Tone and the Accounting Narrative

Abstract

Tone is a means by which narratives may be imbued with a desired connotation or affect through word choice. Like other elements of style, tone may be deployed to aid the dissemination of incrementally useful information or used to strategically influence perceptions. Much literature in accounting considers tone as a uni-dimensional construct. This exploratory study seeks to demonstrate that verbal tone is considerably more nuanced in nature. Using multi-year sample of listed companies, we examine dimensions of tone across multiple document types within the annual report and two components of CSR reports issued separately from the annual report. We first consider how dimensions of tone vary across different types of corporate narrative. Next, we determine whether dimensions of tone are associated with another important element of style, readability. Last, we consider the determinants of tone, including the possibility that tone may be used in impression management. The paper makes several important contributions to practice and theory.

Keywords: Annual reports, tone, readability, impression management, CSR reports, corporate communications, corporate narratives, performance

JEL classification: D82; M40; M41; M48

1. Introduction

The pivotal role of 'style' in aiding both effective and persuasive communication has long been understood. Indeed, several chapters in Aristotle's *Rhetoric* (Book III) are devoted to its importance and function in facilitating perspicuity (clarity or transparency) and rhetoric (influence). Stylistic choices may be made consciously or unconsciously and encompass a range of devices such as syntax, lexicon, imagery, and prosody. An important element of style is tone. Tone is a means through which an author may imbue a narrative with a desired connotation or affect through word choice. Like many elements of style, tone may be deployed to aid the dissemination of incrementally useful information or used strategically to influence the perceptions of the reader about the subject matter of a narrative (i.e., impression management).[1]

The importance of understanding the role of tone in corporate reporting is underscored by the increasingly significant part that narrative communication is playing in the accountability process. This is true both of well-established components of the annual report, such as the operating and financial review (OFR) section (referred to as the management discussion & analysis (MD&A) section in North America)[2], where the volume of such narratives has increased significantly in recent decades (Brown & Tucker, 2011), and of newer areas, such as corporate social responsibility (CSR) reporting and integrated reporting (IR). This shift in emphasis can be attributed to greater public scrutiny of business activities and the need to explain aspects of activity not readily amenable to numerical expression (Campbell & Slack, 2008). Reflecting its utility to stakeholders, narrative information has been associated with future financial performance (Li, 2010a), bankruptcy (Smith & Taffler, 1995, 2000), individual investor decisions (Lawrence, 2013) and market returns (Li, 2010a; Henry, 2008; Lang & Lundholm, 2000).

While tone has been widely studied in political science, communications, and other disciplines, it has only comparatively recently attracted the attention of scholars in accounting and finance. Much of this literature, however, has focused only on one dimension of tone: the degree positivity (or negativity) in corporate narratives – sometimes referred to as sentiment (see, for example, Abrahamson & Park, 1994; Abrahamson & Amir, 1996; Allee & Deangelis, 2015; Henry, 2008; Hildebrandt & Snyder, 1981; Feldman, Govindaraj, Livnat, & Segal, 2010; Tan, Wang, & Zhou, 2014; Huang, Teoh, & Zhang, 2014). However, as Hart, Childers and Lind (2013) point out, tone is more nuanced than a positive-negative dichotomy and

overlooking this may lead to the complexity of a text being missed. The tonal quality of a narrative may encompass a range of attributes. For instance, a company's OFR might be described as conveying a high degree of *realism* and *certainty*, yet another's may be both *vague* and *apologetic*. While one executive's office memorandum might engender a sense of *urgency* and *loyalty*, another's might be both *astringent* and *chastising*.

Given the dual role of stylistic features, such as tone (i.e., facilitating disclosure of incremental useful information and strategic communication), it is likely that classes of narrative that face systematically different levels of restrictions and opportunities over their production will also systematically vary according to their tonal properties. For instance, the different narrative types typically contained in the traditional annual report (e.g., chairman's letter[3], OFR, footnotes, etc.) serve distinct purposes and are subject to varying levels of regulatory influence and auditor scrutiny. Accordingly, we would expect to see a different tonal profile for each. This is consistent with the notion that each component narrative of the annual report may represent a distinct communication genre—that is, each narrative type serves a specific communicative purpose and exhibits a similar pattern of content and style (Swales, 1990). Prior research suggests both the CEO letter (Craig & Amernic, 2018) and OFR (Rutherford, 2005) are distinct genres. No previous study has explored the relative tonal profiles of common corporate narratives. Accordingly, our first research objective is to ascertain whether there are distinct tonal patterns across a range of corporate narratives. For a multi-year sample of listed companies, we examine dimensions of tone (*positivity*, *optimism*, *activity*, *realism*, *certainty*, and *commonality*) across multiple document types within the annual report (chairman's statement, OFR, notes to the accounts, and embedded CSR reports) and two components of CSR reports issued separately from the annual report (opening letter in the CSR report and the main body of the standalone CSR report).

The second focus of this research concerns the relationship between tone and the most intensively researched stylistic dimension of accounting narratives, readability (Rutherford, 2005). As in much of the prior literature, we operationalise readability in terms of textual (syntactical) complexity. Research on textual complexity is motivated by its direct relationship with communicative effectiveness. The latter is of significance in accounting, with regulators and standard setters expressing concern that corporate reports all too frequently contain inaccessible writing styles, excessive sentence lengths, overuse of technical jargon, and excessive wordiness (FRC, 2009, 2011; FMA, 2012, 2014). This complexity can impose information processing costs on users and lead to markets reacting less completely to information contained within the narratives (Lehavy, Li, & Merkley, 2011; Li, 2010a). Tan

et al. (2014, p. 274) argue that tone and readability co-occur in practice, and that managers contemporaneously vary the use of both in order to obfuscate unsatisfactory performance. Using an experiment, they hypothesise and find that readability moderates the relationship between tone (sentiment) and investors' earnings judgments. However, tone and readability are likely to be more interdependent than suggested by these results. In particular, tone might be expected to directly influence readability—a relationship not directly tested by Tan et al. (2014). Consequently, our second research objective is to examine the linkage between these two important dimensions of style.

Like readability, tone can influence the judgments and decision-making of annual report users. Variations in tone have been found to be associated with short-term market reactions (Davis, Piger, & Sedor, 2012; Feldman, Govindaraj, Livnat, & Segal, 2010; Huang et al., 2014) and earnings judgements (Tan et al., 2014). Given the potential potency of tone, it is perhaps not surprising that "opportunities in prose-based disclosure for obscuring information . . . extend well beyond the use of prolixity and syntactically complex words and sentences"(Rutherford, 2003, p.206). Our final research aim, then, is to investigate the determinants of tone, in order to identify those elements of tone that are susceptible to impression management, and the circumstances in which this may occur. Several prior studies have found evidence of a positive bias in particular corporate narratives, including chairmans' statements (Hildebrandt & Snyder, 1981; Abrahamson & Park, 1994), OFRs (Rutherford, 2005), press releases (Guillamon-Saorin, 2006). Unlike prior studies, however, we investigate multiple tonal variables across a range of corporate report narratives. In particular, we consider the role of performance and future performance as motivators of impression management while controlling for other explanatory factors.

In summary, the study addresses three research questions: (1) how do dimensions of tone vary across different types of corporate narrative? (2) are dimensions of tone associated with readability? and (3) which, if any, dimensions of tone are used in impression management? The paper makes several important contributions to practice and theory. First, by illuminating patterns in tonal attributes across classes of corporate narratives, the study contributes to our understanding of latent disclosure norms and practices that together may be interpreted as genre rules. These norms or rules may assist a range of stakeholders, including auditors and regulators, identify instances of 'exceptional' disclosures and provide a basis for future research studying longitudinal shifts in such rules. Second, in revealing the dependencies between two important elements of style, tone and readability, the study highlights the practical complexities and consequences of using multiple interrelated stylistic dimensions, irrespective of motive.

Further, the study enhances our understanding of the determinants of readability in corporate narratives more generally. The findings provide practitioners with important insights on how the readability of a broad range of corporate narratives may be improved. This is timely as there are fears that style-related factors, such as excessive wordiness and technical jargon, are contributing to an overall increase in the complexity and a reduction in the relevance of corporate reports (FRC, 2009; Richards & Van Staden, 2015). Finally, with the exception of positivity, comparatively little is known about the role of tone and obfuscation. In extending the impression management literature we also directly address a concern of regulators and standard setters that narratives may not always be balanced and fair: "users are suspicious that companies do not always communicate openly and honestly. This is unsurprising, since companies certainly have an interest in making their results look as good as possible" (FRC, 2009, p.46).

The paper unfolds as follows. In the next section we explore literature underpinning the nature of verbal tone and consider its role in the construction of corporate narratives. This section also provides the foundation for the study's research questions and hypotheses. Next, we provide details of the study's sample and method, including details the computer-assisted, form-orientated content analysis undertaken in the study. The results are then presented, followed by the discussion, conclusion, and suggestions for further research.

2. Literature Review and Theoretical Background

2.1 Tone

The concept of tone has been applied in a range of fields, including phonetics, literature, physiology, art, audiology, and music. Despite its ubiquity, it "can be an elusive object of study" (Jasinski, 2001, p.578). In literature, it has been defined both as an author's attitude to his or her audience as well as to the subject of a narrative (Jasinski, 2001). This 'attitude' can manifest through diction – that is, word choice (Brill, 1992). Words of equal denotative value (that is, words having the same literal or dictionary meaning) will frequently have different connotative meanings (subjective or affective meaning). Consequently, word choices made in the construction of a narrative may combine to create one or more dominant tones, "just like brush strokes collectively contribute to the mood of a painting" (Brill, 1992, p. 32).

Our use of the term is consistent with its application in political science and related areas. That is, verbal tone is a "tool people use (sometimes unwittingly) to create distinct social impressions via word choice" (Hart et al., 2013, p. 9). This definition hints that there is a

"deeper reality" to be discovered through the analysis of rhetoric (Rottinghaus, 2015, p. 106). According to Hart et al. (2013), *lexical layering* underpins most studies of tone. This notion is based on four assumptions: "(1) Families of words have their own distinctive valence but become mutually implicative when combined; (2) tone becomes more identifiable when word families are commingled; (3) tone becomes more forceful when these families are repeatedly commingled; and (4) lexical layering explains differences among rhetorical genres" (Hart et al., 2013, p. 11). Tone, then, may be viewed as "the product of (1) individual word choices that (2) cumulatively build up (3) to produce patterned expectations (4) telling an audience something important (5) about the author's outlook on things" (Hart et al., 2013, p. 12).

Tone can have important consequences—some readily apparent, while others more subtle. The interest tone has received in political science is predicated on the basis that tone, as a rhetorical device, has impact. It can influence the mood and judgment of the electorate (see for instance Scheafer, 2007) through, as Stuckey (2015) puts it, its ability to legitimate, unify, mobilize and even compensate. As connotative meaning in the domain of accounting has the capacity to impact decision outcomes (Hronsky & Houghton, 2001; Mortensen & Fisher, 2011), one would expect the associated concept of tone to have similar effect in the same context. Indeed, recent studies have shown a relationship between positivity (or optimism) and short-term market reactions (Davis et al., 2012; Feldman et al., 2010; Henry, 2008; Huang et al., 2014) and earnings judgements (Tan et al., 2014). Both Henry (2008) and Tan et al. (2014) draw on 'framing' effects from psychology research (Kahneman & Tversky, 1979) to explain why the impact of alternative wording of the same attribute of an underlying subject matter may affect readers' associated perceptions and judgments. These effects explain why consumers, for instance, have been shown to evaluate beef labelled '75% lean' more favourably than beef labelled '25% fat' (Levin & Gaeth, 1988).

The particular aspects of tone examined in this study include positivity, together with the five elements of verbal tone that were identified and operationalised as master variables by Hart (2001) in the computer-assisted content analysis program, DICTION: *activity, optimism, certainty, realism* and *commonality*. Hart (2001) considers these five statistically independent constructs to be the most important elements of verbal tone for providing the most robust understanding of a particular passage of text. The face validity of the DICTION variables owes much to their grounding "in linguistic semantics and the fact that the [DICTION] approach is well established in the applied linguistics literature" (Sydserff & Weetman, 2002, p. 534).

The first of the DICTION tone variables, *activity*, was inspired by the measurement of meaning research of Osgood, Suci, and Tannenbaum (1957). Osgood et al. (1957) found that,

for most everyday concepts in the general domain of meaning, connotative meaning can be located within a three factor 'cognitive' structure (i.e., a semantic space consisting of three axes). The three factors of the semantic space were identified and labelled as evaluative, potency, and activity – commonly referred to as the EPA structure (see Mortensen & Fisher, 2011, for a recent application of this framework in the accounting domain). Examples of semantic differential scales which typically load onto the activity factor include active-passive, fast-slow, dynamic-static, unplanned-planned, and variable-constant. Extending this to tone, Hart *et al*. (2013, p.15) suggest that active language connotes "movement, change, the implementation of ideas and the avoidance of inertia and helps distinguish reflective from nonreflective texts."

Optimism, on the other hand, is synonymous with "language endorsing some person, group, concept, or event or highlighting their positive entailments" (Hart *et al*., 2013, p. 14) and is credited to the work of Barber (1992). Barber was concerned with identifying the underlying character of US presidents. He identified two independent baselines for determining presidential types: activity-passivity and positive-negative affect. It is the latter to which optimism clearly relates. This baseline, provides critical insight into presidential life, including whether a leader regards their work with optimism or pessimism, hopefulness or scepticism, happiness or sadness. Our study includes the related tonal variable, *positivity,* which is expected to correlate strongly with the DICTION's *optimism* master variable due to the obvious overlap between the two constructs. *Positivity* is one of the most frequently analysed elements of tone in the accounting literature and its inclusion in this study provides both a point of comparison with prior sentiment studies and a means of confirming the construct validity of DICTION's *optimism* measure.

The work of one of the leading protagonists of the General Semantics[4] movement, Wendell Johnson, was the foundation for the DICTION tone variable, *certainty*. Among other things, the general semanticists are concerned with the adverse consequences of increasing language rigidity and the issue of allness, that is, "the attitude of those who are unaware that they are abstracting and thus assume that what they say or know is absolute, definitive, complete, certain, all-inclusive, positive, final—and all there is . . . to say or know about the subject" (Haney, 1992, p. 323). *Certainty*, as operationalised by Hart *et al*. (2013, p. 14), suggests "resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra."

The philosophical tradition of pragmatism, as espoused by John Dewey and others, provides the underpinnings for *realism*. Pragmatism "emphasizes the practical application of ideas by acting on them to actually test them in human experiences" (Gutek, 2014, p.76).

Realism is represented by "language describing tangible, immediate, recognizable matters that affect people's everyday lives" (Hart *et al*., 2013, p. 15).

The last of the DICTION variables, *commonality*, is typified by language that is suggestive of "the agreed-upon values of a group and rejecting idiosyncratic modes of engagement" (Hart et al., 2013, p. 15). This tone draws on the philosophy of communitarianism, which in turn was spurred by a critical reaction to liberalism, particularly its belief in the inviolable rights of individuals, and more recently by the increasing atomisation of Western societies (Etzioni, 2014).

2.2 Tone and corporate disclosures

Narrative corporate accountability disclosures may be used as elements of a broader stakeholder communications strategy, while also as a means of meeting narrow regulatory requirements (Rutherford, 2005). In this study, we focus on the tonal attributes of corporate annual reports and stand-alone corporate sustainability reports. More specifically, we decompose these reports into constituent narrative parts, each representing a distinct subgenre. Within the annual report, we examine the chairman's letter, OFR, notes to the accounts, and any embedded CSR report, while in the standalone CSR report, we focus on the opening letter and the main body of the report. Each disclosure type serves a distinct communicative purpose, while presenting report authors with systematically different levels of constraints and opportunities in their construction.

A chairman's letter (or equivalent) is routinely included in corporate annual reports and is viewed by most corporate officers as being the "primary communications channel to shareholders (Goodman, 1980)" (Abrahamson & Park, 1994, p. 1307). As these statements are generally not constrained by stock exchange listing requirements or reporting regulations, management are largely "free to shape the [chairman's] letter as they see fit" (Abrahamson & Amir, 1996, p. 1159). Typically the chairman's letter provides an overview of a company's performance together with an indication of its future outlook (Clatworthy & Jones, 2001). However, the degree to which forward-looking information is disclosed is likely to be dependent on the litigiousness of the reporting environment (Weetman & Collins, 1996). The chairman's statement is regarded as the least technical part of the annual report (Subramanian, Insley, & Blackwell, 1993), and also, not surprisingly, is the most read (Lee & Tweedie, 1975; Courtis, 1982) and readable (Jones & Shoemaker, 1994). Similar to other forms of corporate communication, chairman's letters have a dual role: part informational and promotional (Henry, 2008). In keeping with the latter role, chairman's letters have been found to have a positive bias

(Hildebrandt & Snyder, 1981; Smith & Taffler, 1992b; Clatworthy & Jones, 2003), and a tendency to attribute negative outcomes to external factors, while associating positive results with management, i.e., exhibit attribution bias (Clatworthy & Jones, 2003).

The OFR or MD&A, supplements and complements the information in the financial statements by providing a 'through the eyes of management' commentary on the company's performance, financial condition and future prospects (CPA Canada, 2014). The requirements and guidance relating to the contents of discussion and analysis sections are generally expressed in broad terms to enable directors to make their own assessments of the information needs of users and to allow flexibility in the style, form and content of disclosures (Schroeder & Gibson, 1990; Aerts & Tarca, 2010).[5] As is the case with the chairman's letter, auditors are not required to audit the OFR, only review it for consistency with the financial statements and their understanding of the entity (ISA720).

Footnotes are an integral component of a set of financial statements, which both describe significant accounting policies, as well as amplify and explain matters that are necessary for an understanding of the financial statements. Footnotes have been found to be among the least readable sections of the annual report (Lee & Tweedie, 1977, Bartlett & Chandler, 1997), containing highly complex and technical material. Much of their content is required by GAAP (IFRS) and regulatory agencies (Schroeder & Gibson, 1990), and is normally closely scrutinised by the auditors, thereby limiting management's discretion over such disclosures.[6] Owing to their technical nature, footnotes "may be particularly prone to a kind of programmed processing of disclosures, leading to 'boilerplate' disclosures" (Aerts & Tarca, 2010, p. 427).

The practice of CSR reporting has increased significantly in recent decades as public interest in the broader impacts of corporate activity has risen (Deegan & Gordon, 1996; Governance & Accountability Institute, 2018; KPMG, 2017). Many firms voluntarily comply with published guidelines or standards, such as the Global Reporting Initiative's Sustainability Reporting Standards and AccountAbility's AA1000 series. While there were no legislative or professional requirements for either of the two forms of CSR report examined in this study (i.e., CSR reports within annual reports and standalone CSR reports), there are clear indications that voluntary reporting will transition to mandatory reporting requirements in many parts of the world (KPMG, 2017). Similar to the chairman's letter, there is currently still considerable discretion and flexibility surrounding the construction of such documents (Cho, Roberts & Patten, 2010). While CSR may be a means of signalling an organisation's commitment to responsible social and environmental practices, many CSR reports have been found to be self-

laudatory with an emphasis on positive rather than negative disclosures (Deegan & Gordon, 1996) – manifestations of 'greenwashing' (Mahoney, Thorne, Cecil & LaGore, 2013).

As is evident from the preceding discussion, each class of narrative has a distinct communicative purpose and faces systematically different levels of constraints and opportunities over its production. This suggests that each disclosure type in this study represents a distinct communication genre (Swales, 1990), and is therefore likely to exhibit a specific pattern of content and style—including tonal attributes. However, surprising little is known about the broad tonal qualities of these narratives. DICTION presents an opportunity to develop an understanding of the tonal profile of typical corporate narratives using its five master variables.

With the exception of Amernic, Craig, & Tourish (2010) and Craig & Amernic, (2018), however, the relatively few accounting studies to have explored DICTION's tone constructs have not focused on *overall* mean scores for tonal variables for the particular narrative under investigation. Rather, their interest has been to determine whether there is evidence of impression management using manipulation of tone (Cho et al., 2010; Ober, Zhao, Davis, & Alexander, 1999; Patelli & Pedrini, 2014; Sydserff & Weetman, 2002; and Yuthas, Rogers, & Dillard, 2002 – all are discussed in more detail in a subsequent section). These studies contrast selected DICTION variable scores of companies with good versus poor performance, or determine the association between performance and DICTION scores. Both Amernic et al. (2010) and Craig and Amernic (2018) investigate CEO letters. Amernic et al. (2010) find that DICTION analysis can provide valuable insights into the 'tone at the top' of specific organisations by comparing their scores with appropriate benchmarks to determine instances of 'out of range' values. Craig and Amernic (2018) use DICTION to identify linguistic markers of CEO hubris. Unexpectedly, they find that high levels of *optimism* and *realism* (relative to the DICTION norm for corporate reports) are characteristic of most CEO letters, irrespective of author – a result suggestive of a genre effect.

In addition to the above, prior studies have tended to use relatively small sample sizes (for instance, Sydserff & Weetman, 2002; Yuthas et al., 2002; and Ober et al., 1999, use samples of 28, 14, and 72 companies, respectively) and each examine only one disclosure type (e.g., chairman's letter, manager's/CEO's letter, MD&A, or environmental narrative) or the combined text of two disclosure types (chairman's letter and MD&A). Furthermore, only Sydserff and Weetman (2002), Yuthas et al. (2002) and Patelli and Pedrini (2014) consider all five DICTION master variables.

The preceding review reveals that individual studies have applied DICTION analysis largely on a piecemeal basis to individual classes of accounting narrative (or to the combined text of two document types, as in the case of Yuthas et al., 2002). No previous study has explored the relative tonal profiles of a broad array of disclosure types. Accordingly, our first research objective is to ascertain whether there are distinct tonal patterns across a range of corporate narratives. This leads to the following research question:

RQ1: How do dimensions of tone vary across different types of corporate narrative?

By illuminating patterns in tonal attributes across classes of corporate narratives, the study advances our understanding of latent disclosure norms and practices that together may be interpreted as genre rules. These norms or rules may assist a range of stakeholders, including auditors and regulators, identify instances of 'exceptional' disclosures and provide a basis for future research studying longitudinal shifts in such rules. This phase of the study is exploratory in nature, as we had no prior expectations regarding likely resuts.

2.3 Tone and readability

Corporate reporting, like other forms of mass communication, must meet the information needs of a diverse range of heterogeneous users, including both private and institutional investors, creditors, employees, government agencies, and other parties (Parker, 1982). Ensuring that information is comprehensible to users of varying sophistication while also meeting the technical requirements of standard setters and regulatory agencies is challenging. The tension between these objectives has been explored in the accounting literature through a series of readability studies dating back to the 1950s. While readability, like tone, is intimately bound to the notion of narrative *style*, it has also been more broadly conceived to include issues relating to *content*, *coherence*, and *organisation* (DuBay, 2004). However, in the accounting domain, readability has generally been operationalised using measures of syntactical complexity (Jones & Shoemaker, 1994).[7]

While a range of different readability measures have been employed in this literature, Table 1 highlights only those studies which have examined the readability of narrative portions of annual reports (and reported mean readability scores) based on the Flesch Reading Ease formula (the most prevalent measure). The Flesch formula produces scores between 0 and 100, with higher scores indicating higher levels of readability. A conversion table can be used to translate scores into US reading grade levels.[8] Table 1 provides little indication of any improvement in

the textual complexity of corporate reports over time, despite growing awareness since the 1950s of the importance of 'plain English' in enhancing the effectiveness of communication (Redish, 1985; Baldwin, 1999; Schriver, 1997; SEC, 1998).

[Insert Table 1]

The manipulation of readability as a means of obscuring 'bad news' through strategic increases in textual complexity and the promotion of 'good news' via clear and concise prose is a phenomenon investigated in a number of readability studies. However, findings have been mixed. While evidence consistent with an obfuscation hypothesis was found by Smith and Taffler (1992b), Subramanian et al. (1993), Li (2008), and to a lesser degree by Courtis (1995, 1998); no such support was found by Courtis (1986), Jones (1988), Clatworthy and Jones (2001), and Rutherford (2005). Merkl-Davies (as cited in Merkl-Davies & Brennan, 2007, p.139) finds that firm size, rather than financial performance, is the determining factor in reading difficulty.

Tan et al. (2014, p. 274) argue, however, that tone and readability co-occur in practice, and that managers do contemporaneously vary the use of both in order to obfuscate unsatisfactory performance. Their experiment finds that readability moderates the relationship between tone (sentiment) and investors' earnings judgments. However, tone and readability are likely to be more interdependent than suggested by these results. In particular, tone might be expected to directly influence readability—a relationship not directly tested by Tan et al. (2014). If this is the case, then tone could be an important control variable in studies which examine obfuscation through textual complexity, allowing for greater insight in to the question of whether "poor readability is determined by impression management or unintentional lexical deficiencies" (Patelli & Pedrini, 2014, p.23).

As vocabulary and word choice are at the heart of both readability and tone, advancing a certain tone (whether consciously or otherwise) is likely to directly impact readability. We identify two elements of tone, in particular, that are expected to influence readability: *realism* and *certainty*. *Realism* is generally associated with language describing tangible, immediate, recognizable matters (Short & Palmer, 2008, p. 743). Lower levels of *realism* may be associated with greater use of convoluted phrasing which, in turn, makes a passage of text's ideas more abstract and implications less clear (Short & Palmer, 2008) – the antithesis of readable text. *Certainty*, corresponds with language which emphasises definitiveness, absolutes, the complete absence of doubt and other phrases which are, as Ober et al. (1999, p. 283) put it, "prime currency for the claims of faith". In contrast, language that more faithfully conveys uncertainty

is likely to use more qualifications and admit more possible causes for events. That is, language which the general semanticists would describe as being more *extensional* in nature. Such language "tends toward full description, qualification, specificity, and objectivity" (Lebar, 1982, p. 177), which we argue necessitates greater textual complexity.

Accordingly, the first of the study's hypotheses are as follows (stated in alternate form):

H1a: Readability is positively associated with *realism*

H1b: Readability is positively associated with *certainty*

2.4 Obfuscation through Tonal Manipulation

In describing tone as a 'tool' employed to "create distinct social impressions via word choice", Hart et al. (2013, p. 9) appears to admit its role as a potential instrument of impression management. A small but growing body of research has examined thematic tone as a means of obfuscation in corporate narratives. Early research along this line focused on 'positivity' inherent in corporate narratives. Hildebrandt and Snyder (1981) considered whether the 'Pollyanna hypothesis' applied to chairman's statements.[9] Their results confirmed that positive words tended to occur more frequently than negative words irrespective of a company's financial position. Rutherford (2005) investigated the relative incidence of 90 high frequency keywords within 44 UK OFR narratives. His analysis revealed that OFRs employed language biased towards a positive theme. However, Rutherford cautions that while thematically oriented research generally demonstrates the presence of impression management, it is unlikely to completely disguise good from poor performance. Guillamon-Saorin (2006) also found evidence of a positive bias in 172 UK and Spanish press release narratives, even after controlling for performance.

In contrast to the preceding studies, Abrahamson and Park (1994) focused solely on the use of *negative* keywords in samples of president's letters issued by U.S. listed companies. They found that the greater the share ownership by outside board members and the greater the shareholding of small institutional investors, the greater the propensity to conceal negative outcomes. On the other hand, they found that the existence of external directors, large institutional investors, and audit report qualifications limited concealment of negative outcomes.

Marking the broadening focus of tone research, Thomas (1997, p.51) suggests, impression management using thematic tone manipulation is more complex than simply "… describing the company with a pretty pen." Her case study revealed that management in fact use of a range of language choices with a view to protecting management from criticism and

managing external perceptions of the company. As a consequence, subsequent researchers have sought to consider other elements of tone aside from positivity. These researchers have drawn on various DICTION master variables (i.e., *activity*, *optimism*, *certainty*, *realism* and *commonality*).

Ober et al.'s (1999) study of the use of 'certainty' in corporate discourse was one of the earliest of such studies to utilise DICTION. They found that the use of *certainty* in MD&As and oral communications of 72 Fortune 500 companies was not influenced by either profitability or industry. However, a significantly higher degree of *certainty* was observed for oral versus written communications, which was attributed to US managers' reputation for "overstatement in oral communication to show their confidence and assertiveness" (Ober et al., 1999, p.293). Yuthas et al. (2002) applied DICTION to a matched sample of seven listed US company annual reports, finding that companies that anticipated negative earnings surprises did not exhibit different levels of strategic communication compared to companies with positive earnings surprises, i.e. no evidence of obfuscation, while Patelli and Pedrini (2014) find no support for the strategic use of *optimism* in a sample of 664 US CEO letters. Davis and Tama-Sweet (2012) conclude that managers strategically report incremental pessimistic language in the MD&A part of the annual report (rather than in earnings press releases) in an attempt to mitigate negative market reaction to it. They support this conclusion with reference to literature which suggests that the market tends to process information in 10-Q and 10-K filings less efficiently than information in earnings press releases.[10]

Using both chairmans' statements and managers' reports from 26 UK investment trusts, Sydserff and Weetman (2002) tested for differences in all five DICTION master variables between 'good' and 'poor' performers. Significant differences were found in the *optimism* scores of chairmans' statements and the *activity* score of managers' reports. However, they argue that the lack of significant differences among most of the master variables could indicate that the managers of poor performers used impression management to make their narratives resemble the verbal tone and themes of good performers, especially in the case of the variables *certainty*, *optimism* and *activity* (p.539). More recently, Amernic et al. (2010) found evidence of 'positive spin' in CEO letters by companies in both the UK and the US.

Davis et al. (2012) examined the consequences of net *optimistic* language in earnings press releases and found it to be associated with future return on assets and to generate a market response. DICTION has also been applied in the context of CSR—using a sample of 190 environmental narratives from Section 1 of US SEC 10-K reports, Cho et al. (2010) found a positive association between environmental performance and both *optimism* and *certainty*. We

now develop the study's final set of hypotheses. Rhetorical devices such as verbal tone offer considerable scope for complementing textual complexity as a means of impression management.

It may be recalled that use of active language conveys the impression of movement, change, the implementation of ideas, and the avoidance of inertia. We draw on Hansson's (2015) 'overcommunication framework' to suggest that the use of *activity* may be particularly amenable to an overcommunication impression management strategy. While this framework was developed with a view to contributing "to the taxonomies of discursive strategies discussed in political linguistics", its roots are multidisciplinary and appear to have application beyond political rhetoric (Hansson, 2015, p. 172-173). Consistent with this framework, text with a high emphasis on *activity* may assist 'poor performers' in two ways. First, by effectively de-emphasising bad news through presentational choices that are designed to "maximise its contextual irrelevance", organisations may achieve some measure of blame avoidance (Hansson, 2015, p. 183). As Hansson suggests, "the tellability and newsworthiness of a blameworthy event can be decreased by providing excessive . . . information in relation to it" (p. 183). Accordingly, detailed information about organisational activities, actions and immediate plans may serve to swamp related 'bad news'. There appears to be some affinity for this view among public relations practitioners. A 2008 white paper on crisis management has as one of its five rules: "Facts and Actions are the Only Things that Trump Rumors and Speculation"—an apparent twist on the adage, 'actions speak louder than words' (Kapcio, 2008). Second, the creation of an impression of 'busyness' (or as Hansson refers to it, 'strategic performances of swiftness'), can create perceptions of increased work output and the resourcefulness of the reporting entity, i.e., impressions of "working hard" and "being on top of things". Accordingly, the hypothesis relating to *activity* is as follows:

Hypothesis H2a: The use of *activity* is significantly negatively associated with performance.

Emphasising positive outcomes (good news) and/or obfuscating negative outcomes (bad news) are forms of concealment strategy which lead to a positive bias in financial statements (Merkl-Davies & Brennan, 2007, p.126). Agency theory, the predominant impression management theory (Merkl-Davies & Brennan, 2007), predicts that concealment may be employed opportunistically by self-interested management to avoid negative consequences associated with perceived poor performance (Abrahamson & Park, 1994). A positive bias in

corporate documents has been found in a number of studies (Hildebrandt & Snyder, 1981; Rutherford, 2005; Guillamon-Saorin, 2006), while evidence has been found that both 'negativity' (Abrahamson & Park, 1994) and *optimism* (Cho et al., 2010; Davis et al., 2012) are also subject to impression management.

Hypothesis H2b: The use of *positivity* is significantly negatively associated with performance.

Hypothesis H2c: The use of *optimism* is significantly negatively associated with performance.

Cho et al. (2010, p. 434) argue that "language designed to obfuscate bad news or mask internal attribution would be flexible, irresolute, weak, and/or tentative"—the antithesis of *certainty*. Prior research has found that poor performance may be obfuscated in a number of ways including the use of weaker language (Subramanian et al., 1993) and through attributional behaviour which ascribes good performance to management and poor performance to other factors (Aerts, 2005; Clatworthy and Jones, 2003, 2006; Thomas, 1997). Defensive attributional strategies include the use of excuses, causality denials and justifications (Aerts, 2005), and are likely to require relatively greater use of extensional language, such as the use of qualifications and inclusion of multiple causes in describing events (Lebar, 1982). Our *certainty* hypotheses, then, is as follows:

Hypothesis H2d: The use of *certainty* is significantly positively associated with performance.

Sydserff and Weetman (2002, p.538) suggest that poor performers are likely to be motivated to obfuscate through "… weakening the semantic content for 'realism'." That is, they will emphasise less tangible and less immediate issues, in an attempt to deflect attention from the very real and immediate issues facing the firm. Accordingly, we may expect lower levels of *realism* in the texts of poor performers:

Hypothesis H2e: The use of *realism* is significantly positively associated with performance.

In contrast, we might expect higher levels of *commonality* among poor performers relative to well performing companies. Managers of well performing companies may attempt "… to set themselves apart from the group, emphasising their diversity and exceptional performance", while poor performers may wish "… to emphasise group identity so as to avoid isolation as a poor performer" (Sydserff & Weetman, 2002, p.538). Accordingly, our last hypothesis is as follows:

Hypothesis H2f: The use of *commonality* is significantly negatively associated with performance.

3. Method

3.1 Sample

Our sample consists of the largest companies listed on the principal stock exchanges in Australia and New Zealand. In particular, the sample is based on the ASX100 (Australia) and NZX50 (New Zealand). In order to maximise the sample pool of disclosures, the study primarily investigates disclosures for two successive financial reporting periods, 2008 and 2009.[11] Consistent with the reasoning of Henry (2008, p. 397), the study's sample was selected intentionally "because of the heightened importance of nonfinancial information during periods of uncertainty" such as that created by the Global Financial Crisis (GFC). Patelli and Pedrini (2014) also choose this period for a similar reason. While the sample period permits a focused examination, it nonetheless may limit the generalisation of the study's findings. The sample parameters resulted in an initial sample size of 150 companies, 300 annual reports and 60 CSR reports.

Both the standalone CSR reports and annual reports were obtained from the Morningstar Document Research database. Standalone CSR reports are separated into two sub-sections: the opening letters and the main disclosure sections. Annual reports are separated into four sub-sections: the chairman's statement, any dedicated CSR sections, OFR (or equivalent) sections and finally the financial statement notes.

3.2 Measures

3.2.1 Tonal Measures

This study includes all five DICTION 6.0 master variables (*activity, optimism, certainty, realism* and *commonality*) together with a measure of *positivity.* DICTION executes its content

analysis by searching passages of text for the occurrence of words included in its approximately 10,000-word corpus. This corpus consists of 31 mutually exclusive dictionaries (word lists) which correspond to 'sub-features' of the text. These sub-features (subalterns) have titles such as 'tenacity', 'levelling', and 'collectives' (see column 3 of Table 1). The raw scores on these 31 sub-features are the word count averages of 500-word segments of the overall text (with a modest statistical adjustment for homographs). The scores for each of the five master variables are linear combinations of the standardised scores of particular sub-features and four 'calculated' variables (*insistence, embellishment, variety, complexity*).[12] Table 2 provides definitions of each of the five master variables. The last column illustrates which sub-features and calculated variables are combined (and how) to determine the corresponding composite score for the relevant master variable. We make an adjustment to the certainty score, in accordance with Ober et al. (1999) and Sydserff and Weetman (2002). Specifically, we exclude two of the subtractive sub-feature variables, *numerical terms* and *self-reference.* The adjustment is considered appropriate for business communication applications of DICTION (see Sydserff & Weetman, 2002, p. 533-534).

Like all form-oriented computerised approaches to content analysis, DICTION is not a substitute for 'close reading'. Accordingly, DICTION is not capable of considering the context or communicative intent of word usage. Further, being dictionary-based, its keyword lists are unlikely to be all-inclusive. However, the software is unobtrusive and capable of handling significant amounts of data (Ober et al., 1999). Additionally, it offers perfect coder reliability and reproducibility. In terms of validity, its constructs are grounded in linguistic theory and the work of many prominent social thinkers (Hart, 2001; Sydserff & Weetman, 2002; Short & Palmer, 2008) and data from processing DICTION against over 30,000 texts has confirmed that the master variables are statistically independent (Hart et al., 2013).

Positivity is a net measure, being the average number of positive words less negative words in a document, per 500 words. Keyword lists consisting 92 positive words and 91 negative words, respectively, were constructed based on those used in the prior literature, including the lists used by Abrahamson and Park (1994). The two lists were then used as custom dictionaries in DICTION. *Positivity* is expected to correlate strongly with the DICTION's *optimism* master variable due to the obvious overlap between the two constructs.

[Insert Table 2]

3.2.2 Readability Measures

Readability formulas generally are subject to several limitations. Dreyer (1984), for example, notes that formulas ignore textual/semantic factors such as word frequency, concept density, and level of abstraction. They also overlook "… unusual positioning of sentence components or clauses and number of dependent clauses" (p. 335-6) and "… cannot distinguish scrambled text from well ordered prose" (p. 336). Smith and Taffler (1992a) observe that, contrary to the prediction of most readability formulas, longer sentences can sometimes aid comprehension. Notwithstanding these issues, readability formulas continue to be widely used in research and practice today. Readability formulas have the advantages of being reliable and efficient to administer (largely due to their mechanical application) and objective (not being reliant on subjective reader responses). Further, if used to assess *relative readability* rather than *absolute readability*, many of the main limitations with readability formulas can be avoided (Clatworthy & Jones, 2001).

The Flesch Reading Ease formula is used as the primary readability indicator in this study. It is the most widely used formula in the domain of readability (DuBay, 2007) and has been included in the vast majority of accounting-orientated readability studies (Clatworthy & Jones, 2001). Its popularity has been attributed to its computational ease, understandability and comparability (Courtis, 1998). As noted in an earlier section, higher Flesch scores correspond to greater levels of readability.[13] For the purposes of sensitivity analysis, several widely used alternative readability measures are used, including the Flesch–Kincaid, Smog, and Fog formulae. In this study, the principal focus is on relative readability scores (for all measures of readability) in order to avoid many of the criticisms of readability formulas.

3.3 Independent and Control Variables

In testing our hypotheses, we account for a variety of explanatory variables that prior literature has shown to be associated with the readability and/or thematic content of corporate disclosures.

Performance: In terms of the obfuscation argument, we argue that a relationship could be expected to exist between firm performance and readability. Profitability is measured using return on equity (ROE). We use return on assets (ROA) in a sensitivity test. Managers wishing to signal positive future opportunities and performance also have an incentive to ensure signals in corporate communications are clear and unambiguous. Alternatively, managers have incentives to obfuscate bad news concerning next period's performance. Consequently, readability is expected to also be related to future performance. In our study, we measure future

performance using the same proxies used to measure current performance. That is, we include measures for ROE for time period *t* and *t+1*.[14]

Another performance aspect is CSR performance. We know from the CSR literature that there is a relationship between CSR disclosure and CSR performance (see for example, Al-Tuwaijri, Christensen, & Hughes, 2004; Clarkson, Li, Richardson & Vasvari, 2008; Patten, 2002). We therefore argue that depending on the level of CSR performance, companies may use obfuscating language in the same way that financial performance can influence the reading difficulty of reports. We therefore include a CSR performance measure in our model. We use the ESG measure from Bloomberg as our CSR performance measure (see for example, Cahan, De Villiers, Jeter, Naiker, & Van Staden, 2016). The Bloomberg ESG score ranges from 0 to 100 and is determined based on a whole range of indicators in each of the three areas.

Size: Larger companies are likely to have longer and more complex annual report disclosures. Similar to previous research, we define company size as the natural log of the market value of the company at each fiscal year balance date.

Risk: Prior related studies have included gearing and liquidity-related proxies for risk (Rutherford, 2003; Smith & Taffler, 1992b; Courtis, 1986). Accordingly, we use the year-end current ratio and debt ratio.

Industry: We categorise our sample companies according to six industry classifications and represent them in our regression models with five dichotomous variables (with the sixth industry serving as the 'reference' group). These simplified classifications are based on industry classifications within Orbis.

Country: Prior research has found that between-country differences in regulatory and litigation costs can induce differences in corporate narrative characteristics (Aerts & Tarca, 2010). While Australia and New Zealand are close economic partners and share a similar cultural, legal and institutional setting, we nevertheless include a dichotomous variable in order to assess the existence of any Trans-Tasman difference in the disclosures. If the company's primarily listing is in Australia then this variable will be recorded as '1', otherwise '0'.

Board Independence: According to agency theory, it would be expected that independent directors will be more motivated to (and be more effective in) limiting manager's opportunism because they have no pecuniary interest in the firm aside from director's fees (see Abrahamson & Park, 1994). Accordingly, we use the percentage of the board represented by independent directors.

Data for the study's independent and control measures are obtained using Datastream, Orbis, and Bloomberg databases.[15] Table 3 summarises the relevant measures.

[Insert Table 3]

4. Results

4.1 Descriptive Statistics

Our initial sample had to be reduced due to the unavailability of data in source databases and, in several instances, due to conversion issues associated with extracted pdf reports. The final usable sample consisted of 34 companies from the NZX50 and 89 companies from the ASX100. A total of 215 individual texts were identified and extracted from the NZX50 companies, while 603 were extracted from ASX100 companies. After combining the data from these two sources, the total data set contained 818 individual texts. Table 3 (Panel B) provides the disclosure frequencies and as expected the data was dominated by the three typical annual report sections: chairman's statements, discussion sections and notes. These three disclosures make up 79% of the tested disclosures while CSR based disclosures, made up 21% of the sample.

Table 4 provides the descriptive statistics. The average disclosure length was 9,099 words. DICTION master variables had mean scores ranging from 44.50 to 52.74, with standard deviations ranging from 2.421 to 4.707. The correlation (untabulated) between *optimism* and *positivity* was, unsurprisingly, positive and significant: Pearson's $r = 0.66$ ($p < 0.01$, two-tailed).

[Insert Table 4]

4.2 Tone and Corporate Accountability Narratives

In this section we consider RQ1, that is, how do dimensions of tone vary across different forms of corporate narrative? Table 5 shows the means and medians of the tonal values and readability scores across disclosure types. Panel A shows the means and medians for the tonal values according to the disclosure types, including mean scores for corresponding sub-features (component variables) of DICTION master variables. Pairwise tests of differences between the disclosures are also indicated.

The results for *positivity* and *optimism* are generally very similar. The overall mean positivity and optimism scores are 4.55 and 51.10, respectively. The AR chairman's report,

the CSR opening section, and CSR in the annual report are the most *positive* and *optimistic* document types. The result for the first two documents is certainly not surprising. Both have mean optimism scores (53.32 and 53.37, respectively) that exceed the DICTION normal range (47.92-52.50).[16] For these document types, comparatively high scores on the DICTION component variables *praise*, *satisfaction*, *inspiration*, and low scores for *denial* are the principal driving factors. The chairman's letter may be viewed as a promotional genre. The considerable discretion available to the writers of such letters, can easily result in letters which promote an overly positive corporate image. However, whether readers dismiss unwarranted positivity and optimism as 'puffery' is an open question. Little if any empirical evidence exists on opening letters in standalone CSR reports. The results of this study suggest they mirror the positivity exhibited in chairman's letters. For CSR disclosures in the annual report, *inspiration* appears to be a key determinant. Inspiration is consistent with language conveying "abstract virtues deserving of universal respect", including desirable moral qualities and both social and political ideals (Hart & Carroll, 2012, p.6). Such themes would be expected to feature heavily in CSR disclosures.

[Insert Table 5]

In terms of *activity* (overall mean 49.01), the highest levels are present in the CSR disclosures (opening statement (50.40), main document (50.10), and CSR in the annual report (49.98)). Sub-features of *activity* that appear responsible include relatively high levels of *aggression* (embracing human competition and forceful action), *accomplishment* (task completion and organised human behaviour), and *communication* (social interaction); and low levels of *passivity* (words ranging from neutrality to inactivity). These collectively portray an impression of companies forcefully and proactively 'doing something' about environmental, social and governance issues. However, Hopwood (2009) and Neu, Warsame and Pedwell (1998, p.268) remind us that "the association between organizational actions and the words used to represent them is often ambiguous."

The AR notes (mean 51.12) and AR OFR (mean 50.74) have the highest levels of *certainty* (overall mean 50.00). High levels of language consistent with *insistence* (repetition of key terms) and limited *variety* (type-token ratio) appear to be responsible. This is understandable with respect to notes to the accounts, which are characterised by the use of standardised terminology and boilerplate accounting language. The high levels of certainty in OFRs echo Ober et al.'s (1999) finding that "the common advice in business communication

textbooks to avoid hedging—to "tell it like it is"—is widely accepted and practiced among Fortune 500 companies in their public business discourse". However, given the sample period of the current study, the possibility cannot be rule out that the relatively high levels of *certainty* in OFRs was an attempt by management to counter the prevailing uncertainty in the market created by the GFC.

The highest levels of *realism* (overall mean 44.50) is found in the CSR opening statement (mean 46.31) and the AR chairman's report (mean 46.35). Scores for both documents are at the upper end of DICTION's normal range. Underlying the *realism* for these two documents, is *human interest* (focus on people and their activities) and limited *past concern*. *Temporal awareness* (fixing a person, idea, or event within a specific time-interval) is also relatively high in the case of the chairman's report. The results generally mirror the findings of Craig and Amernic (2018) who found that high levels of *realism* (and *optimism*) appear to be a genre effect of CEO letters. They make a comparison between CEOs and political leaders (whose discourse has also been consistently demonstrated to exhibit high range REALISM scores) and argue that "both types of leader enact leadership substantially through language" (p. 982). Drawing on the political discourse literature, they note the "tendency for CEOs of major companies to look for ways of representing an abstract concept by means of a tangible example, so that they can tap into shareholders' felt needs" (p. 982) and to "avoid theoriz[ing] about events with little regard to tangible matters (Hart et al., 2013, p. 50)" (p. 982-3).

In terms of *commonality* (overall mean 52.74), the highest level was in the AR notes (mean 53.18) and the AR OFR documents (mean 53.69) with the lowest level in the CSR opening statement (mean 51.07). All document types were well within DICTION's normal range (47.94-55.30). Comparatively high levels of *cooperation* (terms designating behavioural interactions among people that often result in a group product) largely appear to be responsible for the high *commonality* scores of the notes and OFR sections of annual reports. However, high score for notes (mean 17.72) on *cooperation* (overall mean 12.30) is due to DICTION failing to fully account for the accounting and finance-specific homonyms (words having the same spelling but different meanings) 'share', 'exchange', and 'consolidate'. In DICTION these terms are keywords suggestive of 'neutral interactions' or 'job-related tasks', which in turn contribute to *cooperation*. This case serves to highlight one of the limitations of form-based approaches to linguistic analysis.

In summary, the analysis of tone by document types has highlighted important differences in the tonal pattern of key corporate accountability narratives. We find that annual

report chairman's letters and CSR opening letters both tend to exhibit relatively high levels of *positivity*, *optimism*, and *realism*. All forms of CSR document communicate higher levels of *activity* than other accountability documents. Last, annual report OFR sections and notes to the accounts connote high levels of *certainty* and *commonality*. Collectively, these results are consistent with the idea that each component narrative of the annual report represents a distinct communication genre, as each shares a communicative purpose and exhibits a similar pattern of content and style—in this case tone. No previous study has explored the relative tonal profiles of common corporate narratives.

4.3 Influence of Tone on Readability

In this section we examine to proposition that tone may contribute to another important stylistic component of corporate narratives, readability. We first look at the relative readability of corporate narratives included in this study before undertaking multivariate analysis of the determinants of readability.

Panel B of Table 5 shows the means and medians for readability according to individual disclosure types. Pairwise tests of differences between the disclosures are also indicated. The mean Flesch reading score for all documents was 29.17. Converting this score to a grade level suggests that, on average, corporate disclosure documents in our sample required the readability level approaching that of a postgraduate student. This is consistent with prior studies, which have shown that corporate documents to be "… couched in an academic, scientific style which the unsophisticated reader would find difficult or very difficult, to read" (Jones, 1988, p. 298). Although not tabulated, the mean reading level scores for the Flesch-Kincaid, Fog and Smog measures of 15.05, 18.31, and 16.23, respectively, tell a similar story.[17]

The scores by disclosure type suggest that annual report chairman's statements CSR reports' opening letters, CSR main and annual reports' chairman's statements are the most readable forms of textual disclosure, followed by CSR reports' opening letters, CSR main and AR discussion while AR Notes and AR CSR are the least readable. The AR OFR (MD&A) and CSR Main have similar levels of readability as per the means analysis. An interesting finding is that CSR reports that are included in annual reports are consistently less readable than CSR reports issued independently of the annual report. Further, and surprisingly, such reports are also somewhat less readable than the notes to the financial statements for the Flesh indicator, but not for the other readability indicators.

Table 5 shows clearly that different document types have different tonal values with means above and below the mean for all disclosure types combined and some disclosure types differ significantly from others. Table 5 also shows significant readability differences across the disclosure types. We propose that different tonal values may be one of the reasons for the different readability levels of these documents and test that in the remainder of this section.

The results of hypothesis testing using ordinary least squares (OLS) regression analysis are presented below. The model (equation 1) used to examine the first hypothesis (the influence of thematic tone on readability) is as follows (with readability being measured using the Flesch score[18]):

$$Readability = \alpha + \beta 1\ (Tone) + \beta 2\ (Performance) + \beta 3\ (Future\ Performance) + \beta 4\ (Size) + \beta 5\ (Liquidity) + \beta 6\ (Leverage) + \beta 7\ (Energy) + \beta 8\ (Goods) + \beta 9\ (Industrial) + \beta 10\ (Investment) + \beta 11\ (Primary) + \beta 12\ (Country) + \beta 13\ (Board\ Indep) + e \quad \text{(Equation 1)}$$

Where Tone = *positivity, activity, optimism, certainty, realism* or *commonality*

Analysis of the normal probability plot of the residuals suggested that the error term was normally distributed, confirming the appropriateness of the use of regression analysis. The regression results are presented as four models in Table 6.

[Insert Table 6]

The results for models 2-7 indicate that all of the six tone variables were significantly associated (at the 1% level except for *activity* at the 5% level), either positively or negatively, with readability suggesting that tonal characteristics are an important determinant of readability. Combining all tone variables (model 8) resulted in *optimism* and *commonality* failing to reach significance.[19] All the models (except model 3) have higher adjusted R-square values than that of model in column 1 (the model without any of the tone variables). The model incorporating the *realism* tone variable (model 6) had the highest adjusted R-square value (adj. $R^2 = 0.26$) of all models, except for model 8, which included all five tonal variables at the same time. Consistent with H1a, *realism* is positively associated with readability, suggesting that the greater use of language describing tangible, immediate, recognizable matters results in less syntactically complex prose. Conversely, low realism is

associated with difficult-to-follow, abstruse phrasing which, in turn, makes a passage of text's ideas more abstract and implications less clear (Short & Palmer, 2008). Positivity and optimism are also positively associated with readability, suggesting the language that are more positive and optimistic, i.e., language that focus on praise, satisfaction and inspiration and avoid blame is more readable.

Activity, *commonality*, and unexpectedly, *certainty*, were all negatively associated with readability. To uncover the factors contributing to the negative impact of *activity* on readability, we regressed (untabulated) the components of *activity* (see Table 2) on readability. This revealed that aggression (words connoting competition and forceful action), communication (words suggestive of social interaction), cognitive terms (references to cerebral processes) were all significantly negatively related to readability. Similar analysis undertaken on *certainty* suggests that greater use of words relating to *insistence* leads to less readable text. *Insistence* is associated with repetition of key terms suggesting a preference for a limited, ordered world (Hart & Caroll, 2012). According to Hart et al. (2013, p.194), "[u]sually serious people doing serious things – lawyers, scientists, corporate executives, journalist – score high on this variable." Based on an analysis by rhetorical genre, they report that financial reports, legal documents and science journals have the highest insistence scores. H1b, then, was not supported. Last, regressing components of *commonality* on readability identified *centrality* (terms suggestive of institutional regularities and/or substantive agreement on core values), *cooperation* (terms designating behavioural interactions among people) and *diversity* (words indicative of individuals/groups differing from the norm) as each being significantly negatively associated with readability.

In terms of the control variables, profitability (particularly future profitability) has a definite effect on readability in that companies with a higher profitability have more readable disclosures for all tone models (including the combined models). Conversely, poorly performing firms appear to be associated with less readable prose, consistent with management's obfuscation of bad news. This finding is similar to those of Smith and Taffler (1992b), Subramanian et al. (1993), and Li (2008). In contrast to financial performance measures, CSR performance was not found to be significantly associated with readability (model 9).

Some industries (energy and goods) consistently have less readable disclosures while Australian companies consistently have less readable disclosures than New Zealand companies. Surprisingly, company size played no role in terms of readability, contrary to the

claim by Merkl-Davies (as cited in Merkl-Davies & Brennan, 2007) that firm size rather than financial performance is the determining factor in reading difficulty.

4.3.1 Tone and Readability by disclosure type

Analysing the influence of the variables on readability per disclosure type allows us to gain further understanding of the influences on readability. Since we found that thematic tone and readability differs across disclosure type, it is a natural extension of our research to analyse this per disclosure type. We have found (Table 6) for all disclosure types combined that *activity* and *certainty* are negatively related to readability while *positivity* and *realism* are positively related to readability. To observe the effect of this by disclosure type, we do an explorative analysis across disclosure types. The results are presented in Table 7.

[Insert Table 7

The discussion that follows, focuses on differences at the p = 0.05 level. While *activity* resulted in lower readability overall, by disclosure type it only has a significant influence on CSR Open and AR Notes. *Positivity*, which was positively associated with readability overall, only influenced the AR Chairman's report. In contrast, *optimism*, which had a significant positive influence (better readability) in model 4 of Table 6, interestingly does not influence any of the disclosure types. *Certainty*, which was negative overall, by disclosure type it negatively influences the readability of CSR Main and AR Notes. *Realism*, which has an overall positive influence, has an influence on all four of the annual report disclosure types only, i.e., AR CSR, AR Chairman's report, AR OFR and AR Notes. Finally, *commonality*, which had an insignificant effect overall, has a positive influence on AR Chairman's report and a negative influence on AR notes. AR Notes are therefore influenced by all the tonal values (except *positivity*/*optimism*) in the previously observed direction. All the other disclosure types are influenced by only one tonal value, except for AR Chairman's statements that are influenced by two. The tonal value that influenced most disclosure types is *realism* (four).

Tonal values per disclosure type therefore differs markedly. Even comparing disclosure types with the highest readability (AR Chair, CSR Open, AR OFR) shows no common element (except for *realism*) and similarly, comparing disclosure types with the lowest readability (AR notes and AR CSR) shows only *realism* in common. The tonal value most associated with readability was *realism*, across four of the six documents and consistently showing an improved readability. The tonal value with the least influence was *optimism* that was not significant for any of the six documents (although it is significant overall). This is surprising considering the perceived influence of positive (or optimistic) language on readability.

Reflecting on the control variables, while we observed a consistent effect of profitability on readability in our previous analysis, we now note that this is only significant for the AR Chairman's report, i.e., only the AR Chairman's report will be easier to read when profitability is high (or more difficult to read when profitability is low). The industry effect that we observed before is most significant for the AR notes, so different industries will have more difficult-to-read notes. Finally for the country effect, Australian AR OFR and AR Notes are more difficult to read while CSR Open is easier to read. There is still no significant size effect.

4.4 Tone and Obfuscation

The following OLS model (Equation 2) examines determinants of the thematic tone of disclosures. The inclusion of performance and future performance allows consideration of the possibility that tone may be used to obfuscate poor financial performance.

$$Tone = \alpha + \beta 1\ (Performance) + \beta 2\ (Fut.\ Performance) + \beta 3\ (Size) + \beta 4\ (Liquidity) + \beta 5\ (Leverage) + \beta 6\ (CSR\ Open) + \beta 7\ (CSR\ Main) + \beta 8\ (AR\ CSR) + \beta 9\ (AR\ Chair) + \beta 10\ (AR\ OFR) + \beta 11\ (Energy) + \beta 12\ (Goods) + \beta 13\ (Industrial) + \beta 14\ (Investment) + \beta 15\ (Primary) + \beta 16\ (Country) + e \quad \text{(Equation 2)}$$

Where Tone = *positivity*, *activity*, *optimism*, *certainty*, *realism* or *commonality*

Table 8 presents the thematic regression results. The first thematic tone model is for the variable *positivity*. The model is significant and its explanatory power (42%) is reasonably high. The relationship between performance and *positivity* is significant and

positive, which is inconsistent with H3b. All disclosure types, with the exception of CSR Main, were significantly more positive than AR Notes (the reference group).

Activity presents the weakest thematic model, capable of explaining just 2% of the variance in *activity* keywords. The relationship between performance and *activity* is not significant, which is not consistent with H3a. However, future profitability is significantly positively related to *activity*. The CSR reports presents significantly more *activity* (i.e., language representing change, implementation of new ideas or avoidance of inertia) than AR Notes, whereas the other disclosure elements present similar levels of activity.

The *optimism* model explained 45% of the variance in the use of *optimism* keywords. *Optimism* is not significantly related to performance, in contrast with H3c, which anticipated a negative association. All disclosure types show significantly higher *optimism* (i.e., endorsing language highlighting positive entailments) than AR notes.

The *certainty* model is capable of explaining 17% of the variance in *certainty* keywords. *Certainty* is not significantly related to performance, inconsistent with H3d. Relative to the notes to the financial statements, all other document types (except AR OFR) contain significantly less *certainty* (i.e., language indicating resoluteness, inflexibility and completeness). Given the nature of notes to the accounts, this is hardly surprising.

Realism has an adjusted R-square value suggesting that 20% of the variance in *realism* keywords can be explained by the model. *Realism* is not significantly related to performance, H3e is therefore not supported. Relative to the notes to the accounts, annual report chairman's statements and CSR report opening letters contained greater use of *realism* (i.e., language placing greater emphasis on tangible, immediate and recognizable matters that affect people's everyday lives) while the CSR Main report contains less *realism*.

The *commonality* model is also quite weak, capable of explaining just 3% of the variance in *commonality* keywords. *Commonality* is not significantly related to performance, H3f is therefore not supported. All disclosure types, except for AR OFR, had less *commonality* (i.e., language highlighting agreed upon values of a group or helping minimise idiosyncratic views) than AR Notes.

[Insert Table 8]

Other findings of interest are that Australian companies communicate lower *realism* than their New Zealand counterparts, and that disclosure type is an important determinant of thematic tone generally. We find that compared to annual report notes, all other disclosures types have

more *optimism*, and (with the exception of OFR) less *certainty* and *commonality*. A further finding is that the CSR reports convey more *activity* than the AR Notes (but none of the other disclosure types do).

5. Discussion and Conclusion

Many studies consider tone to be a relatively simple one-dimensional construct (e.g., positivity). This study sought to demonstrate that verbal tone is considerably more nuanced in nature. The first objective of this study considers whether common corporate accountability narratives exhibit distinct tonal profiles, consistent with each representing a distinct genre. No previous study has examined the relative tonal profiles of common corporate narratives. For a multi-year sample of listed companies, we examine dimensions of tone across multiple forms of narrative within the annual report and two components of CSR reports issued separately from the annual report.

We find that annual report chairman's letters and CSR opening letters both tend to exhibit relatively high levels of *positivity*, *optimism*, and *realism*. All forms of CSR document communicate higher levels of *activity* than other accountability documents, while annual report OFR sections and notes to the accounts connote relatively high levels of *certainty* and *commonality*. An interesting difference is noted in the levels of *positivity* and *optimism* between the main sections of standalone CSR reports and those embedded within annual reports (the former being considerably less positive/optimistic). We later also find a marked difference in readability between these two narratives—the former being relatively more readable. The reasons for such differences are worthy of further research. By making visible latent disclosure norms and practices that together may be interpreted as genre rules, the study may assist auditors and regulators in identifying 'exceptional' disclosures and provides a basis for future research to study longitudinal shifts in such rules. However, it is acknowledged that further research is required to generalise the study's findings to other jurisdictions and time periods.

The second focus of this research considered the relationship between tone (one element of tone) and the most intensively researched stylistic dimension of accounting narratives, readability. We argue that tone and readability are likely to be more interdependent than suggested by prior studies. In particular, tone might be expected to directly influence readability—a relationship that has not been previously examined.

Our preliminary analysis confirmed that readability continues to be a problem in corporate reporting, echoing the findings of prior research conducted over many decades. Unlike prior studies, however, we investigated the relative readability of a broad range of disclosures (i.e., annual reports and CSR reports) and sections therein, including both regulated and unregulated disclosures. Our results show that of the traditional annual report disclosures (i.e., chairman's statements, OFR, and footnotes), the required and regulated (and audited) annual report footnotes are the most difficult to read. Annual report disclosures that are not regulated and/or prescribed to the same extent (chairman's statement and OFR) are more readable, with chairman's statements being the most readable of any of the textual components. Standalone CSR Reports have the same readability as the OFR section of the annual report. Disclosure type is therefore a significant predictor of readability. Overall, the average readability across all disclosure types was "very difficult" being consistent with the reading level of a postgraduate student. This suggests that unsophisticated readers may find many disclosures to be incomprehensible.

In examining the role of tone in influencing readability, we find five out of six forms of tone (i.e., *positivity*/*optimism*, *activity*, *certainty*, and *realism*) to be influential, thereby providing support for the contention that tone is an important determinant of readability. Contrary to our expectations, though, *certainty* is found to be negatively related to readability. However, as anticipated, *realism* is found to be positively associated with readability and has the largest explanatory effect relative to other forms of tone. Interestingly, Craig and Amernic (2018), who were looking for markers of CEO hubris, found *realism* to be high in all CEO letters examined (relative to financial reports in general), irrespective of the expected level of hubris associated with particular CEOs. They explained their finding as

> "… reflecting a desire by CEOs to avoid 'theoriz[ing] about events with little regard to tangible matters' (Hart et al. 2013, p. 50). As with politicians, they 'use high levels of REALISM to keep themselves grounded' (p. 52). This suggests that language reflecting high REALISM reveals that CEOs are cognizant of 'how powerful they are and how what they do, how they act, and what they say and write, affects human affairs' (Hart et al. 2013, p. 57)" (Craig & Amernic, 2018, p. 11-12).

A similar finding was observed in our study, whereby the *realism* scores for CSR Open and AR Chair (46.35 and 46.31, respectively) were significantly higher than other documents sampled, i.e., CSR Main, AR CSR, AR OFR, and AR Notes (41.85, 43.66, 43.99 and 43.99, respectively ($p < 0.05$)). The passive nature of Craig and Amernic's (2018) finding led them to conclude that the high levels of *realism* in CEO letters is a genre effect

common to all such letters. The results of our study would suggest that a (perhaps unintended but desirable) outcome of this genre effect is an improvement in the readability of such documents.

Although not a primary focus of the current study, we find support for the use of readability as a means of obfuscating 'bad' performance. We find that companies with poor performance (particularly future performance) produce less readable disclosures. The prior literature has produced mixed findings. However, out study is the first to control for the effects of tone. Our result is consistent with the findings of Abu Bakar and Ameer (2011); Courtis (1995, 1998); Li (2008); Smith and Taffler (1992b); Subramanian et al. (1993) and those that have linked firm performance with disclosure quality (e.g., Lang & Lundholm, 1993). The results suggest that management may be reporting opportunistically - using the level of textual complexity to obfuscate bad news. Readability appeared to be manipulated in accordance with anticipated levels of future financial performance. In addition, we examined the effect of CSR performance and while this was not significantly related to readability, it is important to consider its effect on readability given its close relationship with CSR disclosure.

The final area of focus of the study was on determinants of tone. Disclsoure type is seen to be a significant factor in determining tone. By examining the effects of performance in particular, this study addresses the appeal by Rutherford (2003) for scholarly literature on obfuscation to move beyond the current emphasis on textual complexity alone. Rutherford (2003, p. 206) asserts that "[o]ther disciplines, including political science and cultural studies, are now making increasing use of quantitative methods to capture aspects of rhetoric and impression management …". To this end, we examined the directional relationships between performance (profitability and future profitability) and six tonal variables (H2a-f). No support was found for any of the hypothesised relationships.

Contrary to our expectations, we found that current financial performance is directly associated with the level of *positivity*. This result is consistent with Yuthas et al. (2002) who found evidence that public companies report according to Habermas' *communicative action principles*, that is, sampled firms were more communicative than strategic in their communications. However, why a similar result was not also observed in connection with *optimism* is worthy of further investigation. Whether this is attributable to the subtle semantic differences between the two closely related constructs or whether it is due to an artefact in their respective measurement warrants further analysis.

Activity is positively related to future performance only and not in the hypothesised direction. Neither current nor future performance had an influence on *optimism*, *certainty*,

realism or *communality*. However, we cannot rule out the possibility that this was consistent with an alternative form of impression management. Sydserff and Weetman (2002) note that poorer performing companies may use impression management to make specific tonal elements of their narratives resemble those of better performing companies, and thereby 'mimic' the disclosures of better performing companies. We urge future research to re-examine the theoretical underpinnings of the performance-tone relationship. In particular, institutional theory's 'mimetic isomorphism' may be a useful avenue to pursue (see DiMaggio & Powell, 1983; Merkl-Davies & Brennan, 2007).

The issues raised in this paper regarding the clarity and balance of textual disclosures, highlights the challenges in regulating corporate narratives. Fundamentally, the issues are different in nature to those associated with regulating accounting numbers (Rutherford, 2003). Rutherford notes that regulations relating to accounting narratives are often imprecise and lack effective enforcement mechanisms (such as an audit requirement for all narratives in the annual report). This study highlights the role that computer-assisted textual analysis (CATA) tools, such as DICTION and readability analysis, could play if more demanding audit requirements concerning accounting narratives were to be introduced in the future. Indeed, the use of DICTION as a diagnostic tool in the regular financial audit has been mooted by Amernic et al. (2010).

6. References

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Notes:

1 See Merkl-Davies & Brennan (2007) for a detailed discussion of the distinction between the two motivations underlying the provision of voluntary narrative disclosures.
2 In this study we use the terms management's discussion and analysis (MD&A) and operations and financial review (OFR) interchangeably.
3 The statement from a company's chairman (president) that is typically included in an annual report is variously referred to as the chairman's (president's) statement, report, address, narrative or letter. In this study, we will use the term 'chariman's statement' to encompass all of the preceding terms.
4 While there are numerous definitions of General Semantics, perhaps the most parsimonious and understandable is that of Hauck (2008, p.356), who defines it as "the study of reactions to language." Here, language is viewed as a representation of reality having the ability to influence (and constrain) human thought and behaviour.
5 See, for example, S299A Corporations Act 2001 (Australia) and IFRS Practice Statement, 'Management Commentary – A Framework for Presentation'.
6 While it is acknowledged that all documents accompanying audited financial statements are required to be reviewed by the auditor for 'material inconsistencies' with the financial statements (see, for example, ISA 720), there are questions surrounding the efficacy of this process due to the degree of subjectivity involved in the assessment (Clatworthy and Jones, 2006, p.495).
7 The most widely used readability formulae include Flesch Reading Ease (Flesch, 1948), Flesch-Kincaid (Kincaid, Fishburne, Rogers, & Chissom, 1975), Smog (McLaughlin, 1969), and Fog (Gunning, 1952). The reliance on readability formulae has been justified on the grounds of validity, in particular, the correlation between readability

scores and other criteria of readability, such as independent comprehension testing (Klare, 1980; Courtis, 1986). While many factors have been considered as determinants of readability, two have been found to be sufficient to adequately predict reading difficulty: word difficulty and sentence length (Chavkin, 1997; Courtis, 1986; Stevens, Stevens, Stevens, 1992). Both factors are the principal variables in most readability formulas.

8 Flesch Reading Ease score conversion: 100 – 90 = 5th Grade (Very easy), 90 – 80 = 6th Grade (Easy), 80 – 70 = 7th Grade (Fairly easy), 70 – 60 = 8th – 9th Grade (Standard), 60 – 50 = 10th – 12th Grade (Fairly difficult), 50 - 30 = Under Graduate (Difficult), and 30 - 0 = Post Graduate (Very difficult).

9 The Pollyanna hypothesis contends that there is a tendency for humans, irrespective of culture, to use evaluatively positive words more frequently, diversely and facilely than evaluatively negative words (Boucher and Osgood, 1969, p.1).

10 Forms 10-Q and 10-K are statutory filings (reports) that publicly traded companies in the US make with the Securities and Exchange Commission (SEC) on a quarterly and annual basis, respectively.

11 As standalone CSR reports are often not released annually, data was be obtained from each company's latest two reports (if any existed).

12 To ensure no master variable score is negative, a constant of 50 is added to each.

13 The formula for the Flesch index is as follows: Score = 206.835 – (1.015xASL) – (84.6xASW), where ASL equals average sentence length (the number of words divided by the number of sentences), and ASW equals the average number of syllables per word (the number of syllables divided by the number of words).

14 Current and future profitability have the potential to be highly correlated, thereby leading to multi-collinearity issues when both are included in the same regression model. To address this issue, correlations and variance inflation factors (VIFs) were examined. The correlations between current and future profitability were 0.336 and 0.343 for ROE and ROA, respectively, while variance inflation factors for the profitability measures were all below 1.3. These results do not indicate any problem with multicollinearity.

15 To allow direct comparison between Australia and New Zealand, Australian dollar values are converted into New Zealand currency (NZ$) at the relevant balance day conversion rates.

16 Comparisons with DICTION's normal ranges need to be interpreted with caution as DICTION's norms are based on the analysis of both president's letters and sections of MD&As extracted from a relatively small sample (n=48) of large Fortune 500 companies' annual financial reports (Sydserff & Weetman, 2002).

17 Note that while Flesch scores are positively related to readability (i.e., higher scores are indicative of better readability), the alternative readability measures are all inversely related to readability, i.e., higher scores are indicative of less readable text.

18 As noted earlier, alternative readability measures are used for sensitivity analysis (the results of which are discussed later in the paper). Correlations between the different readability measures were all strong (positive correlations ranging from .97 to .98, negative correlations ranging from -.88 to -.91) and all in the expected direction. These correlations provide strong evidence of the convergent validity of the various indicators.

19 In untabulated tests, dropping *positivity* from model 8, sees *optimism* becoming significant and positive (Adj. R^2 = 0.29), while dropping *optimism* and retaining *positivity* results in *positivity* becoming significant and positive (Adj R^2 = 0.31). These results suggest that *positivity* has more explanatory effect on readability than the related construct, *optimism*.

Tables

Table 1. Flesch scores reported in readability studies

Study	Annual Reports Sampled	Report Date(s)	Annual Report Section				
			Whole Report	Chairman's Statement	Footnotes	OFR (MD&A)	CSR
US							
Pashalian and Crissy (1950)	26	1949	34.37				
Soper and Dolphon (1964)	25	1961	28.76				
Smith and Smith (1971)	49	1969			23.49		
Dolphin and Wagley (1977)	19	1974	16.05				
Barnett and Leoffler (1979)	50	1975			12.88		
Holley and Early (1980)	23	1976	23.05				
Baker and Kare (1992)	44	1990		39.00			
UK							
Still (1972)	50	1971		42.51			
Smith and Taffler (1992b)	66	1978-85		35.71			
	33 failed			*33.11*			
	33 non-failed			*38.32*			
Clatworthy and Jones (2001)	60	1995-6		45.00			
	30 profitable			*45.30*			
	30 unprofitable			*43.70*			
Rutherford (2003)	64	1998				29.74	
New Zealand							
Healy (1977)	50	1976			30.19		
Richards and Van Staden (2015)	180	2006-10			28.99		
	108 pre IFRS				*29.56*		
	72 post IFRS				*28.13*		
Canada							
Courtis (1986)	46	1982		31.34	28.06		
	96	1983		28.96	25.96		
Hong Kong							
Courtis (1995)	32	1986		38.35	30.72		
	32	1991		36.85	27.72		
Courtis (1998)	120	1994-5		46.38			
Malaysia							
Abu Bakar and Ameer (2011)	333	2007					23.55

Note: OFR = Operating and Financial Review (or equivalent); CSR = Corporate Social Responsibility Reporting. Flesch scores are reported on a range from 0 and 100, with higher scores indicating higher levels of readability.

Table 2. The DICTION master variables

Variable	Definition	Formula
Activity	Language featuring movement, change, the implementation of ideas and the avoidance of inertia.	[Aggression + Accomplishment + Communication + Motion] – [Cognitive Terms + Passivity + *Embellishment*]
Optimism	Language endorsing some person, group, concept or event or highlighting their positive entailments.	[Praise + Satisfaction + Inspiration] – [Blame + Hardship + Denial]
Certainty	Language indicating resoluteness, inflexibility, and completeness and a tendency to speak ex cathedra	[Tenacity + Levelling + Collectives + *Insistence*] – [Ambivalence + *Variety*]
Realism	Language describing tangible, immediate, recognizable matters that affect people's everyday lives.	[Familiarity + Spatial Awareness + Temporal Awareness + Present Concern + Human Interest + Concreteness] – [Past Concern + *Complexity*]
Commonality	Language highlighting the agreed upon values of a group and rejecting idiosyncratic modes of engagement.	[Centrality + Cooperation + Rapport] – [Diversity + Exclusion + Liberation]

Source: Adapted from Hart and Carroll, 2012; DICTION calculated variables italicised; Consistent with the recommendation of Sydserff and Weetman (2002), *certainty* excludes two subtractive sub-features, 'numerical terms' and 'self-reference'.

Table 3. Summary of independent and control variables

Panel A

Variable	Description
Performance	Return on equity (ROE) or return on assets (ROA) at time period *t*, where ROE is net income divided by average shareholders' funds and ROA is net income divided by average total assets
Future Performance	Return on equity or return on assets at time period *t+1*
CSR Performance	ESG measure from Bloomberg for period *t*. Based on a range of indicators in each of three areas: the environmental area (E) (119 items), social area (S) (45 items), and governance area (G) (96 items)
Size	Natural log of market value represented in New Zealand dollars
Liquidity	Current ratio at year end (current assets divided by current liabilities)
Leverage	Debt ratio at year end (total liabilities divided by total assets) or solvency ratio at year end (shareholders' funds divided by total assets)
Disclosure	Dummy variable for each disclosure type (i.e., CSR Open, CSR Main, AR CSR, AR Chair, AR OFR), except 'notes to the financial statements' – AR Notes, which is the disclosure type reference group
Industry	Dummy variable for each industry category (i.e., Energy, Goods, Industrial, Investment, and Primary), except 'Service', which is the industry reference group
Country	Dummy variable coded '1' for companies whose primary listing is in Australia , otherwise'0'
Board Independence	Percentage of board represented by independent directors

Panel B

	Frequency	%	Measure
CSR Report – Opening Letter	54	6.60	CSR Open
CSR Report – Main disclosure sections	60	7.34	CSR Main
Annual Report – Dedicated CSR sections	57	6.97	AR CSR
Annual Report – Chairman's Statements	188	22.98	AR Chair
Annual Report – OFR	228	27.87	AR OFR
Annual Report – Financial statement notes	231	28.24	AR Notes
Total	818	100.00	

Table 4. Descriptive statistics

	Min	Max	Range	Mean	Std. Dev.
Flesch	1.00	56.00	55.00	29.17	7.997
Flesch-Kincaid	10.00	21.50	11.50	15.05	1.831
Fog	12.80	24.40	11.60	18.31	1.902
Smog	11.10	20.90	9.80	16.23	1.404
Total Words	43	95,181	95,138	9,099	10,259
Positivity (net)	-11.63	34.50	46.13	4.55	5.392
Activity	0.00	62.53	62.53	49.01	4.230
Optimism	42.80	65.52	22.72	51.10	2.431
Certainty	38.94	66.85	27.91	50.00	2.661
Realism	13.88	61.02	47.14	44.50	3.221
Commonality	35.19	153.37	118.18	52.74	4.707
Performance (ROE %)	-106.34	98.63	204.97	11.86	21.277
Future Performance (Fut. ROE %)	-106.34	98.63	204.97	9.17	18.597
Performance (ROA %)	-68.96	45.67	114.63	4.55	11.159
Future Performance (Fut. ROA %)	-68.89	40.29	107.18	3.88	9.338
CSR Performance	4.54	63.22	58.68	29.72	13.88
Size (MV NZ)$ ($000)	37,747	200,469,920	200,432,800	11,387,540	23,383,780
Liquidity (Current ratio)	0.02	19.20	19.18	1.60	1.815
Leverage (Debt ratio)	0.05	1.43	1.38	0.55	0.219
Leverage (Solvency ratio))	-114.01	93.25	207.26	42.44	23.961
Board Independence	0.00	100.00	100.00	68.38	18.465

Table 5. Means (medians) for tone and readability scores across disclosure types

Variable	(1) CSR Open n=54	(2) CSR Main n=60	(3) AR CSR n=57	(4) AR Chair n=188	(5) AR OFR n=228	(6) AR Notes n=231	All n=818	Kruskal-Wallis† Sig	DICTION Normal Range††	
Panel A: Tone										
Positivity	6.76^{a,b}	2.56^{c}	5.82^{a}	10.11^{b}	2.71^{c}	1.53^{d}	4.55	0.000		
	(6.85)	(2.59)	(4.47)	(9.49)	(1.66)	(1.06)	(2.93)			
Activity	50.40^{a}	50.10^{a}	49.98^{a}	48.64^{b}	48.87^{b}	48.59^{b}	49.01	0.000	46.26	53.97
	(51.14)	(50.72)	(50.50)	(49.21)	(49.06)	(48.92)	(49.38)			
+ Aggression	*3.45^{a}*	*2.75^{ad}*	*3.42^{a}*	*3.31^{a}*	*2.69^{bd}*	*1.92^{c}*	*2.72*	*0.000*	*0.07*	*5.36*
+ Accomplishment	*31.13^{a}*	*23.86^{ab}*	*28.21^{b}*	*28.47^{ab}*	*18.36^{c}*	*15.45^{d}*	*21.79*	*0.000*	*18.72*	*43.11*
+ Communication	*6.34^{a}*	*6.02^{a}*	*3.39^{bc}*	*3.54^{b}*	*5.48^{ac}*	*4.60^{a}*	*4.74*	*0.000*	*-0.75*	*6.24*
+ Motion	*1.30^{a}*	*0.70^{ab}*	*1.12^{a}*	*1.23^{a}*	*0.60^{b}*	*0.99^{a}*	*0.94*	*0.000*	*-1.36*	*3.29*
- Cognitive Terms	*7.00^{a}*	*8.62^{a}*	*7.71^{a}*	*5.20^{b}*	*7.74^{a}*	*8.88^{a}*	*7.49*	*0.000*	*2.03*	*10.26*
- Passivity	*5.66^{ab}*	*4.01^{b}*	*4.86^{ab}*	*8.34^{c}*	*6.17^{a}*	*6.01^{a}*	*6.34*	*0.000*	*0.23*	*7.23*
- Embellishment	*0.95^{a}*	*0.58^{bc}*	*0.72^{ab}*	*1.10^{d}*	*0.54^{b}*	*0.36^{c}*	*0.66*	*0.000*	*-0.69*	*2.60*
Optimism	53.37^{a}	50.96^{b}	52.25^{a}	53.32^{a}	50.20^{b}	49.4^{c}	51.10	0.000	47.92	52.50
	(53.31)	(51.06)	(52.11)	(53.33)	(50.14)	(49.48)	(50.52)			
+ Praise	*5.54^{a}*	*2.69^{b}*	*3.16^{b}*	*6.19^{a}*	*2.45^{bc}*	*2.00^{c}*	*3.45*	*0.000*	*-0.37*	*5.13*
+ Satisfaction	*3.87^{ab}*	*2.12^{a}*	*2.42^{a}*	*4.35^{b}*	*1.12^{c}*	*0.92^{c}*	*2.15*	*0.000*	*-0.72*	*1.99*
+ Inspiration	*8.90^{a}*	*5.61^{a}*	*9.12^{a}*	*6.60^{a}*	*3.39^{b}*	*3.54^{b}*	*5.10*	*0.000*	*-0.16*	*7.14*
- Blame	*0.49^{a}*	*0.41^{bc}*	*0.24^{a}*	*0.74^{b}*	*0.30^{a}*	*0.33^{ac}*	*0.43*	*0.000*	*-0.82*	*2.36*
- Hardship	*2.44^{abc}*	*2.68^{abc}*	*3.56^{b}*	*1.82^{c}*	*2.15^{ac}*	*2.73^{ab}*	*2.39*	*0.000*	*-1.00*	*3.78*
- Denial	*1.50^{ab}*	*2.45^{ac}*	*0.85^{b}*	*1.27^{b}*	*2.62^{c}*	*4.48^{d}*	*2.62*	*0.000*	*-2.86*	*6.18*
Certainty	47.84^{a}	48.52^{a}	49.03^{a}	49.11^{a}	50.74^{b}	51.12^{b}	50.00	0.000		
	(47.88)	(48.48)	(49.20)	(49.12)	(51.06)	(51.13)	(50.06)			
+ Tenacity	*21.48^{a}*	*17.52^{bc}*	*17.03^{bc}*	*21.52^{a}*	*19.77^{ac}*	*20.73^{a}*	*20.20*	*0.000*	*5.47*	*18.86*
+ Levelling	*5.09^{a}*	*6.00^{a}*	*5.14^{a}*	*6.11^{a}*	*6.06^{a}*	*6.02^{a}*	*5.93*	*0.039*	*0.42*	*7.17*
+ Collectives	*10.57^{ac}*	*10.31^{acd}*	*12.22^{ae}*	*13.60^{be}*	*12.97^{bde}*	*9.57^{c}*	*11.75*	*0.000*	*2.05*	*13.70*
+ Insistence	*64.64^{a}*	*126.56^{bc}*	*118.70^{b}*	*93.77^{ac}*	*165.58^{d}*	*210.90^{e}*	*149.08*	*0.000*	*111.4*	*341.91*
- Ambivalence	*4.17^{a}*	*3.37^{ac}*	*1.85^{b}*	*3.92^{a}*	*2.42^{bc}*	*2.26^{bc}*	*2.86*	*0.000*	*-0.46*	*6.16*
- Variety	*0.57^{a}*	*0.55^{a}*	*0.56^{a}*	*0.56^{a}*	*0.50^{b}*	*0.47^{c}*	*0.52*	*0.000*	*0.29*	*0.52*
Realism	46.35^{a}	41.85^{b}	43.66^{b,c}	46.31^{a}	43.99^{c}	43.99^{c}	44.50	0.000	41.14	46.85
	(46.30)	(41.87)	(43.68)	(46.55)	(43.85)	(44.12)	(44.57)			
+ Familiarity	*120.77^{ab}*	*109.7^{a}*	*118.13^{a}*	*128.87^{b}*	*131.03^{c}*	*129.13^{c}*	*126.86*	*0.000*	*106.54*	*137.49*
+ Spatial Awareness	*12.26^{a}*	*12.48^{a}*	*14.50^{a}*	*8.86^{b}*	*7.90^{c}*	*7.08^{c}*	*8.98*	*0.000*	*0.44*	*9.82*
+ Temporal Awareness	*13.79^{a}*	*9.87^{b}*	*12.31^{a}*	*20.39^{c}*	*14.79^{a}*	*15.00^{a}*	*15.54*	*0.000*	*5.81*	*20.69*
+ Present Concern	*11.17^{a}*	*8.11^{a}*	*7.48^{b}*	*7.26^{b}*	*6.80^{b}*	*8.92a*	*7.94*	*0.000*	*1.06*	*8.54*
+ Human Interest	*34.95^{a}*	*11.17^{bc}*	*11.81^{b}*	*17.31^{c}*	*6.03^{d}*	*3.32^{e}*	*10.55*	*0.000*	*-4.99*	*12.1*
+ Concreteness	*13.35^{a}*	*20.65^{bc}*	*20.54^{bd}*	*18.90^{cd}*	*21.85b*	*20.38^{b}*	*20.02*	*0.000*	*10.03*	*30.92*
- Past Concern	*2.27^{a}*	*4.79^{b}*	*2.54^{a}*	*2.65^{a}*	*3.61^{b}*	*3.81^{b}*	*3.37*	*0.000*	*-0.88*	*3.85*
- Complexity	*5.38^{a}*	*5.59^{b}*	*5.63^{b}*	*5.24^{c}*	*5.41^{a}*	*5.34^{a}*	*5.38*	*0.000*	*4.71*	*5.42*

Commonality	51.07[a,b]	51.81[a,c]	52.3[a,d]	51.96[b,c]	53.18[d]	53.69[d]	52.74	0.000	47.94	55.30
	(51.27)	(51.85)	(52.78)	(51.30)	(52.97)	(53.59)	(52.49)			
+ Centrality	*6.72[ab]*	*8.17[a]*	*8.59[a]*	*6.44[b]*	*9.06[a]*	*8.10[a]*	*7.93*	*0.000*	*1.32*	*11.39*
+ Cooperation	*7.19[a]*	*8.22[a]*	*9.48[a]*	*7.91[a]*	*13.43[b]*	*17.72[c]*	*12.30*	*0.000*	*4.74*	*18.12*
+ Rapport	*1.29[d]*	*1.77[ac]*	*2.32[bc]*	*2.24[ad]*	*2.14[bcde]*	*1.81[ae]*	*2.00*	*0.000*	*-0.55*	*2.27*
- Diversity	*2.41[ab]*	*2.00[ab]*	*3.06[a]*	*1.85[ab]*	*1.77[b]*	*2.07[ab]*	*2.02*	*0.001*	*-0.39*	*3.53*
- Exclusion	*2.11[ab]*	*2.41[ab]*	*1.89[a]*	*2.27[ab]*	*2.61[b]*	*2.72[ab]*	*2.47*	*0.013*	*0.06*	*7.90*
- Liberation	*1.04[a]*	*1.82[bc]*	*1.60[bc]*	*0.82[a]*	*2.92[b]*	*2.58[c]*	*2.04*	*0.000*	*-0.61*	*1.39*
Panel B: Readability										
Flesch	29.26[a,b]	28.82[a,b]	22.75[c]	35.28[d]	28.95[a]	26.07[b]	29.17	0.000		
	(30.00)	(29.50)	(22.00)	(35.00)	(29.00)	(28.00)	(29.00)			

[†] Testing of the underlying distributions indicated the need for a non-parametric test of differences. Kruskal-Wallis and Dunn's post hoc comparison tests (with Bonferroni correction) were used to analyse differences between disclosure types. Entries within a row with different superscript letters are significantly different according to Dunn's post hoc comparison tests ($p < 0.05$).

[††] DICTION's c*ertainty* norms are not comparable with the current study, as this study used an adjusted measure of *certainty*. Accordingly, the normal range is not shown.

Table 6. Readability (Flesch) regression models with tone variables as independent variables

	(1) Coefficient (Sig)	(2) Coefficient (Sig)	(3) Coefficient (Sig)	(4) Coefficient (Sig)	(5) Coefficient (Sig)	(6) Coefficient (Sig)	(7) Coefficient (Sig)	(8) Coefficient (Sig)	(9) Coefficient (Sig)
Positivity		0.40 (0.000)***						0.25 (0.000)***	0.22 (0.002)***
Activity			-0.16 (0.013)**					-0.22 (0.000)***	-0.22 (0.002)***
Optimism				0.72 (0.000)***				0.01 (0.923)	0.14 (0.388)
Certainty					-0.45 (0.000)***			-0.26 (0.006)***	-0.33 (0.004)***
Realism						0.91 (0.000)***		0.83 (0.000)***	0.82 (0.000)***
Commonality							-0.17 (0.003)***	0.00 (0.933)	0.03 (0.661)
Performance (ROE)	0.22 (0.117)	0.02 (0.251)	0.02 (0.107)	0.02 (0.097)*	0.02 (0.132)	0.03 (0.034)**	0.02 (0.128)	0.02 (0.065)*	0.02 (0.250)
Future Perf (ROE)	0.05 (0.002)***	0.05 (0.001)***	0.05 (0.001)***	0.05 (0.001)***	0.05 (0.005)***	0.04 (0.003)***	0.05 (0.002)***	0.05 (0.002)***	0.04 (0.014)**
CSR Performance									0.04 (0.197)
Size	0.12 (0.617)	0.15 (0.510)	0.14 (0.565)	0.07 (0.771)	0.02 (0.931)	0.07 (0.753)	0.10 (0.676)	0.06 (0.785)	-0.01 (0.984)
Liquidity	0.16 (0.330)	0.20 (0.210)	0.16 (0.324)	0.15 (0.351)	0.18 (0.276)	0.11 (0.482)	0.14 (0.402)	0.14 (0.321)	0.25 (0.127)
Leverage	0.63 (0.685)	0.41 (0.787)	0.85 (0.585)	0.67 (0.659)	0.52 (0.738)	0.32 (0.824)	0.352 (0.821)	0.44 (0.751)	0.57 (0.733)
Energy	-2.74 (0.006)***	-2.87 (0.003)***	-2.78 (0.005)***	-3.02 (0.002)***	-3.10 (0.002)***	-2.77 (0.003)***	-2.80 (0.005)***	-3.11 (0.001)***	-3.26 (0.004)***
Goods	-2.10 (0.016)**	-2.48 (0.003)***	-2.00 (0.021)**	-2.35 (0.005)***	-2.43 (0.005)***	-2.10 (0.009)***	-2.03 (0.018)**	-2.40 (0.002)***	-2.60 (0.005)***
Industrial	-0.22 (0.812)	-0.29 (0.748)	-0.17 (0.853)	-0.42 (0.646)	-0.66 (0.484)	-0.55 (0.53)	-0.23 (0.805)	-0.74 (0.379)	-1.60 (0.103)
Investment	-0.23 (0.786)	-0.62 (0.457)	-0.31 (0.721)	-0.51 (0.540)	-0.38 (0.651)	-0.27 (0.735)	-0.07 (0.933)	-0.69 (0.369)	-1.02 (0.290)
Primary	-0.41 (0.699)	-1.07 (0.301)	-0.38 (0.721)	-0.69 (0.509)	-0.95 (0.371)	-0.24 (0.805)	-0.53 (0.617)	-0.93 (0.335)	-1.45 (0.219)
Country	-6.05 (0.000)***	-6.13 (0.000)***	-6.08 (0.000)***	-5.93 (0.000)***	-5.99 (0.000)***	-4.22 (0.000)***	-6.05 (0.000)***	-4.44 (0.000)***	-4.56 (0.000)***
Board Indep.	-0.03 (0.139)	-0.03 (0.118)	-0.03 (0.125)	-0.03 (0.145)	-0.03 (0.150)	-0.02 (0.172)	-0.03 (0.143)	-0.02 (0.136)	-0.01 (0.525)
Constant	32.18 (0.000)***	30.13 (0.000)***	39.40 (0.000)***	-3.63 (0.606)	56.90 (0.000)***	-8.55 (0.127)	41.75 (0.000)***	17.41 (0.116)	13.19 (0.326)
F Value	10.60	15.78	10.32	13.83	11.52	21.70	10.59	20.16	11.84
Significance	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
Adj. R square	0.13	0.20	0.13	0.18	0.15	0.26	0.14	0.31	0.25

*, **, *** Indicates significance at the 10 percent, 5 percent and 1 percent level, respectively (two-tailed for all variables except for *certainty* and *realism* variables, which are one-tailed due to their expected directional relationship with the dependent variable). Higher Flesch scores indicate higher levels of readability, i.e., a positive relationship shows disclosures that are more readable.

Table 7. Readability (Flesch) regression models by disclosure type

	(CSR Open) Coefficient (Sig)	(CSR Main) Coefficient (Sig)	(AR CSR) Coefficient (Sig)	(AR Chair) Coefficient (Sig)	(AR OFR) Coefficient (Sig)	(AR Notes) Coefficient (Sig)
Positivity	-0.05	0.51	0.35	0.24	0.11	-0.25
	(0.871)	(0.271)	(0.090)*	(0.040)**	(0.461)	(0.138)
Activity	-0.69	-0.09	0.19	-0.06	-0.06	-0.28
	(0.034)**	(0.789)	(0.531)	(0.671)	(0.529)	(0.004)***
Optimism	-0.17	0.18	-0.12	-0.33	0.03	-0.18
	(0.826)	(0.752)	(0.842)	(0.242)	(0.920)	(0.574)
Certainty	-0.85	-0.83	0.12	-0.10	-0.03	-0.38
	(0.077)*	(0.024)***	(0.417)	(0.323)	(0.430)	(0.015)**
Realism	0.25	0.29	1.06	1.36	0.89	0.34
	(0.2450)	(0.090)*	(0.012)**	(0.000)***	(0.000)***	(0.012)**
Commonality	0.10	-0.63	0.17	0.21	-0.09	-0.26
	(0.831)	(0.124)	(0.568)	(0.041)**	(0.425)	(0.029)**
Performance (ROE)	-0.06	0.04	0.05	0.03	0.02	0.02
	(0.611)	(0.602)	(0.383)	(0.282)	(0.375)	(0.314)
Future Perf (ROE)	0.01	0.03	0.10	0.06	0.00	0.04
	(0.818)	(0.537)	(0.195)	(0.064)*	(0.989)	(0.103)
Size	-0.10	-1.88	0.05	0.28	-0.54	0.27
	(0.932)	(0.051)*	(0.351)	(0.543)	(0.084)*	(0.404)
Liquidity	-0.16	0.09	-1.01	0.55	-0.09	-0.01
	(0.778)	(0.845)	(0.195)	(0.097)*	(0.686)	(0.974)
Leverage	16.45	8.73	-2.08	-0.27	-0.19	-3.62
	(0.068)*	(0.192)	(0.729)	(0.930)	(0.926)	(0.091)*
Energy	-3.53	-2.58	3.59	-2.74	-1.53	-5.96
	(0.453)	(0.510)	(0.334)	(0.150)	(0.261)	(0.000)***
Goods	-5.18	-6.70	4.33	-1.33	-1.06	-2.52
	(0.245)	(0.046)**	(0.170)	(0.424)	(0.349)	(0.037)**
Industrial	1.65	-2.19	4.76	2.95	0.17	-3.23
	(0.740)	(0.584)	(0.136)	(0.138)	(0.898)	(0.015)**
Investment	-5.32	0.35	5.55	1.38	-1.73	-0.41
	(0.204)	(0.919)	(0.125)	(0.402)	(0.125)	(0.735)
Primary	-13.18	-5.52	5.41	1.26	-2.71	-0.77
	(0.051)*	(0.27)	(0.252)	(0.530)	(0.051)*	(0.613)
Country	10.49	-2.88	-6.76	-3.10	-2.63	-7.21
	(0.037)**	(0.445)	(0.062)*	(0.057)*	(0.027)**	(0.000)***
Board Indep.	-0.22	-0.04	0.04	0.01	-0.02	-0.04
	(0.111)	(0.728)	(0.665)	(0.701)	(0.326)	(0.141)
Constant	97.61	128.64	-66.25	-22.51	13.21	71.21
	(0.120)	(0.012)**	(0.261)	(0.329)	(0.503)	(0.001)***
F Value	2.02	2.33	2.99	4.33	6.48	8.79
Significance	0.037**	0.015**	0.003***	0.000***	0.000***	0.000***
Adj. R square	0.26	0.25	0.40	0.25	0.31	0.39

*, **, *** Indicates significance at the 10 percent, 5 percent and 1 percent level, respectively (two-tailed for all variables except for *certainty* and *realism* variables, which are one-tailed due to their expected directional relationship with the dependent variable). Higher Flesch scores indicate higher levels of readability, i.e., a positive relationship shows disclosures that are more readable.

Table 8. Thematic tone regression models

	Positivity	Activity	Optimism	Certainty	Realism	Commonality
	Coefficient (Sig)	**Coefficient (Sig)**	**Coefficient (Sig)**	**Coefficient (Sig)**	**Coefficient (Sig)**	**Coefficient (Sig)**
Performance (ROE)	0.02	0.00	0.00	0.00	-0.01	0.00
	(0.020)**	(0.446)	(0.140)	(0.390)	(0.156)	(0.446)
Future Performance (ROE)	0.00	0.02	0.00	-0.01	0.01	0.01
	(0.351)	(0.022)**	(0.177)	(0.056)*	(0.093)*	(0.281)
Size	-0.13	0.03	-0.03	-0.10	0.07	-0.02
	(0.325)	(0.841)	(0.574)	(0.220)	(0.467)	(0.875)
Liquidity	-0.09	0.01	0.02	0.04	0.05	-0.13
	(0.306)	(0.908)	(0.680)	(0.474)	(0.394)	(0.197)
Leverage	0.29	1.37	-0.23	-0.14	0.21	-1.54
	(0.729)	(0.122)	(0.548)	(0.790)	(0.725)	(0.118)
CSR Open	5.21	1.59	4.13	-3.10	2.66	-2.63
	(0.000)***	(0.016)**	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CSR Main	0.95	1.26	1.72	-2.41	-1.81	-1.93
	(0.118)	(0.049)**	(0.000)***	(0.000)***	(0.000)***	(0.007)***
AR CSR	4.44	1.42	2.98	-2.03	-0.10	-1.46
	(0.000)***	(0.028)**	(0.000)***	(0.000)***	(0.821)	(0.042)**
AR Chair	8.71	-0.01	3.97	-1.98	2.32	-1.75
	(0.000)***	(0.976)	(0.000)***	(0.000)***	(0.000)***	(0.000)***
AR OFR	1.28	0.17	0.84	-0.41	0.12	-0.58
	(0.001)***	(0.678)	(0.000)***	(0.081)*	(0.656)	(0.200)
Energy	-0.12	-0.51	-0.05	-0.37	-0.01	-0.03
	(0.828)	(0.371)	(0.841)	(0.257)	(0.990)	(0.963)
Goods	0.82	0.49	0.14	-0.50	0.06	0.56
	(0.079)*	(0.321)	(0.502)	(0.077)*	(0.864)	(0.311)
Industrial	0.13	0.07	0.01	-0.63	0.43	0.21
	(0.803)	(0.894)	(0.951)	(0.043)**	(0.242)	(0.729)
Investment	0.82	-0.59	0.21	-0.13	0.08	1.10
	(0.077)*	(0.230)	(0.318)	(0.640)	(0.815)	(0.042)**
Primary	1.42	0.05	0.12	-0.91	-0.16	-0.47
	(0.014)**	(0.936)	(0.656)	(0.009)***	(0.693)	(0.491)
Country	0.56	-0.19	0.04	-0.03	-1.85	-0.16
	(0.233)	(0.698)	(0.855)	(0.922)	(0.000)***	(0.769)
Board Independence	0.00	-0.01	0.00	0.00	0.00	0.00
	(0.922)	(0.524)	(0.610)	(0.569)	(0.540)	(0.775)
Constant	3.09	47.78	50.28	53.44	43.72	54.87
	(0.233)	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
F Value	34.05	1.78	38.25	10.58	12.77	2.19
Significance	0.000***	0.026**	0.000***	0.000***	0.000***	0.004***
Adjusted R Square	0.42	0.02	0.45	0.17	0.20	0.03

*, **, *** Indicates significance at the 10 percent, 5 percent and 1 percent levels, respectively (all two-tailed except for those relating to Performance and Future Performance, which are one-tailed).