year

observations from USA and 479 from UK². The Compustat Global database is used to collect the relevant financial variables over the sample period. In the empirical analyses the number of company-year observations can be somewhat reduced due to missing financial data.

3.3 Content analysis

We collect linguistic style data using automated text analysis procedures. The computer-based approach improves the generalizability of the empirical results and relevance for follow-up research. In addition, it allows larger sample sizes which significantly increase the power of the empirical tests (Li, 2010). In this paper we use the computer program *Linguistic Inquiry and Word Count* (LIWC), an automated text analysis program developed by psychologists to examine emotional, cognitive, and structural linguistic components present in verbal and written discourse. LIWC is a probabilistic device that analyzes samples of text on a word-by-word basis and calculates the number of words that match pre-defined word categories. This program has been extensively tested (Pennebaker & Francis, 1996) and used in numerous social psychology studies (Tausczik & Pennebaker, 2010). In the financial reporting context, for example Merkl-Davies et al. (2010) use LIWC to investigate self-presentational dissimulation, enhancement and retrospective sense-making in the chairman's statement of UK listed companies.

Consistent with the aforementioned style constructs that establish affective, rational and interpersonal appeal, we use the following LIWC linguistic style characteristics:

Positive/negative emotion words and net affective tone: We use the LIWC content categories of positive and negative emotion words which capture words with positive and negative connotation. Based on the relative occurrence of both sets of content a net tone measure is calculated.

Causal reasoning: The LIWC content category causation measures the relative

² All 498 USA letters are titled as shareholder letters or CEO's review and signed by CEO. Correspondingly, in UK sample we identify 316 letters as CEO letters and signed by CEO. For those annual reports that without CEO's review, we use chairman's statements instead.

presence of causation words ('cause', 'effect', 'hence').

Cognitive marking mechanisms: The LIWC content categories insight, discrepancy, tentative, inhibition, exclusion and certainty are used as proxies for use of insight, directive language, hedges, inhibition and exclusion words and certainty expressions respectively. Both the use of causal reasoning and of cognitive marking mechanisms is considered to be an indicator of cognitive effort and cognitive complexity.

Personalization: The LIWC category personal pronouns measures the relative presence of personal pronouns and is used as a proxy for personalization and related self-referencing.

Text length (or word count): it measures the length of a text according to the number of words in the text. Previous research often treats the word count metric as a measure of complexity or transparency of the disclosure rather than as a measure of the amount of disclosure (Li, 2008, 2010; You & Zhang, 2009). Kohut and Segars (1992) investigate the letter to shareholders of the top and bottom 25 US companies in the Fortune 500 ranked by return on equity (ROE). After analyzing word count, syllables per word and words per sentence, they find that only word count is statistically significant which could indicate that high ROE companies were more verbose than low ROE companies. Li (2010) states that the length of narratives is likely to capture something between the extent of disclosure and the complexity of disclosure. In this regard, he suggests that future research needs to control for the underlying business or operational complexity when using text length as a measure of complexity.

Besides these linguistic style features, we will use additional LIWC and accounting research-based content measures to contextualize the use of rhetorical style profiles (see Results section).

3.4 Empirical models

The following basic empirical models are used to investigate our research questions:

Rhetorical style variable = f [*US country dummy, Performance volatility, Litigation risk, (Performance volatility x US country dummy, Litigation risk x US country dummy), Profitability level variables, Sales growth, Change in profitability variables,*

Company size, Financial risk, Cross-listing, Industry dummies, Year dummies]

We use pooled time series regression with year dummies to test the empirical models. The UK is the omitted country variable. We use a hierarchical procedure to separately test the significance of the country variable and its interactive effects.

We define performance volatility as instability of past financial performance over time. It is measured as the company-specific variation coefficient (the standard deviation divided by the absolute mean) of the company's net sales margin over a period of 5 years preceding the letter date. The sales return margin captures operating risk to a large extent. We follow Francis, Philbrick and Schipper (1994) to measure ex ante securities litigation risk and use their classification details of litigious industries (four-digit SIC codes) to apply an indicator variable for companies with higher expected securities litigation risk³. Profitability level, profitability change and company growth proxy for the demand and supply of performance justification. We use a continuous variable (ROA) and an indicator variable (Loss company) to control for profitability. The indicator variable takes the value of one if the company suffers a net loss (negative earnings and zero otherwise. We control for change in profitability using two variables. An indicator variable (Net income increase) indicates whether there is an increase in net income between two fiscal years, taking the value of one if there is an increase in net income and zero otherwise. An earnings per share surprise measures the change in basic earnings per share. We include relative change in sales scaled by total assets to control for company growth and potential acquisitions.

Previous studies find that company size is significantly associated with amount and quality of voluntary disclosure (e.g. Alsaeed, 2006; Cooke, 1992; Wallace, Naser & Mora, 1994). For example, Wallace et al. (1994) provide evidence that the amount of detail in the corporate annual report is increasing in company size and stock exchange listing, and decreasing in liquidity. Aerts (2005) evidences that larger companies use more enhancements and entitlements, but less defensive attributional statements. Company size is measured as the natural logarithm of the company's total assets (in euro). Previous research suggests that higher financial risk could induce

³ Francis *et al.* (1994) document a range of industries with high litigation risk, including biotechnology (SIC codes 2833-2836 and 8731-8734), computers (SIC codes 3570-3577 and 7370-7374), electronics (SIC codes 3600-3674), and retailing (SIC codes 5200-5961).

companies to become more sensitive to impression management concerns and to be more prone to use verbal coping tactics (Aerts, 2005). We use both a long-term and a short-term financial risk proxy. We measure financial leverage as long-term debt divided by total assets and short-term liquidity risk as current assets divided by current liabilities. Prior research has shown that cross-listing increases the level and quality of disclosure, especially if a company is cross-listed on a foreign market that is more regulated than the domestic market. Therefore we expect that SEC foreign registrants will experience disclosure pressures (including narrative disclosure demands) and reporting incentives similar to US companies. We use an indicator variable of one if a UK company is cross-listed in the US. Industry membership has been shown to affect voluntary disclosure (Malone, Fries & Jones, 1993; McKinnon & Dalimunthe, 1993; Meek, Roberts & Gray, 1995) and industry-specific features have an influence on disclosure patterns of performance explanations (Aerts, 2005; Aerts & Tarca, 2010). In order to control for variability in linguistic text characteristics across industries, the sample was restrained to four broad industry sectors based on the standard industrial classification codes (Food, Retail, Pharmacy and High Technology). An industry dummy variable is created for each of these four industries. Finally, we included year dummies for each fiscal year included in the sample.

4. RESULTS

4.1 Sample descriptives and univariate tests

Table 1 presents descriptives of the main linguistic style variables referred to in this study. Both full sample descriptives and descriptives by country are presented. Table 1 also includes the results of univariate t-tests on the country means. In general, UK shareholder letters are significantly longer than US letters: US letters count on average 1,219 words, while UK letters contain on average 1,789 words⁴. The

⁴ Amernic et al. (2010), investigating CEO letters of the 100 largest companies in the Financial Times Stock Exchange (FTSE) according to market capitalization and of the top 100 companies in the annual Fortune 500 listing of the largest US companies according to annual revenues, show for 2006 an average length of 1,722 words

difference in word count does, however, not affect the measurement of the other linguistic variables, as these are scaled by the number of words of the shareholder letter. All relative linguistic characteristics are significantly different between US and UK shareholder letters and they are all (except for negative emotion and inhibition words) significantly more present in US letters than in UK letters.

[INSERT TABLE 1 ABOUT HERE]

Table 2 presents full sample and country descriptives of the independent variables used in our analyses. The US companies in our sample are, on average, significantly larger than the UK companies. The UK companies show on average a more volatile performance history. Thirteen percent of the UK companies have an additional US listing. Around one third of the sample is composed of loss companies.

[INSERT TABLE 2 ABOUT HERE]

4.2 Factor analysis

To examine patterns among linguistic style variables and in order to create a parsimonious set of rhetorical indicators, we employ principal components factor analysis with varimax orthogonal rotation⁵ in order to empirically identify dominant uncorrelated linguistic style profiles. The factor analysis inputs include the main linguistic properties which have been theorized to be important from a rhetorical style perspective and which are related to the hypothesized differential tendencies (net optimism, use of causal reasoning, use of cognitive markers - insight and directive language, use of hedges, inhibition, exclusion and certainty expressions - and personalization devices). Table 3 (Panel A) shows the variables resulting from the factor analysis model with the highest cumulative explained variance. In this model the use of inhibition and exclusion words is not retained. As shown in Table 3 (Panel A), we identify three uncorrelated factors with eigenvalues greater than 1.0 which

for UK companies and of 2,160 words for US companies.

⁵ Factor results show to be similar when using oblique rotation.

cumulatively explain 61 per cent of the overall variance. Using a cut-off of .20 for factor identification purposes, we label these factors as follows: an *Emphatic assertiveness* profile (factor one), a *Cautious sensegiving* profile (factor two) and a *Rational appeal* profile (factor three).

[INSERT TABLE 3 ABOUT HERE]

The *Emphatic assertiveness* factor (factor one) reflects a linguistic style pattern based on high net positive tone, extensive self-referencing through the use of personal pronouns and strong use of emphatic certainty expressions. Self-references indicate personal identification. The strong correlation of net positive emotion language and personalization markers is consistent with a self-serving tendency to acclaim and internalize positive events and achievements. The configuration of these features tends to project an image of authority, personal agency and control, and commitment to the views expressed. Factor two (*Cautious sensegiving*) is basically defensive (negative net tone) with high use of cognitive uncertainty and attitude markers (hedges, directive language and insight markers), without certainty expressions. These features indicate considerable cognitive effort and cognitive complexity, but a lower level of commitment to facts and assertions. They tend to project an image of a modest, trustworthy and cautious steward of the company (Hyland, 1998). Tentative and cautious expressions may be directed at accommodating reader responses to more negatively oriented news by projecting an aura of credibility gained by openness and tolerance for ambiguity. Being accompanied by significant insight providing language, they simultaneously convey an impression of honesty and openness (Hyland, 1998). They are, however, not very helpful in establishing the authority of the communicator, as, for example the use of hedges communicates signals lack of confidence of the communicator in his statements. They create a distance from the message and avoid direct responsibility for it. Factor three (*Rational appeal*) loads strongly positive on causal language, supported by insight language, while avoiding directive language (obligation modals such as ‘should’, ‘ought’ or ‘need’). It is indifferent on the use of positive/negative emotion words. The configuration of features projects an image of a somewhat detached rationalizing communicator.

4.3 Validating the rhetorical style profiles with content-based measures

In order to validate the scope and meaning of the three composite rhetorical profiles, Table 4 (Panel A) shows correlations of the extracted rhetorical style profiles with on the one hand additional LIWC linguistic characteristics which are more content-based (LIWC category ‘achieve’) and linguistic content variables which more specifically reflect language from the domain of financial disclosure:

performance-related and resources-related words, agent-related words, future words (Henry, 2006), and litigious and uncertainty indicators (Loughran & McDonald, 2011). Moreover, we add from LIWC the use of auxiliary verbs (as an indicator of passive voice), exclusions and inhibition (additional indicators of cognitive effort not retained in the factor analysis outputs) and the use past tense (to reflect focus on the past). ‘Achieve’ (LIWC) covers words indicating achievement-related concerns (‘acquire’, ‘control’, ‘strength’, ‘closure’); these words are essentially agentic and indicative of the authors’ achievement motivation (Bender, Woike, Burke & Dow, 2012); they tend to affirm entities and achievements, describe affective states, attractive qualities and goals and suggests change, activity and purposefulness. This more general topic-related content variable is complemented by more specific financial disclosure related content categories: ‘oper_loss’, ‘oper_prof’, ‘oper_tot’, ‘resources’, ‘agents’, ‘future’, ‘litigious’ and ‘uncertainty’ (Henry, 2006; Loughran & McDonald, 2011). ‘Auxiliary verbs’ (LIWC) (‘have’, ‘do’, ‘are’, ‘become’) of which the relative presence is taken to be an indicator of the use of passive voice (Tausczik & Pennebaker, 2010) and ‘past tense’ (LIWC), expressing a focus on the past.

[INSERT TABLE 4 ABOUT HERE]

Overall, the rhetorical style variables are highly negatively correlated with relative content variables indicating discussion with regard to financial performance (‘oper_tot’) and financial position (‘resources’) issues, suggesting that rhetorical talk substitutes for matter-of-fact discussion of financial statement elements. The only exception are the comments on elements like expenses and losses (‘oper_loss’), which

are positively related to the *Cautious sensegiving* profile (factor 2), evidencing the more defensive nature of this type of rhetorical posture. Overall, the *Cautious sensegiving* dimension is more conjectural and less concrete than the two other rhetorical dimensions. It contains language that is more hypothetical (tentative language), oriented to the past and indicative of uncertainty. It is also associated more passive voice ('auxverb'), suggesting a detached reasoning position. On the other hand, the *Emphatic assertiveness* profile is strongly correlated with linguistic content referring to achievement-related issues and to the presence and role of economic agents (relational issues) suggesting an active rhetorical stance akin to what Amernic et al. (2010) refer to as 'transformational leadership' talk. It is more future-oriented and uses less passive voice. The third rhetorical profile (*Rational appeal*) mainly holds a detached cognitive orientation. It also promotes references to achievement issues, but is not relational (no correlation with references to agents). It seems more focused on explaining current issues in an *ad hoc* fashion without much affective or conjectural language. Table 4 (Panel B) presents the correlation matrix of the rhetorical profiles and the independent variables. Pairwise correlations show that Factor one (*Emphatic assertiveness*) is positively associated with profitability, while the two other rhetorical profiles tend to be negatively associated with profitability level (ROA and loss company). Performance volatility is negatively associated with *Emphatic assertiveness*, while it is positively associated with *Cautious sensegiving*.

4.4 Univariate analysis of rhetorical style profiles by country

Panel B of Table 3 shows the mean scores on the composite rhetorical profiles by country. On average, US companies score higher on all three rhetorical composites: on average, US companies tend to use significantly more emphatically assertive language, use more cautious sensegiving and show stronger rational appeal in their CEO letter than UK companies. The differential tendency is highest for Emphatic assertiveness. The results of these univariate tests are consistent with the argument that US companies have more incentives for rhetorical impression management than UK companies and are consistent with hypothesis 1. This tendency shows to be very robust and manifests itself for all three identified rhetorical profiles.

4.5 Multivariate analyses

Tables 5 (Panels A, B and C) show the results of the pooled OLS regressions on the three rhetorical profile variables. For each profile variable, we use four models to test the country effect and its interaction with performance volatility and litigation risk. The models in Table 5 (Panel A) relate to the *Emphatic assertiveness* profile. Model 1 (Table 5 – Panel A) confirms the univariate result that US shareholder letters exhibit on average more emphatic assertiveness (more positive emotion words, more certain language and more personal pronouns) than UK letters. The country variable significantly increases model fit (the R-square change of adding the country variable is significant). It also shows that companies with a more volatile performance history use marginally less rhetorical assertiveness, which is consistent with our expectation that company credibility affects the verbal stance of the CEO. Model 2 adds the interactive effect of performance volatility and the country indicator. The result shows that the negative effect of performance volatility is essentially driven by US companies, implying that company credibility is a bigger concern in an institutional environment with stronger scrutiny pressures. Model 3 examines the interactive effect of litigation risk and country. The results also support our expectation that litigation risk with regard to impression management is a bigger concern for US companies than for UK companies. US companies in a high litigation risk industry will use significantly less emphatic assertiveness language in shareholder letters: the coefficient of the interaction term overcompensates the main effect of the litigious industry dummy. The models in Table 5 (Panel A) also show that larger companies use more assertive impression management and that UK companies cross-listed in a US market tend to copy the assertive rhetorical posture of their US counterparts and use more *Emphatic assertiveness*, as the incentives for impression management offered by the US market may also motivate cross-listed UK companies. Interestingly, financial performance measures are nearly all (except ‘loss company’) insignificant. Fiscal year (including the financial crisis period) does not seem to affect assertive impression management propensity.

[INSERT TABLE 5 ABOUT HERE]

The models of Table 5 (Panel B) present similar analyses for the *Cautious sensegiving* dimension. The models of this Panel confirm the univariate results that US shareholder letters use, on average, more *Cautious sensegiving* than UK letters, although the country main effect is somewhat less strong than for *Emphatic assertiveness*. Given the more defensive, conjectural and ambiguous language of the *Cautious sensegiving* profile, it seems logical that credibility concerns are less important and this translates in an insignificant interaction effect of performance volatility and country. Litigation risk in a high scrutiny environment does, however, promote such a defensive attitude, with *Cautious sensegiving* being significantly more prominent in the US letters of companies in litigation-sensitive industries.

The models of Table 5 (Panel C) replicate the former analyses for the *Rational appeal* profile. All models of this Panel show a significant negative effect of financial leverage. Interestingly, the industry indicators are strongly significant in these models, with companies belonging to a high-intangibles industry (High tech and pharmaceuticals) showing significantly more causal reasoning than companies from low-intangibles industries (food and retail), probably because the former suffer from higher information asymmetry and have more explaining to do on their business model. Models 1 and 2 of Table 5 (Panel C) also show a significant negative main effect of litigation risk, indicating the potentially more costly nature of causal disclosure in a high scrutiny environment (Aerts et al., 2013). Results also show significantly more use of causal reasoning by US companies (all four models) and a strongly negative impact of the interaction effect of performance volatility and country (Model 2) and of litigation risk and country (Model 3) respectively. The significance and sign of the interaction terms are consistent with hypothesis that message credibility and potential litigation is a bigger concern in an institutional environment with more scrutiny.

[INSERT TABLE 6 ABOUT HERE]

In order to check the validity of our results, we performed a robustness check by

testing the same regression models on individual linguistic style variables. As Table 6 shows, in general, the results of individual components are consistent with rhetorical factor profiles. Net positive emotion words, personal pronouns (main components of factor one) and causation words (main component of factor three) are more prominent in US letter to shareholders than in UK, and their uses are constrained in US where companies face more institutional scrutiny and have more concerns for credibility and litigation risk. However, on the other side, the behavior patterns of insight words, discrepancy words, tentative words (main components of factor two) and certainty words (main components of factor one) are not as clear as what we find in the factor profiles. It gives us more confidence to believe that factor analysis is a proper method to study rhetorical impression management that is more apparent in the co-occurrence of style characteristics than in the use of individual style characteristics.

5. DISCUSSION AND CONCLUSION

The main focus of this paper is the identification, in the annual letter to shareholders, of linguistic style profiles with impression management potential (referred to as rhetorical style profiles) and the effect of country-level institutional differences on the occurrence and strength of rhetorical impression management in the shareholder letter. The linguistic characteristics that we investigate, are largely detached from the substance or propositional content of the letter, but are deemed to be important to sustain the persuasiveness and credibility of the message. We discern three dominant linguistic profiles with rhetorical effect, which we label *Emphatic assertiveness*, *Cautious sensegiving* and *Rational appeal*. They represent different dimensions of rhetorical coping behavior: an acclaiming or assertive stance, a more defensive framing position and a more detached, logic-based cognitive impression management orientation.

By contrasting the linguistic profile properties of the letter to shareholders of US and UK companies, a number of distinguishing features of the rhetorical style which operate in the two countries, have been revealed. In general, we evidence an overwhelming country effect on the use of rhetorical language. The letters to shareholders of US companies seem much more prone to using rhetorical devices than

their UK counterparts. The three composite profiles are all significantly more common in US companies than in UK companies. This is consistent with our expectation that incentives for impression management are, on average, stronger in the US than in the UK.

Although the behavioural rationale for the three rhetorical styles can be expected to be intrinsically different and to be sensitive to different triggers, our results show that current financial performance only marginally affects the prominence of the dominant rhetorical postures. Except for the defensive rhetorical style which, by its nature, is more responsive to negative financial news discussed in the letter, the two other rhetorical style patterns seem to essentially substitute for more matter-of-fact discussion of issues of financial performance and financial position and bring the focus of discussion to (non-financial) achievement-related domains where the potential for persuasive self-enhancement is higher (Solomon et al., 2013).

The more important constraints on rhetorical impression management seem to reside in the effect of expected institutional scrutiny. In this regard, in a high scrutiny environment credibility concerns seem to constrain the use of an assertive and cognitive (logic-based) impression management style. Rhetorical devices can only be persuasive to the extent that they are not inconsistent with the background expectations of the audience. To the extent that the track record of the company indicates lack of control in the past, strong assertive behavior and providing convincing causal explanations may be problematic (Aerts & Tarca, 2010; Salancik & Meindl, 1984). Our results suggest that higher (expected) scrutiny that is inherent in the US institutional setting tends to significantly strengthen the effect of such credibility concerns on the assertive verbal posture of the CEO letter and on the use of cognitive impression management. The rhetorical stance of *Cautious sensegiving* seems to be of another order, however. It represents, in essence, reactive behavior that seems to accommodate potential credibility-threatening evidence of a propositional nature (hard evidence of a volatile and unstable performance past) by building interpersonal credibility and trust through linguistic features that project an image of a modest, concerned and cautious steward of the company (Hyland, 1998).

Moreover, in the US, companies in high-litigation risk industries score significantly less on the potentially costly assertive and cognitive impression

management profiles, and significantly higher on defensive impression management which is, by the nature of the language used, more litigation-proof. This is reflected in the interaction effect of litigation risk and the US country indicator on rhetorical style. While higher litigation risk tends to reduce the prominence of assertive and logic-based rhetorical devices in US companies, it has the effect of promoting a defensive impression management style which, by its nature, allows for more ambiguity and diminishes the possibility of counter-argument and, as such, is less vulnerable to litigation than the two other rhetorical profiles.

Our study adds to the literature on corporate narrative reporting in several respects. First, we extend the literature on impression management in accounting narratives by linking linguistic style characteristics of text with impression management mechanisms, using automated text analysis procedures. We specifically distinguish linguistic style features from propositional and linguistic content properties of accounting narratives that have been the primary focus of prior impression management research with regard to the use of attributions, thematic choice and readability. The linguistic style features are deemed to drive rhetorical impression management as they are assumed to underpin the persuasive propensity of the text in that they signal the communicator's perspective towards both the propositional content and the audience of the reports. Second, we extend the literature on the relevance of linguistic properties in accounting narratives by developing and using composite linguistic style profiles and by investigating their determinants and the relevance of country-level institutional constraints on their use. Prior research on linguistic features of accounting narratives generally relies on single-dimension characteristics, such as the affective 'tone' of the text, and largely ignores that rhetorical speech uses a repertoire of linguistic features that tend to covary depending on a chosen communication style. We exemplify different rhetorical styles in which those separate linguistic features are integrated to compose distinct impression management mechanisms. A third area of contribution relates to providing empirical evidence about the impact of the institutional environment and related incentive and scrutiny differences on the rhetorical stance of the company in the shareholder letter. We show detailed differences in rhetorical postures which tend to vary with country-level differences in institutional incentives and constraints. In this regard we

add to prior international comparative studies of narrative reports (Aerts & Tarca, 2010; Beattie & McInnes, 2006; PricewaterhouseCoopers, 2007) by examining rhetorical style of the shareholder letter in a cross-country setting. Finally, we also add to studies about the impact of litigation-related incentives on disclosure behaviour (Francis et al., 1994; Kim & Skinner, 2011; Rogers, Buskirk & Zechman, 2011), which will be of interest to preparers, market participants and regulators.

Our study is subject to limitations common in research on narrative corporate reporting. We considered only companies from two countries, four industries and reports from a specific time period. This may affect the generalisability of results to other companies, industries and time periods. The automated text analysis procedures have advantages in objectifying the coding of the narrative features, but may overlook more meaning-related issues which are better processed using detailed manual coding schemes. Moreover, being a relatively self-contained document, the shareholders letter covers a wide range of topics with varying distribution of content throughout the document. The current study uses document-wide linguistic measures. A potential drawback of this might be that the linguistic measures do not take into account that linguistic features of different parts of the document may differ and even be subject to purposeful managerial intervention, by strategic location of specific news within the narrative or by the topical mix of news (Stanton, Stanton & Pires, 2004). Future research might consider this issue by segmenting the text of the shareholder letter and by measuring linguistic features by segment in order to investigate intra-text variation in linguistic style.

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Table 1: Descriptives and Univariate Tests on Linguistic Variables

Variables	Total N=977				USA N=498				UK N=479				t-value
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	
Word count	1498	1048	97	10318	1219	679	151	4835	1789	1265	97	10318	***(-8.82)
Positive emotion words (%)	4.06	1.13	1.04	8.16	4.40	1.12	1.04	7.80	3.70	1.02	1.19	8.16	*** (10.12)
Negative emotion words (%)	0.72	0.46	0.00	5.14	0.68	0.48	0.00	5.14	0.77	0.42	0.00	2.78	***(-3.11)
Net (positive) emotion words (%)	3.34	1.29	-1.51	7.59	3.72	1.29	-1.51	7.51	2.94	1.16	-0.28	7.59	*** (10.01)
Personal pronouns (%)	5.27	2.39	0.00	11.83	6.69	1.87	1.80	11.83	3.79	1.93	0.00	9.54	*** (23.88)
Causation words (%)	2.49	0.82	0.50	5.69	2.53	0.84	0.50	5.69	2.44	0.80	0.90	5.39	*(1.79)
Insight words (%)	1.28	0.52	0.00	3.91	1.36	0.55	0.21	3.62	1.19	0.47	0.00	3.91	*** (5.24)
Discrepancy words (%)	0.50	0.31	0.00	2.19	0.53	0.33	0.00	2.19	0.48	0.28	0.00	1.93	** (2.58)
Tentative words (%)	0.74	0.43	0.00	3.96	0.80	0.48	0.00	3.96	0.67	0.36	0.00	3.52	*** (4.73)
Certainty words (%)	0.95	0.43	0.00	4.15	1.04	0.46	0.00	4.15	0.86	0.38	0.00	2.36	*** (6.71)
Inhibition words (%)	0.50	0.37	0.00	3.47	0.49	0.39	0.00	3.47	0.52	0.35	0.00	2.65	(-1.61)
Exclusive words (%)	0.49	0.36	0.00	2.48	0.55	0.41	0.00	2.48	0.44	0.30	0.00	1.71	*** (4.80)

Note: Linguistic variables as defined and measured by LIWC; *, **, *** Significant at the 10, 5, 1 per cent level; two-tailed t-test

Table 2: Descriptives of Independent Variables

Variables	Total N=977				USA N=498				UK N=479				t-value
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	
ROA	0.00	0.23	-0.65	0.25	-0.01	0.24	-0.65	0.25	0.00	0.21	-0.65	0.25	(-0.39)
Loss company	0.33	0.47	0.00	1.00	0.31	0.46	0.00	1.00	0.35	0.48	0.00	1.00	(-1.11)
Sales growth (%)	0.10	0.21	-0.24	0.67	0.11	0.21	-0.24	0.67	0.10	0.21	-0.24	0.67	(0.71)
Net income increase	0.58	0.49	0.00	1.00	0.59	0.49	0.00	1.00	0.58	0.49	0.00	1.00	(0.26)
Company size	5.14	2.34	1.17	9.48	5.56	2.24	1.17	9.48	4.71	2.36	1.17	9.48	***(-5.83)
Financial leverage	0.12	0.15	0.00	0.48	0.12	0.15	0.00	0.48	0.13	0.15	0.00	0.48	(-0.90)
Performance volatility	0.32	0.54	0.01	2.08	0.25	0.45	0.01	2.08	0.38	0.62	0.01	2.08	***(-3.78)
Litigious industry	0.55	0.50	0.00	1.00	0.58	0.49	0.00	1.00	0.52	0.50	0.00	1.00	*(1.90)
Cross-listed company	0.06	0.25	0.00	1.00	0.00	0.00	0.00	0.00	0.13	0.34	0.00	1.00	***(-8.68)
EPS increase rate	0.07	1.18	-2.96	2.64	0.04	1.14	-2.96	2.64	0.09	1.23	-2.96	2.64	(-0.59)
Liquidity	2.53	2.13	0.55	9.00	2.77	2.05	0.55	9.00	2.28	2.19	0.55	9.00	***(-3.59)

Note: *, **, *** Significant at the 10, 5, 1 per cent level; two-tailed t-test

Table 3: Factor Analysis on Linguistic Style Variables

Panel A - Factor Loadings (orthogonal varimax) for model with highest explained variance

Variable	Factor1	Factor2	Factor3
Insight words	0.05	0.59	0.29
Causation words	-0.02	-0.03	0.96
Discrepancy words	0.18	0.68	-0.12
Tentative words	-0.10	0.78	-0.07
Certainty words	0.62	0.19	0.01
Personal pronouns	0.80	0.18	-0.05
Net positive emotion words	0.81	-0.22	0.00

Panel B - Univariate Test on Linguistic Style Factors

Variable	USA N=498				UK N=479				t-value
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	
Factor 1	0.44	0.81	-1.58	1.64	-0.47	0.80	-1.58	1.64	***(17.77)
Factor 2	0.10	0.88	-1.36	1.84	-0.18	0.75	-1.36	1.84	***(5.45)
Factor 3	0.06	0.93	-1.49	1.90	-0.08	0.89	-1.49	1.90	** (2.52)

Note: *, **, *** Significant at the 10, 5, 1 per cent level; two-tailed t-test

Table 4: Correlation Matrix

Panel A - Pairwise correlation matrix with regard to linguistics variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Emphatic assertiveness (F1)	1															
2. Cautious sensegiving (F2)	-0.002	1														
3. Rational appeal (F3)	-0.007	0.035	1													
4. Achieve	***0.457	***-0.096	***0.382	1												
5. Operational profit	-0.041	***-0.212	**0.080	0.007	1											
6. Operational loss	***-0.212	**0.080	***-0.088	***-0.087	***0.305	1										
7. Operational (total)	***-0.111	***-0.146	***-0.098	-0.026	***0.937	***0.618	1									
8. Resources	***-0.107	*-0.057	***-0.125	***-0.097	***0.271	***0.295	***0.332	1								
9. Agents	***0.186	-0.008	-0.006	**0.078	***-0.093	-0.033	***-0.089	**0.067	1							
10. Future	***0.193	***-0.143	***-0.137	***0.168	***0.204	-0.008	***0.166	0.048	-0.002	1						
11. Litigious	***-0.184	0.021	-0.034	***-0.150	***-0.097	0.025	**0.071	-0.010	-0.017	***-0.109	1					
12. Uncertainty	**0.067	***0.362	-0.048	**0.076	***-0.092	-0.028	***-0.086	0.004	*-0.057	0.045	0.053	1				
13. Auxiliary	***-0.163	***0.269	-0.042	***-0.181	**0.072	***0.167	0.002	-0.025	-0.052	***-0.163	**0.072	-0.017	1			
14. Past	***-0.248	**0.065	*-0.058	***-0.267	***0.231	***0.264	***0.288	***0.182	0.007	***-0.135	0.028	*-0.057	***0.392	1		
15. Exclusive	0.011	***0.542	*-0.054	***-0.147	-0.039	*0.061	-0.010	-0.043	**0.081	***-0.232	0.009	***0.177	***0.288	***0.105	1	
16. Inhibition	***-0.151	***0.130	***0.101	-0.002	***-0.245	-0.008	***-0.205	*-0.054	**0.077	***-0.154	***0.209	*0.057	0.043	**0.065	**0.067	1

Note: *, **, *** Significant at the 10, 5, 1 per cent level

Table 4: Correlation Matrix

Panel B - Pairwise correlation matrix with regard to rhetorical style and independent variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Emphatic assertiveness (F1)	1														
2. Cautious sensegiving (F2)	-0.002	1													
3. Rational appeal (F3)	-0.007	0.035	1												
4. ROA	***0.285	***-0.132	***-0.097	1											
5. Loss company	***-0.291	***0.148	***0.100	***-0.735	1										
6. Sales growth (%)	0.044	***-0.095	-0.017	***0.175	***-0.206	1									
7. Net income increase	***0.091	-0.034	-0.001	***0.218	***-0.306	***0.236	1								
8. Company size	***0.394	***-0.088	**0.081	***0.564	***-0.507	-0.015	***0.130	1							
9. Financial leverage	***0.170	-0.043	***-0.152	***0.219	***-0.180	-0.031	-0.049	***0.405	1						
10. Performance volatility	***-0.293	***0.095	0.044	***-0.570	***0.470	**0.064	**0.080	***-0.414	***-0.134	1					
11. Litigious industry	-0.027	**0.063	***-0.151	***-0.213	***0.212	0.020	**0.067	***-0.134	***-0.110	***0.138	1				
12. Cross-listed company	0.025	-0.033	*-0.059	***0.134	***-0.122	***-0.098	-0.006	***0.328	***0.178	0.013	-0.038	1			
13. EPS increase rate	*0.056	-0.026	0.008	***0.231	***-0.439	***0.267	***0.615	***0.083	-0.033	*-0.055	**0.075	0.009	1		
14. Liquidity	***-0.169	*0.056	***0.152	***-0.301	***0.304	***-0.118	**0.077	***-0.337	***-0.358	***0.277	**0.064	***-0.132	*-0.056	1	
15. USA (Country variable)	***0.495	***0.172	**0.080	-0.013	-0.035	0.020	0.008	***0.183	-0.030	***-0.121	*0.061	***-0.268	-0.019	***0.116	1

Note: *, **, *** Significant at the 10, 5, 1 per cent level

Table 5: Regressing Rhetorical Style on Its Determinants

		Factor 1							
		Emphatic assertiveness							
		Model 1		Model 2		Model 3		Model 4	
Number of obs=968		Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)
Constant		***-0.68	(-6.00)	***-0.70	(-6.16)	***-0.72	(-6.38)	***-0.73	(-6.46)
ROA		0.10	(0.58)	0.05	(0.26)	0.07	(0.38)	0.03	(0.15)
Loss company		** -0.18	(-2.15)	** -0.18	(-2.13)	** -0.19	(-2.28)	** -0.19	(-2.25)
Sales growth (%)		-0.00	(-0.03)	0.01	(0.08)	0.00	(0.04)	0.01	(0.12)
Net income increase		0.08	(1.29)	0.08	(1.27)	0.08	(1.25)	0.07	(1.23)
Company size		**0.03	(2.23)	**0.03	(2.14)	**0.03	(2.20)	**0.03	(2.13)
Financial leverage		0.27	(1.48)	0.29	(1.61)	0.20	(1.12)	0.23	(1.26)
Performance volatility#		*-0.09	(-1.58)	-0.03	(-0.47)	*-0.08	(-1.46)	-0.03	(-0.57)
Litigious industry#		-0.01	(-0.11)	0.01	(0.05)	*0.16	(1.35)	*0.16	(1.31)
Cross-listed company		***0.39	(3.66)	***0.41	(3.78)	***0.41	(3.83)	***0.42	(3.91)
EPS increase rate		-0.02	(-0.57)	-0.01	(-0.49)	-0.02	(-0.69)	-0.02	(-0.61)
Liquidity		*-0.02	(-1.89)	** -0.03	(-2.14)	** -0.03	(-2.18)	** -0.03	(-2.35)
Year 2006		-0.03	(-0.35)	-0.03	(-0.38)	-0.03	(-0.35)	-0.03	(-0.38)
Year 2007		0.06	(0.85)	0.06	(0.80)	0.06	(0.85)	0.06	(0.81)
Year 2008		0.01	(0.07)	0.00	(0.01)	0.00	(0.06)	0.00	(0.01)
Year 2010		-0.00	(-0.01)	-0.00	(-0.03)	0.00	(0.01)	-0.00	(-0.01)
Food		0.09	(1.16)	0.09	(1.17)	0.07	(1.01)	0.08	(1.03)
Pharma		-0.16	(-1.46)	-0.15	(-1.44)	*-0.20	(-1.84)	*-0.19	(-1.79)
Retail		**0.24	(2.37)	**0.23	(2.22)	**0.21	(1.99)	*0.20	(1.91)
USA country variable#		***0.96	(18.20)	***1.02	(17.11)	***1.12	(15.11)	***1.15	(15.08)
Performance volatility X USA#				** -0.21	(-2.31)			** -0.17	(-1.81)
Litigious industry X USA#						***-0.29	(-3.08)	***-0.26	(-2.72)
F-value		***35.37		***34.02		***34.38		***32.97	
Adj R ²		0.40		0.41		0.41		0.41	
Change in R ²		***0.20		***0.21		***0.21		***0.21	

Note: *, **, *** Significant at the 10, 5, 1 per cent level;

#one-tailed test for performance volatility, litigious industry and country variables; two-tailed test for others

Table 5: Regressing Rhetorical Style on Its Determinants

		Factor 2							
		Cautious sensegiving							
Number of obs=968		Model 1		Model 2		Model 3		Model 4	
		Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)
Constant	0.02	(0.12)	0.02	(0.19)	0.05	(0.39)	0.05	(0.42)	
ROA	0.12	(0.58)	0.15	(0.72)	0.14	(0.71)	0.16	(0.80)	
Loss company	***0.27	(2.90)	***0.27	(2.89)	***0.28	(2.98)	***0.28	(2.97)	
Sales growth (%)	** -0.34	(-2.52)	** -0.34	(-2.57)	** -0.34	(-2.57)	*** -0.35	(-2.60)	
Net income increase	-0.02	(-0.24)	-0.02	(-0.22)	-0.01	(-0.21)	-0.01	(-0.20)	
Company size	-0.03	(-1.61)	-0.03	(-1.56)	-0.03	(-1.59)	-0.03	(-1.56)	
Financial leverage	0.09	(0.43)	0.07	(0.36)	0.14	(0.66)	0.12	(0.59)	
Performance volatility#	*0.08	(1.32)	0.05	(0.73)	0.08	(1.23)	0.05	(0.80)	
Litigious industry#	-0.07	(-0.57)	-0.08	(-0.65)	*-0.20	(-1.45)	*-0.19	(-1.43)	
Cross-listed company	0.18	(1.48)	0.17	(1.42)	0.17	(1.38)	0.16	(1.35)	
EPS increase rate	*0.06	(1.80)	*0.06	(1.76)	*0.06	(1.87)	*0.06	(1.84)	
Liquidity	-0.02	(-1.19)	-0.02	(-1.06)	-0.01	(-1.00)	-0.01	(-0.92)	
Year 2006	-0.11	(-1.30)	-0.11	(-1.29)	-0.11	(-1.30)	-0.11	(-1.29)	
Year 2007	-0.07	(-0.91)	-0.07	(-0.89)	-0.07	(-0.91)	-0.07	(-0.89)	
Year 2008	-0.05	(-0.65)	-0.05	(-0.62)	-0.05	(-0.64)	-0.05	(-0.62)	
Year 2010	** -0.16	(-1.96)	*-0.16	(-1.96)	** -0.16	(-1.98)	** -0.16	(-1.97)	
Food	** -0.17	(-2.00)	** -0.17	(-2.00)	*-0.16	(-1.90)	*-0.16	(-1.90)	
Pharma	-0.03	(-0.29)	-0.04	(-0.30)	-0.00	(-0.03)	-0.01	(-0.05)	
Retail	0.06	(0.53)	0.07	(0.60)	0.09	(0.77)	0.10	(0.81)	
USA country variable#	***0.37	(6.22)	***0.33	(4.93)	***0.25	(2.99)	***0.23	(2.69)	
Performance volatility X USA#			0.12	(1.11)			0.08	(0.77)	
Litigious industry X USA#					**0.22	(2.01)	**0.20	(1.85)	
F-value	***4.47		***4.31		***4.46		***4.27		
Adj R ²	0.06		0.06		0.07		0.07		
Change in R ²	***0.04		***0.04		***0.04		***0.04		

Note:

*, **, *** Significant at the 10, 5, 1 per cent level;

#one-tailed test for performance volatility, litigious industry and country variables; two-tailed test for others

Table 5: Regressing Rhetorical Style on Its Determinants

		Factor 3							
		Rational appeal							
Number of obs=968		Model 1		Model 2		Model 3		Model 4	
		Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)
Constant	***0.40	(3.07)	***0.38	(2.89)	***0.34	(2.59)	**0.33	(2.50)	
ROA	0.30	(1.47)	0.23	(1.10)	0.25	(1.24)	0.20	(0.97)	
Loss company	0.10	(1.05)	0.10	(1.08)	0.09	(0.91)	0.09	(0.95)	
Sales growth (%)	0.04	(0.31)	0.06	(0.45)	0.05	(0.40)	0.07	(0.50)	
Net income increase	0.00	(0.03)	-0.00	(-0.01)	-0.00	(-0.02)	-0.00	(-0.05)	
Company size	0.01	(0.86)	0.01	(0.74)	0.01	(0.81)	0.01	(0.73)	
Financial leverage	***-0.76	(-3.60)	***-0.73	(-3.45)	***-0.84	(-4.01)	***-0.81	(-3.84)	
Performance volatility#	-0.07	(-1.13)	0.01	(0.10)	-0.06	(-0.98)	-0.00	(-0.02)	
Litigious industry#	***-0.42	(-3.42)	***-0.40	(-3.24)	*-0.19	(-1.35)	*-0.19	(-1.39)	
Cross-listed company	-0.06	(-0.51)	-0.05	(-0.38)	-0.04	(-0.33)	-0.03	(-0.25)	
EPS increase rate	0.00	(0.02)	0.00	(0.11)	-0.00	(-0.11)	-0.00	(-0.03)	
Liquidity	-0.01	(-0.41)	-0.01	(-0.70)	-0.01	(-0.75)	-0.01	(-0.94)	
Year 2006	0.04	(0.47)	0.04	(0.43)	0.04	(0.47)	0.04	(0.44)	
Year 2007	-0.02	(-0.22)	-0.02	(-0.28)	-0.02	(-0.23)	-0.02	(-0.28)	
Year 2008	-0.08	(-0.98)	-0.09	(-1.05)	-0.08	(-1.00)	-0.09	(-1.05)	
Year 2010	-0.10	(-1.21)	-0.10	(-1.23)	-0.10	(-1.19)	-0.10	(-1.21)	
Food	***-0.48	(-5.65)	***-0.48	(-5.67)	***-0.50	(-5.86)	***-0.49	(-5.85)	
Pharma	**0.32	(2.55)	***0.32	(2.58)	**0.26	(2.08)	**0.27	(2.16)	
Retail	***-0.63	(-5.26)	***-0.65	(-5.44)	***-0.68	(-5.69)	***-0.70	(-5.79)	
USA country variable#	**0.14	(2.28)	***0.23	(3.29)	***0.36	(4.17)	***0.40	(4.57)	
Performance volatility X USA#			***-0.29	(-2.67)			**-.23	(-2.08)	
Litigious industry X USA#					***-0.39	(-3.60)	***-0.35	(-3.19)	
F-value	***12.21		***12.03		***12.39		***12.05		
Adj R ²	0.18		0.19		0.19		0.19		
Change in R ²	**0.00		***0.01		***0.02		***0.02		

Note:

*, **, *** Significant at the 10, 5, 1 per cent level;

#one-tailed test for performance volatility, litigious industry and country variables; two-tailed test for others

Table 6: Models with individual linguistic style variables

Number of obs=968	Net positive emotion words		Positive emotion words		Negative emotion words		Personal pronouns		Causation words	
	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)
Constant	***2.44	(15.14)	***3.38	(23.85)	***0.95	(16.57)	***3.38	(12.88)	***2.76	(25.81)
ROA	-0.13	(-0.51)	-0.16	(-0.74)	-0.06	(-0.66)	0.25	(0.62)	0.20	(1.18)
Loss company	***-0.41	(-3.51)	**0.24	(-2.27)	***0.15	(3.67)	0.05	(0.24)	0.05	(0.63)
Sales growth (%)	0.19	(1.15)	-0.03	(-0.17)	***-0.20	(-3.39)	-0.13	(-0.47)	-0.01	(-0.07)
Net income increase	*0.16	(1.92)	0.10	(1.28)	**0.07	(-2.39)	0.11	(0.81)	0.00	(0.05)
Company size	***0.06	(2.75)	***0.05	(2.62)	-0.01	(-0.89)	0.02	(0.46)	0.01	(0.90)
Financial leverage	0.06	(0.23)	-0.05	(-0.23)	*0.17	(-1.83)	***1.16	(2.75)	***-0.69	(-4.00)
Performance volatility#	-0.00	(-0.03)	-0.08	(-1.04)	**0.06	(-1.96)	**0.25	(-1.80)	-0.01	(-0.13)
Litigious industry#	***0.52	(3.09)	***0.37	(2.46)	***-0.20	(-3.27)	0.19	(0.69)	**0.19	(-1.70)
Cross-listed company	***0.49	(3.24)	***0.49	(3.66)	-0.00	(-0.03)	***1.23	(4.95)	-0.07	(-0.65)
EPS increase rate	-0.03	(-0.86)	-0.01	(-0.16)	*0.02	(1.67)	0.00	(0.02)	-0.00	(-0.14)
Liquidity	-0.03	(-1.48)	*0.03	(-1.81)	0.00	(0.14)	*0.05	(-1.69)	-0.01	(-0.61)
Year 2006	0.06	(0.53)	-0.07	(-0.75)	***-0.14	(-3.78)	-0.10	(-0.61)	0.05	(0.67)
Year 2007	0.12	(1.19)	-0.02	(-0.19)	***-0.15	(-4.07)	-0.01	(-0.06)	-0.01	(-0.22)
Year 2008	0.07	(0.64)	-0.00	(-0.01)	-0.06	(-1.61)	-0.12	(-0.71)	-0.07	(-1.05)
Year 2010	0.07	(0.64)	0.00	(0.03)	**0.07	(-1.99)	-0.10	(-0.59)	-0.08	(-1.25)
Food	***0.30	(2.88)	***0.31	(3.39)	-0.01	(-0.21)	-0.00	(-0.03)	***-0.40	(-5.82)
Pharma	***-0.51	(-3.33)	***-0.46	(-3.44)	0.07	(1.19)	-0.14	(-0.55)	**0.26	(2.57)
Retail	-0.14	(-0.93)	0.03	(0.27)	***0.21	(4.09)	***0.63	(2.64)	***-0.55	(-5.67)
USA country variable#	***1.05	(9.66)	***0.88	(9.21)	***-0.15	(-3.82)	***3.22	(18.21)	***0.29	(4.09)
Performance volatility X USA#	*-0.20	(-1.47)	0.02	(0.21)	***0.22	(4.60)	**0.44	(-2.03)	***-0.21	(-2.43)
Litigious industry dummy X USA#	***-0.41	(-3.03)	***-0.37	(-3.09)	0.03	(0.52)	*0.34	(-1.52)	***-0.27	(-3.04)
F-value	***19.56		***18.45		***8.49		***41.73		***12.53	
Adj R ²	0.29		0.27		0.14		0.47		0.20	
Change in R ²	***0.09		***0.09		***0.03		***0.32		***0.02	

Note:

*, **, *** Significant at the 10, 5, 1 per cent level;

#one-tailed test for performance volatility, litigious industry and country variables; two-tailed test for others

Table 6: Models with individual linguistic style variables

Number of obs=968	Insight words		Discrepancy words		Tentative words		Certainty words	
	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)	Coef.	(t-value)
Constant	***1.27	(18.64)	***0.49	(11.65)	***0.75	(13.34)	***0.88	(15.12)
ROA	-0.00	(-0.04)	-0.01	(-0.20)	**0.19	(2.20)	-0.02	(-0.20)
Loss company	*0.10	(1.95)	0.04	(1.34)	0.05	(1.30)	-0.07	(-1.58)
Sales growth (%)	-0.02	(-0.30)	** -0.11	(-2.44)	*-0.10	(-1.80)	-0.02	(-0.36)
Net income increase	0.01	(0.19)	-0.01	(-0.27)	-0.01	(-0.21)	-0.01	(-0.18)
Company size	-0.01	(-0.63)	-0.00	(-0.53)	-0.01	(-1.37)	0.01	(1.02)
Financial leverage	0.03	(0.30)	0.11	(1.60)	-0.08	(-0.85)	-0.04	(-0.43)
Performance volatility#	0.05	(1.27)	0.01	(0.33)	*0.04	(1.28)	0.02	(0.51)
Litigious industry#	*-0.09	(-1.33)	***-0.11	(-2.61)	0.04	(0.69)	-0.05	(-0.82)
Cross-listed company	0.09	(1.32)	**0.09	(2.20)	-0.02	(-0.39)	-0.00	(-0.08)
EPS increase rate	0.01	(0.75)	**0.02	(2.24)	0.00	(0.26)	-0.00	(-0.25)
Liquidity	** -0.02	(-1.99)	-0.00	(-0.21)	-0.00	(-0.19)	-0.01	(-1.65)
Year 2006	-0.04	(-0.88)	-0.00	(-0.18)	-0.05	(-1.27)	-0.05	(-1.38)
Year 2007	-0.02	(-0.55)	0.03	(1.06)	*-0.07	(-1.90)	-0.01	(-0.29)
Year 2008	0.00	(0.07)	-0.01	(-0.35)	-0.01	(-0.38)	-0.01	(-0.17)
Year 2010	-0.05	(-1.08)	-0.03	(-1.20)	-0.04	(-1.08)	-0.02	(-0.57)
Food	** -0.09	(-2.15)	-0.02	(-0.81)	-0.01	(-0.25)	-0.02	(-0.56)
Pharma	0.02	(0.29)	*0.07	(1.77)	*-0.09	(-1.72)	-0.02	(-0.33)
Retail	-0.03	(-0.43)	*0.07	(1.92)	-0.01	(-0.18)	***0.17	(3.28)
USA country variable#	***0.16	(3.48)	0.02	(0.59)	***0.10	(2.58)	***0.21	(5.28)
Performance volatility X USA#	-0.00	(-0.02)	0.03	(0.79)	-0.04	(-0.78)	-0.01	(-0.20)
Litigious industry dummy X USA#	0.04	(0.70)	***0.09	(2.45)	0.05	(0.98)	-0.05	(-1.11)
F-value	***2.94		***2.51		***2.43		***6.13	
Adj R ²	0.04		0.03		0.03		0.10	
Change in R ²	***0.03		***0.02		***0.02		***0.04	

Note:

*, **, *** Significant at the 10, 5, 1 per cent level;

#one-tailed test for performance volatility, litigious industry and country variables; two-tailed test for others