

Linguistic Deception Cues in Selected Narrative Disclosures Contained in Prospectuses of Failed and Non-Failed New Zealand Finance Companies

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University of Canterbury, New Zealand

Ava Chang

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Abstract

With the judicial system worldwide investigating finance companies for misleading disclosures, deception has become a topical issue. However, deception is an area that has historically not been favoured in academia. The paper aims to determine whether disclosure practices of failed companies show more characteristics of deception than those of viable companies. The research will involve a mixture of qualitative and quantitative methodologies, including the use of content analysis and the software DICTION. An index of deception is constructed. The higher the deception score, the more deceptive the authors are deemed to be. This study tests this argument with respect to the prospectuses of a sample of failed and non-failed New Zealand finance companies.

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1. Introduction

For financial reports to provide value, they must assist the decision making of users. Users cannot be expected to base decisions on company documents if they do not find them to be relevant, reliable, comparable, and most importantly, understandable (Smith, 1996). However, whether this can be accomplished is another question (Bolívar, Pérez, & Hernández, 2006). This is particularly the case with prospectuses, which contain both historic and forward-looking financial information. The New Zealand Securities Commission raised concerns in 2004 that prospectuses and investment statements have become too compliance-based, often at the expense of users' understanding (Securities Commission, 2004). When investors lack understanding of the technicalities of the registered prospectuses, which at times can extend up to hundreds of pages, they often turn to the most easily digestible section: the chairman's' or managing director's letters to the investors. However, these sections are unaudited, discretionary and consequently susceptible to strategic communication. This is an area that has been highly neglected in literature. Company communication with investors can shape the decisions taken by investors. If optimistic news is portrayed, investors may react more positively than expected (Henry 2008). However, negative news may spark a reduction in investor confidence, leading to more unfavourable outcomes. Yuthas, Rogers, and Dillard (2002) are of the view that poor earnings and other unfavourable information may be detrimental to a corporation's image, so incentives arise to suppress this information, or portray it in a positive light.

Herein lies the importance of corporate disclosures. In the event of a corporate failure, the welfare of investors in finance companies, such as debenture holders with respect to invested principal and accrued interest, is at stake. There is no guarantee that either would be returned. Historically the return of their initial deposit in the event of a failure is quite low. In times of financial distress, the need for information is greater, due to higher levels of uncertainty (Coats & Fant, 1993). However in such times, the question of whether management has the incentive to provide unbiased truthful

disclosures is raised. What happens if investors cannot realistically take such information at face value? Are investors capable of making the distinction between truth and fiction on their own? The United States Securities Exchange Commission (SEC) once stated that “market forces alone are insufficient to cause all material information to be disclosed” (as cited in Chow et al. 1996). This signals its scepticism about firms providing disclosures on their own accord without the extra encouragement from regulation. However, information is essential for the effective and efficient operation of the capital market (Rezaee, 2005). Information asymmetry leads to adverse selection, agency problems, and greater yet, the possible breakdown of market forces (Cooper & Keim 1983). The recent meltdown of the finance sector worldwide has sparked controversy about whether full disclosure was afforded to investors: why did investors not adjust their decisions accordingly?

Prior literature throws little light on this question. Empirical studies fail to provide support for the notion that an equilibrium of full disclosure can be achieved, but they do not refute the notion either. Existing research such as studies by Holder-Webb and Cohen (2007) and Altman (1983) are harmonious in the recognition of the overall impact of financial distress on disclosure. However, there are some divergences over the timing of disclosures, and the underlying motivations of corporations to provide disclosures. Hess and Feng (2007) could not find evidence that supported investors ‘rewarding’ firms for disclosures by offering relatively lower interest rates. Darrough and Stoughton (1990) have found evidence that the clarity of annual reports becomes impaired as the company becomes financially distressed, possibly in an attempt to distort its underlying message. This contradicts with Yuthas et al. (2002) who found evidence that disclosures of both distressed and non-disclosed firms displayed characteristics relating to ‘good’ communication (i.e. the Habermasian principles)¹. Verrecchia (1990) sums up the argument nicely by stating that disclosures provide information to aid decision making regarding asset values, and in the case of

¹ The Habermasian principle of ‘good’ communication requires the communicators to be comprehensible, truthful, sincere and legitimate (Yuthas et al., 2002).

non-disclosures, it shows insights into managements' motivations. However, it is duly noted that this assumes readers have the ability to detect non-disclosure and deceptive disclosure.

Deception in corporate reporting from a narrative context is a topic that is still relatively fresh in accounting literature. The current lack of research does little to help us predict fraudulent communication, or even whether deception can be predicted from an analysis of narratives (Purda & Skillicorn, 2012). However, it is not a new phenomenon in our society. People are inherently poor lie detectors due to their tendency to be biased towards the truth (Carlson, George, Burgoon, Adkins, & White, 2004). It is said that it is "difficult if not impossible" to identify fraudulent practices in financial reporting, even for sophisticated users (Hobson, Mayew, & Venkatachalam, 2011 p.1). In some cases, this may be lower than chance (Wang & Wang, 2012). However, there is limited research relating to deception in terms of accounting narratives, with most research focusing on more obvious forms of fraud, such as accounting treatment (Baker, 2003; Gordon, 2002; Leach, Newsom, & Newsom, 2007; Scharff, 2005). Carlson et al., (2004) argue that this is largely attributable to the difficulties in detecting deception as there is not a single indicative behaviour that can characterise a person to be 'deceptive'.

This study undertakes a content analysis of selected communications in the prospectuses of a sample of failed and non-failed finance companies in New Zealand in order to examine the relative use of deceptive language. The study employs DICTION, a computer assisted text analysis programme, to count the frequencies of relevant words associated with deception. The paper focuses on five common traits or 'cues' of deception to form a 'deception score'. The five components of the deception score are the use of personal pronouns, negative emotive words, descriptive words, exclusion and causation words, and use of uncertain words.

The next chapter explains the contributions the current study will bring, followed by a review of current literature. An explanation of the hypotheses tested is described in chapter four, followed by the methodology in chapter five and results in chapter six. A discussion of the results is shown in chapter seven and a conclusion follows in chapter eight.

2. Contribution

Despite the economic and financial market meltdowns over the past half century, there are startlingly few papers examining the role deception has played in corporate collapses. In times of financial distress, firms may not feel rewarded by telling the truth, and fear being ‘punished’, as full disclosure may be “suicidal” (Jorgenson, 2004 p.1). Therefore, deceptive disclosures may be “inevitable” when a company is under financial distress (Myers, 1977 p. 159). This represents a significant gap in literature considering the importance of corporate disclosures to investors.

The paper makes several important contributions. Firstly, it contributes to the sparse field of deception from an accounting narrative perspective, and secondly, to the existing limited literature concerning narrative disclosures of media other than annual reports. Specifically, this study examines deception in narratives of selected communications contained in registered prospectuses. The paper further contributes to existing literature by examining deception on a medium targeting more than one party. As the registered prospectuses are distributed to existing and prospective investors, the context of multiple users may call for differing assumptions than with a single user, as popularly discussed in prior literature. Such assumptions include the reactions of readers and subsequent deceptive strategies in word choices. As there isn’t a single indicator that defines deceptive behaviour, multiple measures of deception were used. With the benefit of hindsight and knowing which firms did in fact produce deceptive disclosures, we may be able to provide support for tell-tale signs of deceptive behaviour alluded to by prior literature. However, prior literature has not found enough support for deception in the field of written disclosures, where the same assumptions may not hold. We also illustrated how automated linguistic tools such as DICTION can help analyse possible indicators of deception in the narratives.

Corporate disclosure documents are the key to efficient allocation of resources in society, and help keep the capital markets functioning (Rezaee, 2005). However, for investors of finance companies (a form of Non-Bank Deposit Takers (NBDT) under New Zealand Securities legislation), the most relevant corporate disclosure may not necessarily be the annual report, which has often been the focus of past studies. Rather it may be the registered prospectus. Although highly important, registered prospectuses have not previously been given much academic attention. Part of the reason is the prominence of the narrative portion in prospectuses. While such the narrative portion usually provide important information, they are subjective by nature and therefore often only play a supporting role in terms of external scrutiny (Tennyson, Ingram, & Dugan, 1990). There are also generally few or no guidelines specifying the contents of narrative disclosures (Yuthas et al., 2002). This is especially so in comparison to rigid accounting standards governing the financial statements. Important to this thesis is the fact there is scant research dedicated specifically to firms with uncertain financial health and future, as the underlying assumption of most of the papers is that the firm is stable or growing (Daily, Dalton, & Cannella Jr, 2003). Boo and Simnett (2002) agree, questioning whether studies done on healthy companies are comparable with their financially distressed counterparts. The author posits that studies of companies in financial distress should be given consideration by academics as companies operating under unstable financial conditions will have different incentives and motivations to provide disclosures. A sound understanding of deception in narrative disclosures and the motivations behind it could help prevent investors making unprofitable investment decisions and build a stable foundation for a sector, the finance sector for instance, which is trying to re-emerge from its failure. A stable foundation can help rekindle the confidence that has been lost in the Global Financial Crisis (GFC). The revival of the finance sector is fundamental for any society, as it constitutes a significant proportion of the economy. In New Zealand, the dollar amount of this was approximately \$377 billion² of the entire New Zealand economy for the year ending 30 June 2010 (Reserve Bank of New Zealand, 2011b).

² All monetary figures are stated in New Zealand Dollars, unless otherwise stated.

3. Review of prior literature

On the 13th of December 2006, Roger Moses, the then Chairman of failed finance company Nathans Finance, wrote in the company's registered prospectus No. 8: "The Board has confidence that Nathans will continue to be well placed to capitalise on the emerging strategic growth opportunities." Despite this, the company was placed under receivership in August 2007, and in its demise, \$174 million in deposits were lost from the New Zealand economy (JDJL Limited, 2011b). Unfortunately, the case of Nathans Finance was only one of many. As of 4th October 2011, the "Deep Freeze list"³ reports no less than 63 failures of NBDTs⁴ (includes the more commonly known 'finance companies', building societies and credit unions), now in moratorium⁵, receivership or liquidation. There are many factors speculated to have triggered the meltdown in the financial markets. In 2006, the Global Financial Crisis (GFC) hit, leaving a damaged world economy hanging on its hinges. The collapse has been particularly severe in the finance sector worldwide. By the beginning of 2011, the collapse of the finance sector in New Zealand had cost the country's economy \$3.112 billion (JDJL Limited, 2011b) and damage to confidence in the sector that possibly can never be repaired (KPMG, 2008). The 'blame-game' often follows in the aftermath of such widespread financial carnage, in which internal factors such as the incompetency of management are focused upon (Altman, 1983). In the wake of the GFC a question that might reasonably be asked by investors of such entities is often: did the directors deceive in their statements?

The scenario described above has played out on a wider scale in other jurisdictions. Since the GFC, the Australian Securities and Investment Commission (ASIC) has commenced 235 investigations on companies allegedly making misleading statements (D'Aloisio, 2010, November). Using the

³ From interest.co.nz, an organisation providing free online market data and is independent of any financial advisors and institutions (JDJL Limited, 2011a).

⁴ Although the full 'deep freeze' list reports 63 failed NBDTs, not all of the deposit takers included narrative portions in their registered prospectuses. Due to the restriction of available information, the current study examines 33 of the 63 firms.

⁵ Companies placed in moratorium leave investors two with choices: forgoing interest or principal repayments (or both) for a period of time or a receivership. This allows management to realise assets on an orderly basis and is likely to achieve a better return for investors than a receiver (Joblin, 2009).

benefit of hindsight, investors (Macfie, 2010) and the Financial Markets Authority (FMA) (FMA, 2011a) are now questioning whether companies were being entirely truthful in their communications with shareholders. At the centre of these investigations were disclosures prepared by the companies to the shareholders and debenture holders from their registered prospectuses and annual reports. It is no secret that unsophisticated investors,⁶ who make up a large proportion of investors, find it difficult to dissect and understand corporate financial disclosures (Balata & Breton, 2005). With the introduction of complex accounting standards and onerous financial legislation, some investors find the chasm between their understanding of financial information and ‘reality’ to be widened. In such times, narrative disclosures written in plain English seem to offer a ‘ray of hope’ (Jones, 1994). The study by Yuthas et al., (2002) explored some roles deception may play in narrative disclosures. They found that the narrative component in annual reports can help enhance the company’s trustworthiness, even if their other capabilities, such as their operating activities, become suspect.

3.1 The continuum of disclosure practices

An organisation has an array of disclosure strategies in its arsenal. This may vary from full disclosure of its activities to no disclosures at all. However, the disclosure of misleading information is seen as more destructive than non-disclosure, and is therefore at the negative extreme of the continuum.

Although the study examined unlisted finance companies, which consequently will not have the same analyst following as finance companies listed on a share exchange, the same assumptions regarding disclosure strategies may still apply.

⁶ A usual proxy of investor sophistication is institutional ownership (Bartov, Radhakrishnan, & Krinsky, 2000). Therefore ‘unsophisticated’ investors are those not part of an institution (e.g. normal ‘mum and dad’ type investors).

3.1.1 The first scenario - timely voluntary and true disclosures

Narrative disclosures are very valuable as they can overcome some information asymmetry problems (Smith and Taffler, 1992). Firms may either voluntarily disclose unfavourable information on a timely basis or withhold the information. The determining factor in the decision is the perceived reaction that is likely from the market (Kothari, Shu, & Wysocki, 2009), and the resulting effect on the firm's share prices (Trueman, 1986). Milgrom (1981) strongly advocates voluntary disclosures, as non-disclosure is usually interpreted as the worst case scenario, and this assumption will badly reflect investors' perceptions of asset prices. Assuming there are no costs to disclosure, it would be in the firm's best interest to disclose both good and bad news, for the sake of firm value (Chow, Haddad, & Hirst, 1996). Healy and Palepu (2001) argue that, as shareholders can replace personnel for the company's poor performance, management has the incentive to provide disclosure to correct mispricing of shares and thus defensively explain poor performance. Graham et al, (2005) had similar findings, suggesting that if directors fail to achieve projected earnings per share, this is a tale-tell sign of poor management. Hirshleifer and Teoh (2003) found a positive relationship between disclosure and investors' reactions in which less sophisticated investors benefit from quality disclosures. This is generally in the form of easily digestible narrative disclosures. In Collett and Hrasky (2005) there is support that managers make disclosure decisions in an attempt to take advantage of more favourable terms from capital suppliers. Voluntary disclosures could be used to management's own advantage: as a defensive mechanism or to signal its talent to the market.

Timely disclosure of both good and bad news indicates that managers have the ability to anticipate the future changes of the firm, thus increasing their compensation and reputation. Lack of disclosure leads the market to think that the firm has bad news, which prompts management to provide timely disclosures (Trueman, 1986). Bad news is usually anticipated by investors and their expectations

are already reflected by the share prices (Frino, Jones, & Wong, 2007; Morris, 1997). If this is the case, bad news therefore should not be ‘new’ news to investors and thus there is no reason for disclosures of bad news to be delayed. Frost (1997) provides support for this claim stating that, based on the 81 firms he studied, distressed firms tend to be open about disclosure of their negative news. The rationale is that if the market is efficient, then signs of impending distress are often clear. For example, through the decrease or omission of dividends (DeAngelo & DeAngelo, 1990). More importantly, bad news often sounds ‘better’ coming from the firms themselves in a timely manner (Frost, 1997). In Graham, Harvey and Rajgopal’s (2005), 76.8% of respondents agreed with the proposition that, on top of sounding better, timely disclosures also potentially mitigate litigation. Timely disclosure is also a chance for management to explain poor performance to prevent shareholders holding management responsible and taking corrective action themselves (Healy & Palepu, 2001). Lang and Lundholm (1996) suggest that by adopting timely disclosure practices, firms can attract a greater analyst following, improve accuracy of market expectations and reduce information asymmetry. This will bring in benefits for the firm as this may lead to an overall reduction in cost of capital.

3.1.2 The second scenario: untimely unfavourable disclosures

In section 3.1.1 we looked at the rationales for companies to provide upfront disclosure of unfavourable behaviour. However, a competing argument states that, given the adverse impact on share prices, management has incentive to withhold the disclosure of unfavourable news (Kothari et al., 2009). Management’s self-interest, whether directly through compensation or indirectly through ownership schemes, affects both the extent and integrity of disclosures (Donoher, Reed, & Storrud-Barnes, 2007; Kothari et al., 2009). Smith and Taffler (1992) found evidence that the readability of narrative sections of financially unsound companies often deteriorates with declining performance. Darrough and Stoughton (1990) acknowledge that disclosures can help investors evaluate a firm’s

value but can also adversely impact on the firm by informing competitors of the firm's strategic competitive position. Graham et al, (2005) and Healy and Palepu (2001), both find fear of setting the "disclosure precedent"⁷ may reduce the incentive to provide forward-looking disclosures. This is because legal liabilities may result if management fails to achieve what it announced it would do. Firms that were described as most likely to provide inadequate disclosures are those that are generally less profitable, as they want to hide the reasons they are not performing (Singhvi & Desai, 1971). Firms with relatively poor prospects and performance usually do not disclose the full extent of their relative position in the market (Penman, 1980) as this increases uncertainty, which is detrimental to their relatively higher default and bankruptcy risk (Holder-Webb & Cohen, 2007).

These findings support the notion that firms with unfavourable news are more likely to distort their communication, if given the opportunity. This supports the standard agency perspective. The incidence of information asymmetry provides opportunities for management to withhold or distort such disclosure. After all, market forces alone cannot sway them to disclose voluntarily (Securities and Exchange Commission, 1977). However, this ability to delay bad news has somewhat diminished with the introduction of continuous disclosure regulations in the United States (Kothari et al., 2009). New Zealand has developed similar disclosure requirements, which are set out in the Securities Market Act and the NZX listing rules (New Zealand Stock Exchange, 2009). However, lax policing by financial market watchdogs, which has been suspected both internationally and domestically (MacKay, 2010; McConvill, 2006; Proimos, 2005) is likely to reduce the extent of complete and timely disclosures, though this is yet unproven. Research into the New Zealand context is therefore also very valuable.

⁷ Management's unwillingness to be bounded by what it has disclosed (Graham, Harvey, & Rajgopal, 2005).

3.1.3 The most adverse scenario: manipulation of disclosures - deception

Finally, at the end of the spectrum is the disclosure of false information – deception. Deception is a serious matter particularly in accounting. The disclosure of misleading information can also lead to poor investments decisions, resulting in the inappropriate allocation of resources (Merkl-Davies & Brennan, 2007). This makes deception more harmful than non-disclosure.

Accounting is viewed as “neutral” and “independent” (Evans, 2009). Having such perceived inherent qualities means accounting has possible influential powers over other forms of communication. However, disclosures by management are “self-serving”, depending on which information is disclosed (García Osma & Guillamón-Saorín, 2011). ‘Misleading narrative disclosure’ is not a break-through concept. From the outright fraudulent comments made by Enron executives in the United States (Kroger, 2005), to unclear statements regarding related parties transactions made more locally by Bridgecorp directors (Financial Markets Authority, 2011a), both have the intention of misleading investors and regulators, and are therefore classed as deceptive disclosures. It is also suggested by investors and academics that, as the financial health of a company deteriorates, so too does the clarity of the annual reports, possibly as an attempt to focus investors’ attention away from poor performance (Jones, 1994). Although this seems to fit the description of ‘deception’, it is still a tricky word to define. Literally it means to intentionally mislead by providing false information (Pearsall & Hanks, 1998). Interestingly the definition does not include omissions of material information. However, prior literature seem to hint at a wider scope, including for example, partial disclosures such as subtle ‘half-truths’ (Langevoort, 1999). So why do companies feel they have a need to put a spin on their version of the truth? Why do they feel the need to deceive investors?

Prior literature provides a number of different theoretical perspectives to describe deceivers' possible motives. The current study briefly discusses prospect theory, impression management and the Pollyanna effect⁸. The general assumption from these various theories is that deception is an intentional action done to achieve a desired outcome (Craig, Mortensen, & Iyer, 2012). Prospect theory describes investors' perceived reactions towards positive news and provides reasoning that would explain the motivation for deception. When a corporation produces positive financial reports, these tend to cause investors to think more favourably about it than they would have if the reports had been unbiased (Henry, 2008). For financially distressed companies, to be perceived positively by the market may be crucial to their survival. The author describes one method as 'subtle promotion' – selectively reporting favourable information while withholding unfavourable information. This can include strategically deciding which comparative years to include, which GAAP principle to define earnings and the emphasis and placement of certain words. The misalignment between what management knows and how it frames that knowledge in the wording of its disclosure will distort the received meaning by users, thus highlighting the dangers of 'half truths' (Smith & Taffler, 1992).

Social psychology offers 'impression management' as a possible motivation for deceptive behaviour. Hooghiemstra (2003) (as cited in Merkl-Davies & Brennan, 2007) defines impression management as "studying how individuals present themselves to others to be perceived favourably by others". Under this assumption, deceivers will alter their written media depending on how they think they are or like to be perceived by the users of the reports. Gioia, Schultz, and Corley (2000) suggest that this is usually done with the intention to appeal to the readers. However, Abrahamson and Park (1994) and Smith and Taffler (2000) question the triumph of impression management, stating that there is no evidence indicating that differences between good and bad performance are

⁸ 'Pollyanna' effect is the phenomenon when "positive, affirmative words [are] used more than negative words" (Hildebrandt and Snyder, 1981). The effect is said to be suppressed as the shareholding/ownership by directors increases (Abrahamson and Park, 1994)

successfully camouflaged. Rutherford (2005) supports this, arguing that subtle strategies of impression management such as those displaying characteristics of the Pollyanna effect may not be able to fool sophisticated users. Deumes (2008) provides an example of how the Pollyanna effect may impact on a firm's disclosure strategy. If management is generally optimistic in its publications, this possible positive bias may mean that management is reluctant to provide effective warning signals for investors. However, what is omitted is usually just as important as what the management has chosen to present. Although the author could not find traces of positive bias, i.e. the Pollyanna effect, the companies in the studies were found to have been selective in what they were disclosing. Hildebrandt and Snyder (1981) found positive words to feature more often in annual reports of companies, regardless of their financial health. In contrast, Rutherford (2005) found evidence of the Pollyanna effect, with loss-making companies making more references to 'profits' than losses, and to the top line of the income statement (i.e. earnings). Boo and Simnett (2002) provide empirical evidence in support of the supposed benefits of the Pollyanna effect, thereby shedding some light as to why companies may want to compromise their competitive position. The authors found that financially distressed companies that provided optimistic management prospective comments were less likely to fail within the next year, in comparison to other financially distressed companies.

Regardless, it would seem that overall, disclosures are intentional, and ultimately management will present information that is instrumental to achieving its goals (Erickson, Weber, & Segovia, 2011). However, the results of empirical research study do not suggest an association between manipulation in disclosure and negative performance (Merkl-Davies & Brennan, 2007). These authors conclude that disclosure strategies are generally used to benefit users by providing more information. There appears to be further disagreement in findings in prior literature. Stanton, Stanton, and Pires (2004) did not find support for the proposition that managers can successfully manipulate the users' perception through the use of narrative sections in their annual reports. However, Merkl-Davies and Brennan (2007) claim that such conclusion should be "interpreted with

caution” (p.166), as content analysis of discretionary disclosures was not undertaken to determine which sections contain evidence of impression management.

3.2 ‘Deception’ in detail

Deception itself is difficult to define. It could be as direct as the fabrication of events to the more subtle forms such as ‘half-truths’ or vague statements (Carlson et al., 2004). All communication, whether truthful or deceptive, contains some element of self-presentation (DePaulo et al., 2003). Drawing largely from studies in linguistics and psychology, the general consensus is that deception is “[a] message knowingly transmitted by the sender to foster a false belief or conclusion by the receiver” (Buller & Burgoon, 2006 p.205). Interpersonal Deception Theory (Buller, Burgoon, White, & Ebesu, 1994) assumes that, based on feedback by the receiver, deceivers will adapt their behaviour so as to not arouse suspicion. Under that assumption, deception in communications from senior management is expected to be discrete, subtle and the warning bells are generally only leaked subconsciously⁹. This is very plausible, as the emotions or cognitive load they experience, or their behavioural changes in attempts to appear more legitimate, are usually signs that give away their deceit (Caso, Gnisci, Vrij, & Mann, 2005).

Carlson et al. (2004) argue that language is an important ‘cue’¹⁰ to deception. It is with this cue to deception where we can find some traces or hints of deceptive behaviour. Wang and Wang (2012) are of the opinion that the truth may ultimately “leak out” of the deceiver’s state of mind, hence it is important to examine the language used to identify these subtle indications. Jameson (2000) asserts that unlike their high performing counterparts, firms in financial distress are more likely to lie. However, prior literature does not provide agreement on how being deceptive will impact the overall content of disclosures. On the one hand, the lack of certainty is a defining characteristic of

⁹ For example, the former Chief Executive of Enron, Jeffery Skilling’s use of the term “Asshole” at the end of a response to an analyst in a nationally televised media forum. With hindsight the use of the word spelt the turning point in Enron’s fortunes, from rise to fall (Gibney, 2005).

¹⁰ In most deception literature, this refers to indicators, whether verbal or nonverbal.

deceptive communication, but there isn't a definitive definition of the term deceptive communication. Hobson et al. (2011) is of particular interest. By looking at IPO prospectuses and other media releases, the authors conclude that financial misreporting varies on a scale that ranges from manipulation of items on the financial statement to the concealment of unfavourable news. They also find that the probability of misreporting is positively correlated with the use of 'lying words'.

The main body of deception literature comprises, among others, Hancock et al. (2005); Zhou et al. (2004); Keila and Skillicorn (2005); Larcker and Tayan (2010); Hancock et al. (2004); Newman, Pennebaker, Berry, and Richards (2003); and Hancock et al. (2008). Their major findings are:

1. CEO communication can be a strategic medium for "self-presentation, self-reporting [and] ...self-promotion of the president" (Bournois & Point, 2006 p.47). Fear of association plays a big part in the minds of the communicator, especially when addressing investors who are concerned about the future of the company. The use of personal pronouns such as "I" and "we" were found to be severely reduced in deceptive disclosures as the communicator does not want any responsibility over the news he or she is portraying. Case studies provided by Amernic and Craig (2006), reveal CEOs neglecting such language to distance themselves and limiting their accountability. Such words are found to be possible indicators of deception and even blame shifting (Keila & Skillicorn, 2005; Zhou et al., 2004). Chatterjee and Hambrick (2007) and Craig et al. (2012) also suggest expanding the definition of personal pronouns to both first person and singular personal pronouns to encompass more blame shifting behaviour. More generally, Morrow (2009) asserts that in the course of unfavourable situations, CEOs are "less likely to blame themselves" (p.20).

2. The choice of deception affects the inner psyche of everyone to some extent and in most cases the effect is indirect, such as on the words used by deceivers. Deceivers have been found to use more negative emotive words arising from the mental discomfort caused by betraying their conscience. Larcker and Zakolyukina (2011) also assert that the inward guilt and fear of exposure can affect their choice in use of negative words. Craig et al. (2012) describe the physical and mental discomfort experienced by deceivers from the stress of having their deceptive actions being found out. Hobson et al. (2011) find that executives who are suffering from “cognitive dissonance”¹¹ will be more prone to convey negative news about their firm’s future performance. However, some authors found contradicting results. Larcker and Tayan (2010) argue that deceivers will tend to over-exaggerate positive news and discount negative news, thus suggesting a lower usage of negative words.

3. There are views on whether deceivers will provide more or less information. On the one hand, in order to substantiate their version of events, deceivers are posited to be more expressive with their descriptions. Therefore, the excessive use of sensory descriptive words, such as “feels like”, “sounds like” or “looks like” is associated with deception. Deceivers are constantly paranoid that their version of events will not be accepted so they will typically include ways receivers can relate to, to reinforce their argument. However, there is also a widely held support for the view that lies, in comparison to truths, are less forthcoming and less detailed as if the teller is trying to hold back giving too much information (DePaulo et al., 2003; Hancock et al., 2005; Hancock, Curry, Goorha, & Woodworth, 2007; Hancock, Curry, Goorha, & Woodworth, 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Newman et al., 2003). By providing fewer details, the deceiver is less likely to be exposed to debate and questions which if answered inadequately, will lead to suspicion (Hancock et al., 2005).

¹¹ When one is doing things in contrast to what one believes in.

4. Deceivers usually have a hard time keeping track of the version of reality they have chosen to portray. On top of balancing the credibility of their story they will generally try to reduce the risk of self-contradiction and will be less likely to use exclusive words (such as “except” and “however”) or causation words (“because” or “for that reason” to name a few) (Hancock et al., 2005, 2007; Hancock et al., 2004).

5. Deceivers generally exhibit cautious and sometimes even “nervous” behaviours (Larcker & Tayan, 2010 p. 2) as they try to authenticate their lies. As discussed above, they are careful in their word usage so as not to create any unnecessary loopholes or restrictions in their version of events. They are also noted as being very careful in the tone of their writing. Carlson et al. (2004), Larcker and Tayan (2010) and Larcker and Zakolyukina (2011) all assert that responses from deceivers are usually vague and indirect, as if speaking in generalities will prevent them from committing to anything that may contradict their version of events. They are also more evasive than non-deceivers, which may be a function of their fear of being caught out (DePaulo et al., 2003). Zhou et al. (2004) describe this approach as “relevance manipulation” (p. 86). In general, deceivers are perceived to be uncertain in their writing.

However, deception detection in communication literature is typically focused on the physiological effects of deception (i.e. the physical changes in the human body). For that reason, the above papers used interviews and laboratory experiments to test their research questions. The narrative portions analysed were of the transcripts of the interviews only. These disclosures are different to written corporate disclosures by nature. Larcker and Tayan (2010) point out that verbal disclosures are generally formal, but unrehearsed. Deceivers are therefore more likely to let slip their deceptive intentions. On the other hand, written disclosures and in particular registered prospectuses are generally carefully crafted products of different parties, each specialising in an area (Deumes, 2008).

Any item that may arouse suspicion included in such disclosures is more likely to be identified and removed or rephrased. The intended audience of verbal and written narratives may also differ.

Communication that has been tested in prior literature (i.e. interviews and conference calls) typically focus on one, or a small group of individuals. On the other hand, corporate disclosures such as prospectuses are distributed to a much larger audience: both existing and prospective investors. Marett and George (2004) look at the difference between deceiving one or multiple parties, and conclude that different ‘tactics’ are needed to deceive multiple parties. Herein lies another research gap: deception in communication to a large number of individuals. Despite this, Hobson et al. (2011) conclude that speech analysis is a good means of testing for fraud and that nonverbal cues should not be ruled out as they are good complements to verbal cues. Craig et al. (2012) suggest that an analysis of patterns of words used by CEOs over time is an important indication of deceptive behaviour. Therefore, the findings from previous literature could still be considered relevant.

3.3 Non-bank deposit takers – finance companies

The next sections provide a brief background of the financial sector in New Zealand. They cover the primary causes and consequences of the Global Financial Crisis (GFC) that are commonly cited in the literature. This is followed by an analysis of the disclosure regulation of the finance sector in New Zealand before and after the GFC. The section concludes by looking at a specific form of disclosure relevant to finance companies: the registered prospectus. Finance companies have historically fallen short in their responsibilities in providing full disclosure of their risk profile. This is particularly evident when compared with other ‘like’ entities in the sector, such as registered banks (Deloitte, 2004). Although the Securities Commission did raise some concern over occasional substandard disclosure practices back in 2004 (Securities Commission, 2005), the extent of the

malpractice is only beginning to be uncovered by the receivers of some of the larger failed finance companies. In the receivers report for Lombard Finance, Pricewaterhouse Coopers (PwC) raised concerns over specific transactions that the company and its related entities were engaged in, and their financial reporting practices (Pricewaterhouse Coopers, 2008). PwC also reported that it had discovered several transactions that “warrant further investigation” during the receivership of Strategic Finance (Pricewaterhouse Coopers, 2011).

Understanding the nature of the market may help understanding the rationale behind certain disclosure strategies of finance companies. Looking back, there has been some scepticism concerning the effectiveness of the disclosure regime, not only by the Securities Commission, but by New Zealand academics also¹². The Reserve Bank of New Zealand (RBNZ) acknowledges that the “current RBNZ model may be inadequate in a crisis situation” (Reserve Bank of New Zealand, n.d.b). Hess and Feng (2007) provide support, highlighting that the regulation of non-banks was “less stringent” than that of registered banks, and that there is growing concern about the adequacy of the risk management practices of some New Zealand finance companies.

3.3.1 Background of the finance sector in New Zealand

A combination of strong economic growth and overall investor confidence fostered a fertile environment for the finance sector prior to the GFC in New Zealand. Low interest rates also helped foster economic activity as it was less costly for firms to borrow (Economic Intelligence, 2006) and it helped stimulate the development of alternative sources of short term credit – finance companies (Guender, 1998). Unlike their registered counterparts, non-bank entities were not bound to the same extent of specific disclosure requirements nor were they supervised by the RBNZ (Hess & Feng, 2007). Despite existing securities and reporting legislation such as the Financial Reporting Act 1993

¹² In Dunstan, Gallery, and Truong (2008) it was found that found “the NZX’s enforcement mechanisms were considered inadequate, the definition of relevant information was vague, uncertain, and broad, and the rules were inconsistent with international standards” (p.3)

applicable to ‘issuers’¹³, prior to the introduction of the new regulatory framework, there were no specific guidelines targeting NBDTs (Hess & Feng, 2007). These, along with other factors such as low barriers to entry (Economic Intelligence, 2007), enticed finance companies to enter the market. In September 2007, the RBNZ reported there were 103 non-bank institutions in New Zealand, which was a relatively large number considering New Zealand’s small population (KPMG, 2007). This was quite a significant presence, as the finance sector as a whole, inclusive of banking and non-banking institutions, accounted for 6.4% of the GDP in 2006 (Economic Intelligence, 2007).

Rapid and irresponsible lending particularly by NBDTs in New Zealand (Simpson, Kern, and McGuigan, 2011), fuelled by rising house prices (Chiang & Prescott, 2010), created a boom in the housing market, which came to a halt by the end of 2007 (Emigratenz, 2007) with the advent of the GFC. As house prices plummeted, mortgage bearers started to default on their repayments. However the value of their houses could no longer cover the value of their mortgages, so reselling the house to cover mortgage repayments was no longer a viable option (Poole, 2010). As a result, a global credit crunch or a “misallocation of resources” occurred (Johnson & Neave, 2007). In simple terms, when applicants default on their loans, an opportunity cost arises. The supply of credit becomes restricted, and the cost of finance increases overall in the sector (Campello, Graham, & Harvey, 2010; Johnson & Neave, 2007). The effects are very pervasive, and have been felt globally. Such “weak governance and poor management” made the sector vulnerable to the changes in the external environment (Uganda, 2010). Bridgman, a corporate restructuring partner in PwC, argues that the GFC was only the tipping point, and that the real cause was the quality of the foundations and models the sector was built on (as cited in Uganda, 2010). The view that inadequate risk management practices, and not the wider economic environment, are the primary culprit of the crisis is echoed by analysts from other key institutions in the sector (Deloitte, 2011). Fear-induced

¹³ As defined in section 4 of the Financial Reporting Act (1993) as “every person who has...allotted securities pursuant to an offer...”. These will include companies with public shareholders, and finance companies.

terminations of investment created a heavy outflow of credit, with most investors opting to deposit with registered banks instead. This created a huge strain on the already precarious supply of funds (KPMG, 2007).

By the end of 2006, the sector experienced a 6.9% drop in assets, which is significant considering the sector had experienced double-digit growth since 1999 (KPMG, 2006). The decreasing confidence in the overall sector added further instability to an already unstable sector. With registered banks reluctant at best to provide assistance, finance companies found it exceedingly difficult to diversify their funding options. To make matters worse for NBDTs, fierce competition arose from registered banks which were in a position to give away large interest margins (Economic Intelligence, 2007). This suggests that the low interest levels maintained by the RBNZ had been somewhat artificial (KPMG, 2008). Business NZ, the leading advocacy group for enterprises in New Zealand (BusinessNZ, 2011) supports this claim. It argues that the New Zealand Government and the RBNZ caused the predicament by intervening with the workings of the market in providing access to ‘too easy credit’ and mortgages without sufficient asset backing (BusinessNZ, 2008). Despite the increasingly rapid growth in the sector, it was noted that there was a lack of differentiation in sources of funding, and, due to the favourable conditions, a heavy reliance on debt funding (KPMG, 2007). It also became apparent that the build-up of debt from a decade of lax credit terms and low interest rates helped feed consumers’ unsustainable spending habits, which were mostly funded by debt (KPMG, 2008). By the end of 2008, 33 institutions had ceased trading, putting \$6,406.4 million of deposits at risk (JDJL Limited, 2011b). To date, a total of 63 NBDTs have been forced into moratorium, placed in receivership, or liquidated (JDJL Limited, 2011b). This makes it “the most fundamental dislocation in financial markets in our lifetimes” (New Zealand Institute of Chartered Accountants, 2011). It is retrospectively clear that certain warning bells were ringing from 2002.

3.3.2 New Zealand's response to the collapse

Disclosures by finance companies appeared to have fallen short of regulatory requirements and investors' expectations. Prudent self-proclaimed 'sophisticated' investors could no longer decipher information provided by finance companies to assess risks (Macfie, 2010). This meant that investors were taken by surprise when high-flying finance companies, which hitherto appeared to be thriving, collapsed under the harsh new economic conditions. A few of the failed finance companies have been summoned by the judicial system, to face claims that untrue statements had been made in their investment documents. These companies include Five Star Consumer Finance and the related group Five Star Finance, Nathans Finance, Bridgecorp and Bridgecorp Investments, and National Finance, to name a few (Financial Markets Authority, 2011a). Almost all the cases related to inadequate and at times, untrue disclosures regarding related-party transactions, types of business activities and standards applied by the firms. These items are basic information that should have been contained in the registered prospectuses, as per the Securities Act 1978. The directors of these companies had also inappropriately signed off the relevant investment statements and prospectuses, claiming that the financial position of their firms had not "materially and adversely changed" (Financial Markets Authority, 2011a).

3.3.3 Regulation of the non-banking sector

Back as early as September 2004, the Securities Commission of New Zealand grew wary of the practices of some finance companies in New Zealand. The KPMG Financial Institutions Performance Survey (FIPS) also gave notice of the potential credit risks from the lack of any specific mechanism for investors to assess the risk of their investments, in comparison with those of other possible investment vehicles. The Survey also noted that regulation was ineffective in making the finance companies disclose their risks (KPMG, 2007). In a discussion paper regarding the

finance companies' disclosures, the Securities Commission reviewed the disclosure documents of thirty finance companies. It noted its disappointment in finding inconsistent levels of quality in disclosure documents and in some cases, that the minimum standards of regulations such as the Securities Act 1978 and Securities Regulations 1983 were not met (Securities Commission, 2005). Both Acts deal with misleading statements in a very general way. Section 34(1) of the Securities Act 1978 provides some detail about deceptive disclosures and requires the prohibition of distribution of a prospectus if "it is false or misleading in a material particular by reason of failing to refer, or give proper emphasis, to adverse circumstances"¹⁴. Overall, the Commission, in its 2004 document, stated it was appalled by some of the disclosures being made by the finance sector. The Commission was of the view that, based on existing disclosure levels and quality, few 'unsophisticated' investors would be able to gain a full understanding of the risks; and that the disclosures provided had the "potential to mislead investors" (Securities Commission, 2004 p.6).

Since the GFC, numerous measures have been taken to improve the disclosure of NBDTs. Regulation specifically designed for non-banks was imposed for the first time in September 2007 when the RBNZ required all deposit takers to comply with prudential requirements under a new regulatory framework. This decision followed a string of collapses in the finance sector (Reserve Bank of New Zealand, 2007). It was the view of the RBNZ that investors' confidence and participation in the troubled sector would take off again, if good quality information became available (Reserve Bank of New Zealand, 2011b). In summary, key changes have been made to capital adequacy ratios, related party disclosure, minimum liquidity requirements, mandatory credit ratings and risk management and governance programmes (Reserve Bank of New Zealand, n.d.b).

¹⁴ Section 34(1) of the Securities Act 1978 in its entirety reads: No registered prospectus shall be distributed by or on behalf of an issuer,

- (a) after it has been amended unless all the amendments have been incorporated in, or attached by way of an instrument to, every copy of the registered prospectus that is so distributed; or
- (b) if it is false or misleading in a material particular by reason of failing to refer, or give proper emphasis, to adverse circumstances (whether or not it became so misleading as a result of a change in circumstances occurring after the date of the prospectus)

As part of the prudential disclosure regime, the Ministry of Economic Development and the RBNZ have enforced additional policies such as the standardising of disclosures and a regular six-month update requirement (Reserve Bank of New Zealand, n.d.a). However, there is no current obligation to notify investors of changes in the disclosure documents. The requirement for continuous updates is invaluable, as at present, prospectuses could be valid for eighteen months, so long as it is not ‘misleading’ (Reserve Bank of New Zealand, 2011a). The new Financial Markets Authority (FMA), established under the Financial Markets Authority Act 2011, will also help provide some oversight in the sector. The FMA supersedes the Securities Commission, and takes over some responsibility from the Ministry of Economic Development. Its primary role entails enforcing all relevant legislation applicable to financial services and the securities market, to help ensure efficiency in the financial markets (Financial Markets Authority, 2011b). However, the FMA has made it very clear that it cannot eliminate all risks of investment. This remains the responsibility of the individual investor (Financial Markets Authority, 2011b). This highlights the importance investors and the general public place on the reliability of documents published by finance companies.

In light of the rapidly diminishing confidence in the finance sector and a genuine fear that banks and other institutions would collapse (KPMG, 2008), two Deposit Guarantee schemes have been introduced by the New Zealand Government¹⁵ (Reserve Bank of New Zealand, 2007). In simple terms, the Government is essentially acting as backing for the value of investment repayable at maturity within the scheme, provided the entity meets capital requirements. By 31st March 2009, 28 NBDT were approved (KPMG, 2008). Although it was originally intended to be a temporary measure, the scheme was extended for qualifying entities until 31st December 2011 (The Treasury, 2011). The effectiveness of such scheme was quickly evident. Without the guarantee, finance companies would have found it difficult to quell the anxiety rippling through investors, many of

¹⁵ The retail deposit guarantee scheme was rolled out on 12th October 2008 and the wholesale deposit guarantee scheme on the 14th of November 2008.

whom quickly transferred their funds to qualifying NBTs as non-qualifying debt investments could not be guaranteed elsewhere at reasonable prices (KPMG, 2008). The Deposit Guarantee Scheme has already been a life saver for some investors. However, some were not so lucky. Investors of South Canterbury Finance, who qualified under the scheme, managed to get their entire invested capital back from the receivers, which amounted to \$1.8 billion in total (The Treasury, 2010), while those who invested in the failed finance company, Provincial Finance, will only receive 10 to 20 cents of their original investment (Pricewaterhouse Coopers, 2006).

The efficacy of the guarantees is under heavy debate. In 2008 when the Government introduced the Deposit Guarantee Scheme, only a handful of finance companies could meet the criteria (Reserve Bank of New Zealand, 2011a), sparking a dramatic relocation of funds into the selected companies and registered banks. However, KPMG notes that such move did not provide significant assurance. For investors of registered banks, it was a sigh of relief that was not sorely needed, as registered banks already have the support of the RBNZ under the Reserve Bank of New Zealand Act 1989.¹⁶ For investors in finance companies that did not qualify on the other hand, it was the catalyst for mass movement in the market, and the depletion of what little confidence the market had in struggling finance companies. Regardless, it is now clear that the lack of rigorous regulation allowed too many finance companies which did not have enough resources as a buffer to continue trading, at the expense of the investors who invested funds in them (KPMG, 2007).

There are relatively few studies dedicated specifically to examining finance companies. Indeed, some even exclude such companies. For instance Purda and Skillicorn (2012) and Beneish (1997) both excluded such companies from their sample. Cole and Jones (2005) argue that such move is generally due to the unique characteristic such as specific regulations on disclosures, and risks that

¹⁶ The Reserve Bank of New Zealand Act 1989 allows the RBNZ to minimise the potential damage of a failing bank by its crisis management powers.

often compromises the comparability of such disclosures. This represents a significant research gap, particularly in light of the reliance finance companies have on their good image, which serves as an additional potential motivator to employ deceptive narratives.

3.4 Different types of disclosures

There are a lot of ways in which companies can communicate to their stakeholders and in particular, investors in the market. Typically these forms of communication include investor relations letters and annual reports. However, each type of disclosure allows varying levels of flexibility (Lang & Lundholm, 1993) and varying relationships with the cost of capital (Botosan & Plumlee, 2002). To complicate matters more, the same type of disclosures could have differing effects on investors' perceptions, depending on the way it is presented and the sophistication of the investor (Hirshleifer & Teoh, 2003). Background knowledge is more essential than text coherence for investors in understanding CEO's letters (Jameson, 2000). Less sophisticated investors may misinterpret or misunderstand relevant aspects of the disclosure (Lambert, 2003), and in particular, they may not be aware of the strategic incentive the firm might have to manipulate their perceptions (Hirshleifer & Teoh, 2003).

Narrative disclosures communicate to investors information that can influence decision making, but which cannot be quantified in financial terms. As a result, this information is usually excluded from the financial statements (Tennyson et al., 1990). Although they are informative by nature, narrative disclosures are usually expressed in cautionary terms so as to act as "safe harbours" for the preparers (Henry, 2008). It is considered as "one of the most ubiquitous and powerful discourse forms in human communications" (Bruner (1990) as cited in Jameson, 2000) but prior literature furnishes no agreement on the usefulness of such reports. McConnell, Haslem, and Gibson (1986) consider them to be "carefully crafted public relations documents with little, if any, substantive

content.” Geppert and Lawrence (2008) point out that such disclosures are not regulated and are heavily influenced by management. Bettman and Weitz (1983), Clapham and Schwenk (1991), and Abrahamson and Park (1994) share similar findings, with Abrahamson and Park (1994) stating that the incidences of “impression management” they found suggest narrative disclosures are self-serving rather than informative. Merkl-Davies and Brennan (2007) point out that the dangers of impression management are severe. The authors assert that if users are susceptible to such practice then “adverse capital allocations may result” (p.116) which may disrupt the entire market. The authors argue that impression management implies a misalignment between the reality portrayed by the financial statements, and the reality described by management.

On the other hand, other academics are much more positive about the use of narrative disclosures. Schipper (1991) argues they are of “great importance”, even for more sophisticated users such as analysts. This view is shared by Yuthas et al., (2002) who advocate that such disclosures are relevant as “the most important information is forward looking. Old news is no news.” Smith and Taffler (1995) found that it was a complementary source of information to the traditional financial statements, and its absence in literature is possibly due to the difficulties of examination in an objective manner. In their later study of relationships between words and financial variables, Smith and Taffler (2000) found that narrative disclosures are important as a tool for reporting on a firm’s failure, suggesting that they contain not only vital information on the past, but also about the future. Linsley and Shrives (2006) have similar findings, stating that qualitative risk disclosures tend to be more relevant than their quantitative counter parts. Academic enquiry is now reaching beyond the traditional financial perspective of insolvent and financial distressed firms.

3.4.1 Financial statement fraud vs. deception in narratives

In the wake of high-profile corporate collapses such as those of Enron and Worldcom, fraud in financial accounting has been well explored (Rezaee, 2005). However, most studies tend to focus

on ‘financial statement fraud¹⁷’. Johnson, Jamal and Grazioli (1993) briefly described the idea of deception in narratives as “mimicking” in their investigation of detection of fraud from an auditors’ perspective. Nevertheless the authors acknowledged that their use of narrative knowledge was “limited”. Perhaps because the narrative sections of annual reports are not audited they tend to fall short of being topics worthy of professional and academic investigation. Deception and fraud in financial reporting is not a new phenomenon in our society. People are inherently poor at detecting lies due to their tendency to be biased towards expecting to get the truth (Carlson et al., 2004). There are even arguments that the dichotomy of fact and fiction is fast losing its relevance as corporate disclosures become more focused on narratives (Evans, 2009). However, there is limited research relating to deception in terms of accounting narratives, with most research pinpointing the more obvious forms of fraud in the accounting treatment (Baker, 2003; Gordon, 2002; Leach et al., 2007; Scharff, 2005). Carlson et al., (2004) argues that this is largely attributed to the difficulties in detecting deception as there is no single indicative behaviour that can reliably define a person to be ‘deceptive’.

However, there are questions as to whether narrative disclosures can be taken at face value. Weber (1980) found financially distressed companies were more susceptible to overstate their future prospects to try and retain investor’s favour (as cited in Boo & Simnett, 2002). In Tennyson et al. (1990), the narrative disclosures of healthy firms were found to focus more on growth opportunities while financially weaker firms disclosed more on their external environment. Fisher (1994) argues that “rationality is determined by the nature of persons as narrative beings - their awareness of narrative coherence...whether the stories they experience ring true with the stories they know to be true in their lives” (p.10). This suggests that past experiences will interact with the texts from narrative disclosures, influencing the received meaning. Darrough and Stoughton (1990) posit that

¹⁷ This includes but is not limited to the manipulation of accounting records, material intentional misstatements of events and transactions, misapplication of accounting standards, intentional omissions of accounting standards and other financial information, earnings management and aggressive accounting techniques and the manipulation of accounting practice (Rezaee, 2005).

market considerations should be measured, in that the market perceives that such disclosures are usually selectively disclosed. Selective disclosure is more likely where flexibility in disclosure is allowed (Boo & Simnett, 2002). Narrative disclosures are therefore subjective by nature as they are “a construction, rather than a reconstruction” (Jameson, 2000). Rutherford (2005) provides further support, stating that narrative disclosures are subjective, and communicated strategically in a relatively “mechanical manner” to obey regulatory codes. The flexibility of the regulation surrounding narrative reports have generally being seen by critics of such reports as the reason for such inconsistency and incomparability (Yuthas et al., 2002). Merkl-Davies and Brennan (2007) had come to the a similar conclusion. They found increasing opportunities for impression management within corporate reports and that the information content of such disclosures varied depending on the financial health of the company. Conaway and Wardrope (2010) are of the view that “words presented in corporate documents may not exist as objective reality but rather as an effort of ‘sense making’ by corporate writers who wish to construct support for organisational practices” (p. 142). The authors find no guidelines as to what should be or should not be included in CEO’s letters to investors and argue that such freedom makes narrative disclosures “strategic rather than informative”. This flexibility, as stated by Purda and Skillicorn (2012), allows the authors of such written media to “aggressively”, and “legitimately” enhance their image. Perhaps the most noteworthy is the conclusion Smith (1995) made, which suggests that narrative disclosures may increase errors in decision making by adding confusion. The author suggested mandatory audits of narrative disclosures to reduce misleading messages conveyed by such disclosure.

Narrative disclosures should have high academic importance because unsophisticated investors may place more reliance on the text portions of financial disclosure as they may not feel as confident in deciphering the numeric information. Frost (1997) asserts that the market is capable of discounting positive management prospective statements made by companies experiencing financial difficulties. On this basis there is scope in academic research for narrative discloser analysis (Henry, 2008). The

most common form of disclosure is through the annual reports distributed to the investors and the impacts of such disclosures are well documented in prior literature.¹⁸ This is even more so in relation to financial distress.¹⁹ However, relatively little attention has been given to other forms of disclosures. The next section intends to summarise the most relevant type of disclosure for a NBDT: the registered prospectus.

3.4.2 NBDT specific disclosure documents: the registered prospectus

Prospectuses are a special case of a document as it provides narrative that may be deceptive through biases in its wording. There are many users of corporate disclosure documents like the registered prospectuses and many conflicting objectives to achieve. Psychology literature (for example Caso et al., 2005; Hyman, 1989; Newman et al., 2003 to name a few) cites contradictory objectives to be a pulling factor of employing deceptive disclosure practices. In the case of a poorly performing company, there may be more pressure to fulfil market expectations, which may not be achievable, and hence the conflict. These conflicting purposes may collectively amount to an incentive for deceptive disclosure. Van Staden and Hooks (2007) assert that “previous studies involving content analysis...[have] usually only focused on Annual Report disclosures” (p. 198). However, few academics have questioned the dominance of such reports. Curtis (1986) (as cited in Jameson, 2000) found these reports to be too difficult for average readers. Linsley and Slack (2010) argue that the lack of coherence and inadequate disclosures of risk policies are undoubtedly a fundamental limitation of annual reports. Linsley and Slack (2010) suggest that alternative disclosures may also help overcome the underlying limitations of the Annual Reports. In light of these flaws, the registered prospectus seems to fill this gap, particularly with its emphasis on risk disclosures.

¹⁸ See (Healy & Palepu, 2001), Firth, (1978) and Singhvi & Desai, (1971)

¹⁹ See Altman (1968) Altman and Saunders (1997) and Laitinen (1993)

The prospectus is designed to complement the investment statement, and provides information on all material matters, such as the risks relating to the investment (Deumes, 2008). As it is required by legislation, it is deemed to be the most important of corporate disclosures for a NBDT. The Securities Act 1978 and Securities Regulations 2009²⁰ both require issuers to provide registered prospectuses when offering securities. It is required to be dated, in written form and must be registered with the Companies' Registrar (Securities Commission, 2005). A continuous updating requirement obliges a firm to update the prospectus and investment statement, if these no longer include all relevant information and become misleading (Reserve Bank of New Zealand, 2011a). Importance is thus also placed on the investment statement, which acts as the "principal point of sale document" (Securities Commission, 2005 p.5). The Securities Act 1978 states that the purpose of such a document is to provide material that can assist the decision making of "prudent but non-expert" investors (s.38D) and alert them to the existence of other important documents which are presented in a question-and-answer format to aid simple understanding (Securities Commission, 2004). However, KPMG (2007) finds that attempts by firms to comply with all necessary investment statement regulations have made it difficult for investors to read these documents as at times, they may be well over seventy pages in length.

Deumes (2008) also discusses some potential shortfalls associated with prospectuses. The author first argues that as risks are entity and company specific, while regulations concerning such disclosures have generally been quite vague and open to interpretation. This has led some critics, including Schrand and Elliott (1998), to question the validity of the prospectus, on the basis of the information presented being sometimes too subjective. Schrand and Elliot note that the overall drawback to narrative, or qualitative disclosures is that they cannot achieve the same kind of credibility available to quantitative disclosures. "[Quantitative information] improves [the]

²⁰ Section 5 and Schedule 1 of the Securities Regulations 2009 specifies the matters to be contained in full registered prospectuses. This includes, but is not limited to, the main terms of offer, name and address of offeror, details of incorporation of issuer, principal subsidiaries of issuer, names, addresses, and other information.

credibility of disclosures and makes them ex-post verifiable” (p. 280). Hodder, Koonce, and McAnally (2001) also question the value of narrative disclosures, arguing that it is hard for investors to translate qualitative information into quantitative information for risk assessment. Others also criticise on the one hand, the lack of comparability between different investments, and on the other, the “one size fits all” (Securities Commission, 2005) approach used by Schedule 3D of the Act.

The Institute of Chartered Accountants of England and Wales found prospectuses to contain more information than financial statements on the risks of investments (Deumes, 2008). Fuller and Jensen (2002) also provide support for this argument, claiming that “trying to mask uncertainty that is inherent in every business is like pushing up a balloon: smoothing out today’s bumps means they will pop up somewhere else tomorrow, often with catastrophic results” (p. 43). Deumes (2008) further argues that thoroughly prepared prospectuses may also benefit the companies themselves as understanding the risks they are exposed to can prevent future damage to their reputation, which is essential in the finance sector. However, despite their importance, there appears to be little empirical evidence as to how informative these disclosures actually are (Deumes, 2008), and this is more so in New Zealand. Further research in prospectuses and investment statements as disclosure documents should prove to be very beneficial. Perhaps registered prospectuses have greater significance than annual reports for ordinary companies in that the former, by enticing potential investors to invest, can directly secure the company’s short term financial funding requirements. Therefore, the effect of bad news in a prospectus may have more immediate results than similar bad news in an annual report for an ordinary company. This highlights a significant gap in the literature currently dominated by studies of annual reports. The narrative portions of prospectuses, that is, the communications from the chief executive, chairman or directors are important objects of research as good news and bad news are often communicated using those channels.

3.5 Conclusion

Poor disclosure is a particularly damaging phenomenon in the finance sector. Greater monitoring of companies going through financial difficulties is needed, particularly with NBDTs and the information they provide in their registered prospectuses which now appears questionable in hindsight. Considering the importance of, and reliance on directors' or chairmen's statements by users of company disclosures, deception in narratives is a significant research topic. However, a quick review of prior literature reveals many gaps and indeed, opportunities and scope for further investigation. Deception in narratives is an area that has been overshadowed by its financial and numerical counterparts, with most studies of fraud concentrating on accounting treatments and earnings management. Due to the relatively little attention given to firms in financial distress, prior literature is unclear on whether the same assumptions can hold for both distressed and viable firms. This is especially the case for finance institutions that are inherently more vulnerable to risks and changes in the market, and the specialised disclosures that they make. Their specialised disclosure and the nature of their business really puts into question the applicability of past findings. Another point of interest that is scarcely covered by existing literature is the impact of deception on communication with more than one intended recipient. When a deceiver is attempting to deceive multiple parties, as is the case of directors responsible for misleading corporate disclosure documents, a different approach may need to be taken in comparison to a single party. More research in this area would definitely be of value.

These are significant research gaps, and this paper seeks to address them. Text analysis can be a good means of testing for deception in narratives. This supports the approach used in this thesis of examining the frequencies of identified 'lying words'. Through the use of content analysis, this study seeks to fill in the little pockets of uncertainty within the existing literature.

4. Research question and hypothesis formulation

The following section will describe the six hypotheses examined in the current study. Deception in narrative disclosures is an area that has been examined, yet no conclusive indicators of deception have been found. However, sometimes disclosure of true and unfavourable news may be “suicidal” (Jorgenson, 2004 p.1), which prompts companies to think twice about their disclosure, and some may even go to extreme lengths such as omitting (Boo & Simnett, 2002; Van De Wiele, 2002), or even distorting the disclosures (Rezaee, 2005). Ultimately, these incentives cause deception, or elements of deception, to be seemingly “inevitable” when a company is under financial distress (Myers, 1977 p. 159) . Consistent with the forgoing discussion, it is hypothesised that companies, especially finance companies which are financially distressed, are more prone to make more ‘deceptive’ disclosures. In light of this, this study proposes the following six hypotheses, all expressed in the alternative form. All hypotheses are expressed in alternative form, and are measurable at the 5% level of a Type I error²¹.

H_{1A}: The deception score of narrative disclosures by failed companies is significantly higher than that of disclosures by non-failed companies.

Overall, Merkl-Davies and Brennan (2007) posit that future research incorporating both scenarios (i.e. impression management and incremental information) will provide valuable information. Larcker and Tayan (2010) are stalwart advocates of the idea that the language composition of narratives can provide an indication as to whether they are true or false. The authors assert that subtle changes in the usage of certain words can convey deep psychological effects of deceit. However, Carlson, George, Burgoon, Adkins, and White (2004) also acknowledge that this is an area that has been largely ignored by academics.

²¹ Type I error is the risk that the null hypothesis is rejected, when it should have been accepted. At the 5% confidence level, there is greater risk of a type I risk as opposed to a type II risk (confirming a null hypothesis when it should have been rejected) (Black et al., 2007).

H_{2A}: The use of personal association words in narrative disclosures by failed companies is significantly lower than that of disclosures by non-failed companies.

Bournois and Point (2006) found three tactical uses of the word “I”: first to place the authors as a representative of the social group; second to express personal commitments made; and third to project themselves as a principal motivating force of a project. Fear of association plays a big part in the mind of the communicator, especially when addressing investors who are concerned about the future of the company. The use of personal pronouns such as “I” and “my” were therefore found to be substantially reduced in deceptive disclosures as the communicator did not want any responsibility over the news they were portraying (Hancock et al., 2005; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Larcker & Zakolyukina, 2011; Newman et al., 2003; Zhou et al., 2004). They also did not want their reputations to be tainted. Tennyson et al., (1990) found evidence that financially weaker firms disclosed more about their external environment, rather than internal processes.

H_{3A}: The use of negative emotive words in narrative disclosures by failed companies is significantly higher than that of disclosures by non-failed companies.

The choice of deception affects the inner psyche of everyone to some extent and in most cases the effect is indirect. One possible manifestation of deception on one’s psyche is the words choice of deceivers. Deceivers were found to use more negative emotive words from the mental discomfort caused by betraying their conscience (Hancock et al., 2005; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Larcker & Zakolyukina, 2011; Newman et al., 2003; Zhou et al., 2004). Caso et al. (2005) argues that above all, deceivers will be nervous, and (Inbau, Reid, Buckley, & Jayne, 2011) also points out that they will be more uncomfortable than truth tellers. Hobson et al. (2011) found that executives who are suffering from “cognitive dissonance” will be more prone to conveying negative news about their firm’s future performance. However,

some authors found contradictory results. Larcker and Tayan (2010) posit that deceivers will tend to over-exaggerate positive news and discount negative news, thus suggesting lower use of negative words.

H_{4A}: The use of sensory descriptive words in narrative disclosures by failed companies is significantly higher than that of disclosures by non-failed companies.

In order to substantiate their version of events, deceivers tend to be more expressive with their descriptions. The excessive use of sensory descriptive words, such as “feels like”, “sounds like” or “looks like” is associated with deception (Hancock et al., 2005, 2007; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Newman et al., 2003; Zhou et al., 2004). Deceivers are constantly paranoid that their version of events will not be accepted so they will typically include ways receivers can relate to, to reinforce their argument. Marett and George (2004) posit that it is ‘easier’ to deceive a group by creating a familiar feeling. The authors found this to help enhance the deceiver’s supposed credibility.

H_{5A}: The use of exclusive words in narrative disclosures by failed companies is significantly lower than that of disclosures by non-failed companies.

Related to the point above, deceivers usually have a hard time keeping track of the version of reality they have chosen to portray. On top of balancing the believability of their story they will generally try to reduce the risk of self-contradiction and will be less likely to use exclusive words (such as “except” and “however”) or causation words (“because” or “for that reason” to name a few) (Hancock et al., 2005, 2007; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Newman et al., 2003; Zhou et al., 2004).

H_{6A}: The degree of certainty in narrative disclosures by distressed companies is significantly less than that of disclosures by non-distressed companies.

The tone of words is also an important consideration for deceivers, and therefore deception detection. As deceivers are generally more cautious (Larcker & Tayan, 2010), they are careful in not only their word usage so as to not create any unnecessary loopholes or restrictions, but also in the tone of their writing. Carlson et al., (2004), Larcker and Tayan (2010) and Larcker and Zakolyukina (2011) assert that by speaking in generalities, this may prevent them from committing to anything that may contradict with their version of events, and hence draw suspicion to their deceptive activities. Deceivers are also said to be more evasive than non-deceivers, which may be from their fears of getting caught out (DePaulo et al., 2003). In general, deceivers are perceived to be uncertain in their writing.

5. Research methodology & method

This section will describe the research methodology and method used to test the six hypotheses identified in section four. The failed and non-failed samples will be discussed, followed by the dependent and independent variables (i.e. the deception score and components of the deception score) examined. Next, the method of content analysis is discussed in detail, followed by a deep look at the software, DICTION.

5.1 Failed and non-failed firms

The primary objective of this study is to look at disclosures of failed companies from the finance sector of New Zealand in a period leading up to their ultimate collapse. On a retrospective look, disclosures made by finance companies have been inadequate. From the judgments passed down by the courts, disclosures made by distressed companies have been incomplete, insufficient and at times, outright misleading²². If failing finance companies are consistently exhibiting disclosure practices similar to those described as ‘deceptive’ in general deception literature, or are disclosing in a manner significantly different to the control companies in this thesis, the control sample methodology should be able to pick that out. These warnings may be able to buy investors more time to re-think their investment. The literature discussed in the previous two chapters tends to suggest that failing companies have more motivation to provide deceptive disclosures.

A sample of failed finance companies was compared against a control sample, and the differences examined in the study. In determining the failed and control samples, the current study took the approach that ‘failed’ and ‘non-failed’ were mutually exclusive classifications. As such, if a finance company was not deemed ‘failed’, then they are more appropriately classified as ‘non-failed’. As

²² In cases such as Five Star Consumer Finance, Nathans Finance and Bridgecorp, the directors were found to have “made further untrue statements when they signed a prospectus extension certificates” (Financial Markets Authority, 2011a).

discussed in Anderson and Chang (2011), there is a difference between ‘financially distressed’ companies and those in ‘bona fide financial distress’. Inclusion of companies which are only experiencing “momentary turbulence in trading” (p. 40) can distort a study’s findings as they are not in real financial difficulty. The Deep Freeze List on the interest.co.nz website records a list of finance companies that have failed as a result of the Global Financial Crisis. At the end of 2011, The Deep Freeze List shows that there were 63 public issuer finance companies²³ in moratorium, liquidation or receivership – essentially these finance companies were in bona fide financial distress (JDJL Limited, 2011b). In contrast, a register was not kept detailing which finance companies are still actively trading. As a result, the full membership of the Financial Services Federation²⁴ (FSF) was used to identify the number of non-failed public issuer finance companies in the New Zealand market. This yielded 33 active finance companies in total. However, of the 33 non-failed finance companies, only 24 companies provided a narrative component in their registered prospectuses. All the companies on the FSF membership site were cross-checked against the Deep Freeze List to ensure that none of the companies are recorded in both the failed and non-failed samples.

The use of matched samples is said to allow for a more systematic analysis of potential relationships between financial narratives and performance (Smith & Taffler, 1992). However, it is problematic to devise a control sample that matches and compares individual deception scores of companies in both samples due to potential bias that may be introduced in the process. Failed and non-failed samples used in the study were not artificially matched against each other using arbitrary criteria²⁵. Zmijewski (1984) cites several arguments against the use of matched samples, with the distortion of reality being one of the primary reasons. In particular, the author questions whether the use of choice-based samples (i.e. a matched sample with equal proportion) is appropriate. The author argues that the proportion of failed to non-failed firms is unlikely to be even (i.e. a 50/50 matched

²³ However, not all of the 63 companies provided the necessary information to be included in the study.

²⁴ The major New Zealand grouping of non-bank financial institutions (Financial Service Federation, 2011a).

²⁵ For example, in Frino et al. (2007) individual failed and non-failed companies were matched based on market capitalisation and total revenue in the same sample period.

sample), but the failed proportion of failed firms is usually significantly lower²⁶. Haber (2008) argues that the equal control sample assumption is one of the fundamental flaws of matched samples, as the success rate is dependent on how well the proportions reflect reality. Sampling bias may also be introduced as not all items in the population will have an equal chance of being included, in an effort to maintain the equal proportions.

The current study notes the criticisms of matched samples and adopts unmatched and unequal samples. New Zealand's business environment was the reason for not using identical failed and non-failed sample sizes. As at October 2012 the membership of active finance companies and building societies contained 33 finance companies (Financial Service Federation, 2011b) and based on this, the market failure rate was 66%.²⁷ The sample examines a total of 189 prospectuses²⁸ in the relative timeline and 199 companies in the calendar timeline from 57 different finance companies, of which, 33 have become bona fide failed finance companies i.e. those which have been liquidated, or are in receivership or are subject to a moratorium. These two time frames are further explained later in the chapter. One hundred and twenty-seven from the relative timeline were from the failed sample. The remainder 62 were from the control sample. The sample rate of failure based on the distribution of prospectuses is 67%. Alternatively, looking at the actual finance companies, the sample failure rate is 58%. In terms of the calendar timeline, 127 prospectuses from failed finance companies were examined, in comparison to 72 prospectuses from the control sample. The sample rate of failure for the calendar timeline based on the distribution of prospectuses is 64%. Overall, the sample is designed to better reflect the actual proportion of failed to non-failed firms rather than to obtain a sample consisting of equal proportions of failed and non-failed firms.

²⁶ Historically, the frequency of financial failure has not exceeded 0.75% since 1984 (Zmijewski, 1984)

²⁷ The suggested population of finance companies in New Zealand as at October 2012 is 96. This is made up of 63 failed finance companies as shown in the Deep Freeze List, and 33 active finance companies.

²⁸ The dates of the prospectuses span from 2002 to 2010.

Altman (1968), who examined 33 bankrupt companies and 33 similar non-bankrupt companies, had developed a bankruptcy prediction model, the 'Z Score'. He examined whether his model could correctly classify the 66 failed and not failed companies. Frino et al. (2007) also examined 78 failed and 78 non-failed firms in terms of cumulative abnormal returns from bankruptcy announcements. Although both studies used matched samples, their results were not the relative results of the individual matched pairs, but of the two samples separately. That was also approach used by the current study. The decision not to pair up each prospectus in the distress sample to a corresponding control company prospectus was to reduce potential bias that may be introduced in the process. Potential bias could arise from determining which relevant characteristic ought to be used in matching failed with non-failed companies, i.e., there are many characteristics that could be used, such as size, portfolio structure, risk appetite, etc. and choosing any one in particular is essentially arbitrary (Zmijewski, 1984). For instance, the differing risk appetites of finance companies complicate the matching process, as these risks will affect how prospectuses are constructed, and may create noise and 'statistical differences' irrelevant to the study. The small sample size renders closely matched samples inappropriate, as the accuracy may be compromised (Smith & Liou, 2007). Overall, this study intends to examine the effects of time on deception and non-deception cues in written media. Such approach of having a time series of both failed and non-failed firms increases the probability of an observation being deceptive in the whole population of firms (Pruda & Skillicorn, 2012). This is said to be a good attribute to have in deception detection techniques. Pruda and Skillicorn (2012) suggest it can capture changes in language, regulation, or any corporate events and the effects they have on the corporate disclosures.

In comparison with international studies, the sample of 33 failed and 24 control firms (57 in total) may seem small, however this reflects New Zealand's small market size. A large sample size, as typically found in US studies is simply unachievable for such a small nation. Interestingly, however, Altman (1968) maintained validity and credibility with a small matched US company sample size of

33 (66 in total). This is one of the most cited papers in the field of financial distress. Other papers within the financial distress literature such as Smith and Taffler (2000), Luoma and Laitinen (1991) and John, Lang, and Netter (1992) also have matched sample sizes of less than 50. By focusing on the finance sector, this study eliminates noise arising from differing industries and sectors. As the finance sector may not be comparable to other sectors, and usually operates under different assumptions, the use of data from other industries for the sake of increasing the sample size was rejected. The definition of financial distress used in the study has also helped restrict the potential sample size. The failed sample includes only finance companies that are in bona fide financial distress. This restriction is considered necessary, as those are the companies which have had the risks of defaulting on principal repayments to investors converted into an actual default. As discussed previously, Anderson and Chang (2011) found that profit warnings and suspensions of trade were inadequate predictors of financial distress among the NZX-listed firms as they were too “noisy”. Such a vague classification of ‘financial distress’ has the potential to include companies that are not in any real danger but just experiencing temporary turbulence in the normal course of trading. Other papers have adopted similar approaches and restricted their classifications. Frino et al (2007), who conduct an events study to look at the impact of bankruptcy announcements in Australia, use the legal definition of financial distress and include only companies in receivership and liquidation. Similarly, Altman (1968) used only bankrupt firms in his study.

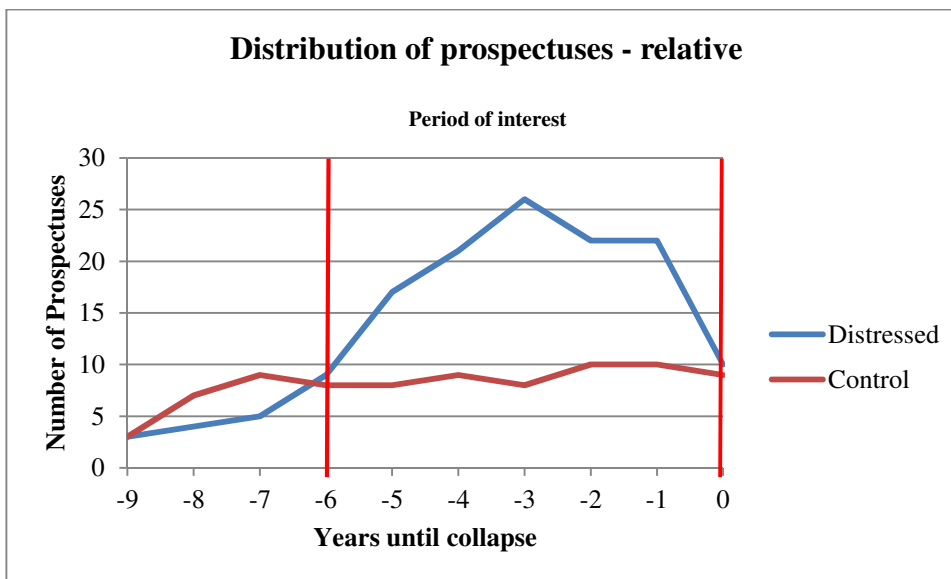
In the finance sector in New Zealand, there is a distinction between registered banks and NBDTs such as finance companies, building societies and credit unions. In line with the identified gap in the literature, the current paper examines NBDT, and specifically finance companies. It is also important to recognise the distinction between two types of finance companies in New Zealand, public issuers and private deposit takers. As mentioned above, issuers in the public domain are subject to legislation and regulation relevant to the issuance or offering of securities. Consequently, public corporate disclosure documents such as financial statements, registered prospectuses and

investment statements are readily available through the Companies Register. The second and increasingly prominent type of finance company is privately funded, and hence there is no publically available information listed with the Registrar. In keeping with the work of Hess and Feng (2007), the former type will be examined in the study, as they represent the type of NBDT that the general public will have access to. Attempts have been made to obtain data from the second type of NBDT, but the required financial information has not been made available to the researcher.

5.2. Relative and Calendar Timelines

In order to examine the whether the writing style of failed companies changes relative to the distress level, this study looks at two samples frames: the relative timeline and the calendar timeline. The next sections will explain in detail how this study arrives at each of the samples.

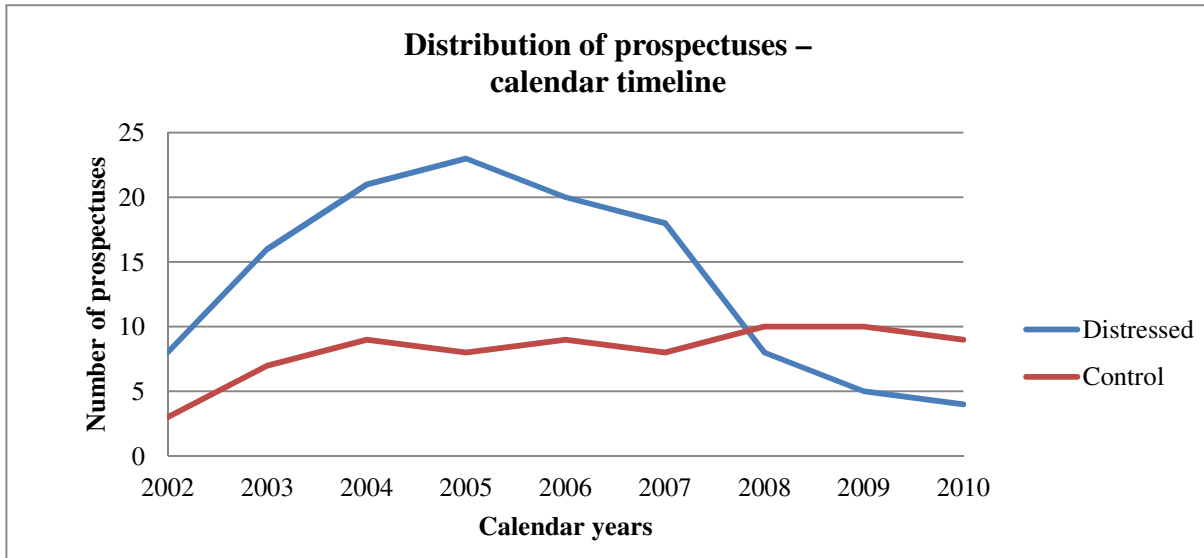
Figure 1: Distribution of prospectuses – relative timeline



The ‘relative failed sample’ contains a mixture of prospectuses preceding the year of their company’s collapse. Figure 1 shows the distribution of prospectuses in the ‘relative’ study. Interestingly, there were significantly fewer prospectuses for the failed sample in the earlier years prior to the collapse. The main difference in the lack of information was due to more of the failed

finance companies being smaller and younger. Indeed, the majority of the surviving companies in the control sample were more stable and well known, and had more capital to rely on during the Global Financial Crisis. All the prospectuses in the failed sample were sorted based on their years until receivership, liquidation or moratorium (year of collapse). These dates range from 2002 to 2010. As discussed above, the most problematic aspect of the study was finding a way to devise a control sample to compare with the results of the failed finance companies. The control companies were not matched to individual failed companies based on any one common characteristic as noted earlier, but were sorted in ascending order, with 'the year of collapse' (year 0) mapped to 2010 as it was the latest year with available data, as 2011 yielded no useable data for the failed sample. This allowed the distribution of the prospectuses to be similar to that of the failed sample to allow more meaningful results. The remaining years were mapped accordingly. In effect, there are two versions of the analysis: the failed sample in the relative timeline against the non-failed sample in the calendar timeline, and the failed sample in the calendar timeline against the non failed sample of the same sample time frame. This approach is appropriate as the non-failed (i.e. control sample) are companies that did not fail, and therefore will not have been able to contain data for years prior to their 'collapse'. In order to maintain the desired failed:control ratio as described in the above section, only the period between 6 years before collapse (-6) and the year of collapse (0) will be examined.

Figure 2: Distribution of prospectuses – calendar timeline



With changes in time come subtle changes in the language style used in printed media (Can & Patton, 2004). Such subtle changes may distort the scores calculated by DICTION in the study, thus the ‘calendar timeline’ sample was created. Smith and Liou (2007) assert that the changing economic trends and cycle cause instability in the data over time. The calendar timeline compares prospectuses within the same time period, isolating the effect of changes in language style. Both sets of prospectuses examined will also be subject to the same market conditions, so the study can examine whether failed and control finance companies respond differently to the same economic crisis. The calendar timeline shows that most of the prospectuses were from between 2003 and 2007, peaking at 24 in 2004 for failed companies and 9 for control companies. During this time the New Zealand economy was a fertile breeding ground for investment activity and created an abundance of finance companies (Economic Intelligence, 2008), with a lot of usable data for the study. From 2004 onwards the frequency of prospectuses for the failed sample steadily decreased as more troublesome finance companies were thrown into the spotlight and forced to exit the market. The control sample size remained relatively constant.

5.3 Content analysis

Beattie and Thomson (2007) state that “content analysis has become a widely used method of analysis in financial accounting research” (p. 129). The use of content analysis is a key tool for discovering differences, if any, in disclosure practices between failed and non-failed firms. Content analysis is an approach that categorises text and quantifies incidences of certain words or themes (Bryman & Bell, 2007). Krippendorff (2004) argues it “is a research technique for making replicable and valid inferences from text to the contexts of their use” (p.18). It has been extensively used to examine different types of corporate disclosures. Content analysis has been used in studies such as Tennyson et al, (1990), Smith and Taffler (2000), Kohut and Segars (1992), and Bowman (1984). In Tennyson et al, (1990), it helped examine the relationship between financial and narrative disclosures and the effectiveness of these to explain bankruptcy. Content analysis is chosen as it, arguably, can systematically examine the disclosures of both the failed and non-failed firms, with a reasonable level of objectivity (Berelson, 1952; Lyon, Barber, & Tsai, 1999).

Generally, there are two forms of content analysis. Form-oriented content analysis focuses on objective measures such as frequencies while meaning-oriented taps into the meaning of the subject (Steenkamp & Northcott, 2007). The authors argue that although the meaning-oriented approach is said to overcome the rigidity of the former approach, it effectively may not achieve its objective, as the researcher must make the inferences based on personal judgement. Comparability and reliability are therefore traded off. Readers may not come to the same conclusion as “[the information] is made, rather than discovered by the researcher” (Steenkamp & Northcott, 2007). Objectivity can be maintained through the consistent use of categories when examining the narrative disclosures of the sample of registered prospectuses. The current study adopts a form-oriented approach, as consistency and universal acceptance of the categories examined between readers is of high importance. Frequencies of words will be examined, allowing minimal opportunities for the author’s personal views to impact on the objects of interest. The study may be rendered useless if

readers do not accept the methods and assumptions used, and therefore the results produced. Although it would seem overly simplistic and lacking in human judgement, the form-oriented approach has been found to furnish similar results to complex and subjective methodologies (Smith & Taffler, 2000).

There is also the question of whether to employ computer assisted techniques, or manually analyse the data. Deumes (2008) discusses some of the advantages/disadvantages of each approach. Although humans can better judge and adapt to the different meanings of words within different contexts, they are less cost effective and more susceptible to error and bias. Detection of traces of deception in general communication is complicated by nature, let alone in corporate disclosure documents. How could one, without the benefit of hindsight, unerringly determine if someone has the intention to mislead based on words on paper? Despite this, Burgoon and Nunamaker (2004) assert that, because of such high levels of complexity, human intervention is necessary in most cases. However, the authors also admit that automated tools should be used to augment the researcher's judgements. Hobson et al., (2011) have similar findings, stating that computerised algorithm programmes are better detectors of fraud than conventional methods. Generally there are three quantitative approaches to detecting deception: judgement based thematic content analysis, word pattern analysis and word count analysis (Pennebaker, Mehl, & Niederhoffer, 2003). Wang and Wang (2012 p. 3393) support the use of word counts, citing it as a "reliable and transparent approach". Of the papers examined, the majority adopted word count analysis and the software of choice has tended to be Linguistic Inquiry and Word Count (LIWC). The current study will adopt the word count analysis approach also, but DICTION will be used to assist the process.

5.4 DICTION

DICTION has been found to be an efficient and effective form of content analysis that is also consistent with human-oriented methods (Short & Palmer, 2008). It is widely used in the linguistic

literature, for example, in Pennebaker et al. (2003), and as such, its capabilities can be vouchsafed (Sydserff & Weetman, 2002). DICTION is not a newcomer to the field of financial distress. For example, Linsley and Slack (2010) examined press releases of Northern Rock with DICTION and how the language evolved as the company went through its crisis period. Frequency of certain words could become potential warning bells for traces of deception and impending financial distress. Using a ‘form-oriented’ approach, Smith and Taffler (2000) found evidence that one is able to predict corporate failure based on the existence of words such as “overdraft”, “disposal” and “no dividends”. Matsumoto, Pronk, and Roelofsen (2006) found that investors can be manipulated by management’s optimism in their earnings announcements, but will later change their opinions if they find that analysts have been sceptical. Overall, DICTION has been very useful in accounting research and more recently, financial distress.

There are five major semantic components examined by DICTION: activity, optimism, certainty, realism and commonality, each defined by a series of subcomponent which are in defined by different words. Examining in units of 500 words, DICTION keeps track of the number of times a word that fits each of the five categories appear based on its 10,000 word dictionary²⁹ and this produces a score. This score can signal the overall tone of the language of the document. A useful function of DICTION is the ability, on the part of the researcher, to tweak pre-set formulas (Sydserff & Weetman, 2002). For the purpose of the study, some subcategories of the five components did not describe any of the traits of deception, and therefore are irrelevant to the scope of this paper. As a result, the scores they produce will not be examined. Two additional categories have also been added in. The two user defined dictionaries have been created as none of the existing subcategories adequately defined the component of interest.

²⁹ For more information please refer to the DICTION 6.0 manual (Hart, 2000).

However, DICTION is not without its fair share of criticisms. Its handling of homographs, which are words with several unrelated meanings, is widely criticised (Short & Palmer, 2008). The authors argue that DICTION's focus on word choice, and not the reasoning behind such choice, severely limits its ability to fill the gaps left by existing content analysis techniques. Because of this flaw, DICTION may be best used to examine predetermined categories, with set criteria that have empirical and theoretical backing. DICTION will be applied to examine common traits of deception documented in prior literature (i.e. use of personal pronouns, negative emotions etc.), so the effects of the second limitation may not come into play in this study. The words within the dictionaries of each trait of deception were closely scrutinised to ensure inappropriate or irrelevant words are excluded. The study into the reasoning of word choice is, in the researcher's opinion, very subjective and cannot be achieved through frequencies of words alone. It would involve interviews with the persons involved, and is out of the scope of the current study. Short and Palmer (2008) consider DICTION to be unobtrusive, efficient and above all reliable. They advocate that its focus on the subtle powers underlying the choice of words and flexibility from custom dictionaries, particularly the dictionaries based on business materials, is definitely an advantage. The automated coding and quantification system helps strengthen validity (Sydserff & Weetman, 2002).

Another limitation with DICTION is the restriction to only single words in the user-defined dictionary. Compound words are broken up and listed into separate words. For example, the word "for that reason" is broken up and added as "for", "that" and "reason". The inclusion of such fragmented words has the potential to distort the study's findings as the three words individually have a very different meaning to the term "for that reason". This represents a significant setback for the analysis, as this severely limits the words of interest particularly in the 'exclusion and causation' dictionary. The way around this was to add each of these compound words as a 'synthetic' word without the spaces in between (e.g. "for that reason" becomes "forthatreason") and replacing each incidence in the prospectus with the equivalent synthetic word. Naturally, this is a very tedious and

time consuming process, with 42 different compound words to search 189 documents, so macros in Microsoft Word were created to identify the expressions of interest, and remove the spaces between them. They are then able to be analysed by DICTION.

In order for DICTION to count the frequencies of the relevant words that appear, the data must first be imported into the system. The prospectuses retrieved from the Companies Register were PDFs in the form of scanned images. In this format, they were incompatible with DICTION. The prospectuses were scanned with Optical Character Recognition (OCR) software into Microsoft Word format. In this process the prospectuses was edited, leaving only the relevant section for the study (i.e. the chairman's report, letters to shareholders and managing director or chief executive's report) and check the recognition accuracy of the software. In this process a few typographic errors from the recognition process were identified and corrected. After the input files were converted and imported into DICTION, the programme was able to scan through the documents in units of 500 words and produced an output report detailing the frequencies of occurrences of words specified for detection within each of a number of dictionaries. The specific dictionaries are detailed in the next section. The output report was then exported to Microsoft Excel where the score for each hypothesis was calculated.

5.5 Disclosure practices and deception

The study examines whether stereotypical signs of deception as described in the psychology and linguistics literature were evident in New Zealand during the period leading up to, and including, the Global Financial Crisis. For this purpose, the voluntary disclosure portions of communication were essential, due to the flexibility of the authors to include or omit materials of interest. The Chairman's Letters, Chief Executive's Reports and Director's Letters or equivalent (hereon as 'Chairman's Letter') were examined. Communication from the top can be a "subtly revealing

medium” (p. 46) of the presentation of the vision of a company, as well as the intended vision (Bournois & Point, 2006).

The Companies Register’s online database contains the mandatory disclosure documents of all registered companies of New Zealand, including finance companies. Using the Deep Freeze List and the membership of the FSF, the Companies Register was examined and relevant prospectuses picked out. Thirty-two of the 65 failed finance companies did not include narrative portions in their prospectuses. As such, they were excluded from the failed sample. This brought the number of companies in the failed sample total down to 33. From the 33 failed companies, 127 different prospectuses from 2002 to 2010 were obtained for the relative and calendar timelines. For a prospectus to be selected, the disclosures must contain more information than the generic disclosures found in the Director’s Statement³⁰. No specific selection criteria regarding format was set out so as to not restrict the already small sample size. Similarly, of the 33 non-failed finance companies in the FSF membership, nine companies’ prospectuses did not contain Chairman’s Letters, thus reducing the control sample to 24. The 24 control companies provided 62 different prospectuses for the relative timeline and 72 different prospectuses for analysis in the calendar timeline. In total, One hundred and eighty-nine different Chairmen’s letters of prospectuses from 57 different finance companies were examined for the relative timeline, and 199 letters in prospectuses were examined in the calendar timeline. The control sample increased to 72 in the calendar timeline due to the way the data was sorted. The period examined spans from 2002 to 2010, due to the unavailability of data in either sample in 2000, 2001 and 2011. This range allowed the study to capture both the ‘boom’ period, and the aftermath of the Global Financial Crisis, and see how these events shape the disclosures in the registered prospectuses. This is discussed in further detail in the next section.

³⁰ That is, the paragraphs defining the scope of the director’s responsibility.

The objects of interest in the current paper are the disclosure practices of failed finance companies in comparison to those trading as a going concern. The paper examines whether the former are more likely to contain traits of 'deceptive practices' than the latter. Purda and Skillicorn (2012) provide evidence that truthful and fraudulent linguistic traits are "vastly different", and therefore can be correctly classified using word lists. As with the approach used by other researchers, the definition of 'deception' includes only those done with intent, and therefore include incidences of 'self-lies' and hubris (See DePaulo et al., 2003).

Included in the prospectuses and acting as the primary point of interest in the study, is the letter to investors written by the chairman, chief executive or managing director. The views and beliefs such disclosures communicate to the investors are perceived to be of great importance as this person is the "ultimate spokesman for the company" (Geppert & Lawrence, 2008 p. 288). However, there is debate over who actually composes such letters. The stance the current paper takes is that because the letter is signed off by the person who professes to be in such position, the disclosures are deemed to present that person's views and are deemed to have been substantively prepared by that stated individual. The chairman's letter is often rigorously reviewed to ensure that the desirable message is conveyed to the public, due to its wide availability (Geppert & Lawrence, 2008). Ingram and Frazier (1983) found that the chairman has considerable influence over the content of this sort of disclosure while Salancik and Meindl (1984) provide evidence the chairman's writing style and word use in such documentation remains similar, even with the help of external parties. The chairman or CEO's correspondence with investors is therefore a useful indicator of the integrity of a corporation's communications, and thus a good gauge of deception within corporations.

In the deception literature, the general deception theory describes certain characteristics that help pinpoint deceptive disclosure practices in corporate disclosures. But 'disclosure practices' is a difficult word to define. As discussed earlier, there are no specific reporting standards governing the

universal structure of narrative disclosures. Section 240 (2) of the Crimes Act 1961 defines deception as:

“[A] false representation, whether oral, documentary, or by conduct whereby the person making the representation intends to deceive any other person and know that it is false in a material particular; or is reckless as to whether it is false in a material particular; or an omission to disclose a material particular...”

Such a definition is very broad, and provides no guidance as to what constitutes a particular disclosure to be deceptive, and requires the users of disclosures to know the intent of the preparers, which is almost always only available retrospectively. Similarly, section 39 of the Securities Act 1978 set out the form and content of what is expected of the prospectus, but it does not provide further guidance or any exemplar upon which finance companies could base their disclosures³¹. As such it is a difficult task to define ‘non-deceptive’ disclosure, let alone a deceptive one. Drawing on prior literature such as Hancock et al. (2005); Zhou et al. (2004); Larcker and Tayan (2010) and Newman et al. (2003), this study employs five key elements that collectively describe ‘deceptive disclosure practices’ to arrive at a ‘deception score’ to measure deception.

Deception is measured by the following:

- Lower frequency of first person pronouns
- Higher frequency of negative emotive words
- Lower frequency of exclusive words
- Higher frequency of sensory words
- Higher frequency of uncertainty words

Such an approach to using prior literature to derive variables was also used in Beaver (1966), where a bankruptcy score was created in similar fashion. Purda and Skillicorn (2012) support the use of

³¹ s39 of the Securities Act 1978 states “[T]he prospectus shall (a) be in writing and be dated; and (b) specify any documents required by [section 41](#) of this Act to be endorsed on or attached to the prospectus or registered prospectus for the purposes of that section; and (c) contain all information, statements, certificates, and other matters that it is required to contain by regulations made under this Act.”

this “bag of words”³² approach, arguing that data generated word lists to classify truthful and fraudulent reports are an effective approach. These levels of incidence are relative to the incidence level found in the documents of firms that are not distressed (i.e. the control sample). Content analysis will be employed to determine if there are statistically significant differences between failed and non-failed finance companies in any one of these components.

5.5.1 Components of the deception score

The deception score is created by the sum of the five prominent signs of deception in psychology and linguistics literature.

Deception score

- = Use of personal pronouns
- + Use of negative emotives
- + Use of descriptions
- + Use of exclusion and causation words
- + Higher frequency of uncertainty words

Consequently, there are five variables making up the deception score, each defined by the relevant subcomponent of each component (shown in brackets) of DICTION. These subcomponents are discussed further in Table 1.

Use of personal pronouns

- = Self Reference (Certainty)
- Collectives (Certainty)
- Cooperation (Commonality)

As the Personal Pronoun component is made up of ‘Self Reference’ less ‘Collectives’ and ‘Cooperation’, the higher the score, the more the writer refers to himself or herself in the report. A

³² Such approach counts how many words appear in each document, then conducting statistical analysis (Purda & Skillicorn, 2012).

negative score indicates the writer tends to refer to a group, possibly in an attempt to not become solely responsible for the state of the corporation portrayed by the contents of the reports.

Use of negative emotive words

- = Blame (Optimism)
- + Hardship (Optimism)
- + Denial (Optimism)
- Praise (Optimism)
- Satisfaction (Optimism)
- Inspiration (Optimism)

The Negative Words component is made up of 'Blame', 'Hardship', 'Denial', 'Praise', 'Satisfaction' and 'Inspiration', with the latter three being positive words, in contrast to the first three. As the positive words are subtracted from the score, a high score indicates the negativity of the author. Prior literature is of the view that such negativity may have resulted from the emotional guilt from deceptive behaviour (Hobson et al., 2011).

Use of descriptive words

- = Aggression (Activity)
- + Accomplishment (Activity)
- + Communication (Activity)
- + Motion (Activity)
- + Cognitive Terms (Activity)
- + Sensory (User Created – see Appendix II)

The descriptive words component contains words which provide more information about a particular activity. The user-defined component, 'Sensory', contains basic adjectives which provide further elaboration to back up the writer's words (to see the complete list of words contained in that dictionary, please direct your attention to appendix II). Deception literature provides conflicting findings. On the one hand deception may lead to the writer giving away detailed descriptions to

back up their falsified claims, but on the other, less details reduces the possibility of the lie being found out (Hancock et al., 2005, 2007; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Newman et al., 2003; Zhou et al., 2004). The higher the score, the more detail the writer is giving in their communications. The current study takes the approach that the more descriptive the disclosure is, the more likely the disclosure is to be deceptive.

Exclusion and Causation (User defined – see Appendix I)

The Exclusive and Causation Words component is a straight count of the relevant words prescribed by the user-defined dictionary. The higher the score, the more inclined the writer seems to be restrictive in communications to investors. Deceivers are predicted to be less restrictive in communication, as they do not wish to set unnecessary boundaries in their version of events. They will avoid being unduly precise in case their precision inconveniently causes contradictions in their

Use words signalling uncertainty

- = Ambivalence (Certainty)
- Levelling (Certainty)
- Tenacity (Certainty)
- Insistence (Certainty)
- Numerical Terms (Certainty)

The degree of uncertainty component is comprised of ‘Ambivalence’ which hints at doubts and uncertainty, less ‘Levelling’, ‘Tenacity’, ‘Insistence’ and ‘Numerical Terms’, which provides certainty. The terms ‘Levelling’, ‘Tenacity’ and ‘Insistence’ are further discussed in Table 1, but in short convey a degree of confidence. Although existing deception literature does not provide empirical evidence on using the tone of words to signal certainty, this study is of the view that deceptive statements will portray more uncertainty. The author may attempt to avoid committing to

anything concrete in their untrue version of accounts as this might make their lies more susceptible to being found out. The higher the score, the more uncertain the writer appears to be.

The below table shows how the DICTION components make up each variable of the deception score, and how this relates to the hypotheses identified in section 4:

Table 1: The components of the deception score

Hypothesis and Trait of Deception	DICTION Sub-Component (Component)	Examples of Words included:	Explanation
H_{1A} : The deception score of narrative disclosures by failed companies is significantly higher than that of disclosures by non-failed companies.	Aggregate of subcomponents discussed below.	Includes all the words discussed below.	= Use of personal pronouns + Use of negative emotives + Use of descriptions + Use of exclusion and causation words + Use of uncertain words
H_{2A} : The use of personal association words in narrative disclosures by a failed company is significantly lower than that of disclosures by non-failed companies, measurable at the 5% level of a Type I error.	Self-Reference (Certainty)	I, I'd, I'll, I'm, I've, me, mine, my, myself.	The main assumption of this sub-component is that it is the writer that drives the action, and not the world at large. This will include the personal pronouns such as "I".
H_{2A}	Collectives (Certainty)	crowd, choir, team, humanity, army, congress, legislature, staff	This component contains words signalling plurality and reduces the sense of specificity, giving the impression that the action was conducted by a group, and not by certain individuals.
H_{2A}	Cooperation (Commonality)	unions, schoolmates, caucus, chum, partner, cronies, teamwork, sharing, contribute	Words that describe the interactions of groups of people. It suggests that the action was not conducted with the involvement of someone else, and hence the responsibility should also be attributed to the other party.

H_{3A} : The use of negative emotive words in narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies, measurable at the 5% level of a Type I error.	Blame (Optimism)	mean, naive, sloppy, stupid, fascist, blood-thirsty, repugnant, malicious, bankrupt, rash, morbid, embarrassing, weary, nervous, painful, detrimental	Includes negative adjectives undermining a certain action or object, and other unfortunate or unplanned circumstances.
H_{3A}	Hardship (Optimism)	earthquake, starvation, tornado, pollution, killers, bankruptcy, enemies, vices	External and internal events detrimental to the organisation, for example, natural disasters, political unrests and human behaviour.
H_{3A}	Denial (Optimism)	aren't, shouldn't, don't, nor, not, nay	Contains words that try to contradict or negate responsibility.
H_{3A}	Praise (Optimism)	dear, delightful, witty, mighty, handsome, beautiful, shrewd, bright, vigilant, reasonable, successful, conscientious, renowned, faithful, good, noble	Contains words with confirmation of a person's positive attributes.
H_{3A}	Satisfaction (Optimism)	Cheerful, passionate, happiness, thanks, smile, welcome, excited, fun, lucky, celebrating, pride, auspicious, healing, encourage, secure, relieved.	Contains words of positive emotions, including moments of triumph.
H_{3A}	Inspiration (Optimism)	Faith, honesty, self-sacrifice, virtue, courage, dedication, wisdom, mercy,	Contains words of aspirations of positive attributes desired by people.

		patriotism, success, education, justice.	
H_{4A} : The use of sensory descriptive words in narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies, measurable at the 5% level of a Type I error.	Aggression (Activities)	Blast, crash, explode, collide, conquest, attacking, dictatorships, violation, goal, crusade, commanded, challenging, overcome, mastered, rambunctious, pushy, prod, poke, pound, shove, dismantle, demolish, overturn, veto, prevent, reduce, defend, curbed	Contains words that imply human force and action. It also includes actions as a result of personal triumph and resistance.
H_{4A}	Accomplishment (Activities)	establish, finish, influence, proceed, motivated, influence, leader, manage, buy, produce, employees, sell, grow, increase, generate, construction, handling, strengthen, succeed, outputs, agenda, enacted, working, leadership	Contains words that imply completion of tasks and the human behaviour and actions that assist this.
	Communication (Activities)	listen, interview, read, speak, film, videotape, telephone, e-mail, translate, quote, scripts, broadcast, chat, declare, flatter, demand, reporter, spokesperson, advocates, preacher, hint,	Contains words that include interaction, and means of interaction.

		rebuke, respond, persuade	
H_{4A}	Motion (Activities)	bustle, job, lurch, leap, circulate, momentum, revolve, twist, barnstorm, jaunt, wandering, travels, lickety-split, nimble, zip, whistle-stop, ride, fly, glide, swim	Contains words that include human motion, and the details of the action.
H_{4A}	Cognitive terms (Activities)	learn, deliberate, consider, compare, biology, psychology, logic, economics, question, forget, re-examine, paradoxes, graduation, teaching, classrooms, invent, perceive, speculate, interpret, estimate, examine, reasonable, strategies, diagnose	The details of the action, including the reasoning behind the action.
H_{4A}	Sensory Dictionary (User Defined)	See appendix II	Includes words that provide additional information about a said matter.
H_{5A} : The use of exclusive words in narrative disclosures by a failed company is significantly lower than that of disclosures by non-failed companies, measurable at the 5% level of a Type I error.	Exclusion and Causation Dictionary (User Defined)	See appendix I	Includes words that restrict the scope of the written media, by providing for boundaries and reasoning.

H_{6A} : The degree of certainty in narrative disclosures by a distressed company are significantly less than that of disclosures by non-distressed companies, measurable at the 5% level of a Type I error.	Ambivalence (Certainty)	allegedly, perhaps, might, almost, approximate, vague, somewhere, baffled, puzzling, hesitate, could, would, he'd, dilemma, guess, suppose, seems	Contains words implying the author's unwillingness to commit to past written statements. It includes any words to undermine the tone of certainty.
H_{6A}	Levelling (Certainty)	everybody, anyone, each, fully, always, completely, inevitably, consistently, unconditional, consummate, absolute, open-and-shut	Contains words to build a sense of completeness and assurance, thus adding to the certainty of the written statements.
H_{6A}	Tenacity (Certainty)	is, am, will, shall has, must, do, he'll, they've, ain't	Contains definite verb forms and other verbs that imply confidence and entirety.
H_{6A}	Insistence (Certainty)	(Words x Sum of Occurrence)/10	Measures repetition of words, as repetition of words indicates preference of an ordered world.
H_{6A}	Numerical terms(Certainty)	one, tenfold, hundred, zero, subtract, divide, multiply, percentage, digitize, tally, mathematics	Contains any numerical figure, including dates, that provides additional support for the stated argument.

The scores of failed and non-failed company will be added up and the statistical significance of differences in mean scores between samples is then determined by a t-test.

$$t = \frac{\bar{D} - \mu}{\frac{s}{\sqrt{n}}} \quad (1)$$

The sample mean \bar{D} is the average of DICTION scores. The population mean, μ is the mean of DICTION scores obtained from the corresponding control sample. This assumes that the sample of control firms is fairly and truly representative of the population of finance firms in general. This is reasonable due to the size of the overall population of finance companies in NZ. The difference between the average and population mean is divided by s , the sample standard deviation divided by the square root of n , the sample size. The t-test determines whether the means of the disclosure levels of failed and viable firms are statistically different from each other, and provides guidance on whether the null hypotheses should be kept.

This result is cross checked by the Kruskal Wallis test:

$$H = \frac{12}{N(N+1)} \left(\sum \frac{T^2}{n} \right) - 3(N+1) \quad (2)$$

Where

T= Aggregate score of all prospectuses examined

N= Total number of prospectuses studied

n= Number of firms in that category

The H statistic and associated p-value will indicate to us whether to accept or reject the study's null hypothesis, based on the study's confidence level. The hypotheses will be rejected if the F statistic, when following the F distribution, is greater than the 5% level of significance (indicated by the corresponding p-value). As the Kruskal-Wallis test is non-parametric and therefore does not require the data to be normally distributed (Dalgaard, 2008), it is arguably better suited to provide robust results.

The next chapter will examine the analysis of the prospectuses collected of the finance companies in the failed and control samples. In each of the topics of interest (i.e. the relative timeline and the calendar time sample), a table with the descriptive statistics, and graphical presentations of the mean and median scores will be compiled. Included within the table of descriptive statistic are the mean, median maximum and minimum scores for each sample in each of the time periods. The count of how many prospectuses made up those scores is also recorded. These scores are determined by DICTION, and the relevant variables aggregated by Microsoft Excel. Having both the mean and median score will help determine whether the results are indicative of the general trend of the sample, or distortions by a few extreme results. DICTION examines the text in units of 500 words (Hart, 2000). For prospectuses over 500 words, the default approach, and the approach taken by the current study, divided the total word count of the prospectus into units of 500 words, and the particular score was the averages of the scores of the units.

6. Results

This chapter analyses the 189 prospectuses from the 57 finance companies in both the failed and control samples, and determines whether there are different disclosure practices between finance companies in distress and those that are not. The analysis is split into two sections:

1. Relative Time Sample
2. Calendar Time Sample

The relative timeline looks at the scores from six years before, to the year of collapse for the failed sample, in comparison to the control sample. The control sample is made up of ‘non-failed’ finance companies with available information, matched in calendar time to automatically assume the same relative time for comparison. This section will help ascertain whether there are different disclosure practices between the two samples in the years leading up to, and including, collapse. Drawing from Anderson and Chang (2010), and Frino et al. (2007), the market usually has indications of financial distress well in advance, as indicated by the occurrence of negative abnormal returns several years before the year of collapse. The market may be informed through insider trading and networking, or through investors’ correct interpretation of company communications (Frino et al., 2007; Morris, 1997). This may be possible through the increasing sophistication of investors (Chandra & Greenball, 1978). Management are also usually aware of this pending financial distress in advance, and will be motivated to placate the market, to prevent unfavourable reactions. Drawing from prior literature, the failed sample should return higher deception scores than the control sample. The calendar timeline looks at the prospectuses from 2002 to 2010, and this section shows how the Global Financial Crisis affected the both the failed and control samples, and eliminates external forces in the different disclosure practices.

6.1 Relative timeline

This section first examines the deception score on the whole, then the subsequent sections examine the five components that make up the score, to identify which components, if any, are the key drivers for this difference in disclosure practices.

6.1.1 The overall deception score

The first hypothesis, H_{1A} , posits:

H_{1A} : The deception score of narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies.

Table 2: Summary of the deception score

		Failed					
Years Until Collapse		Mean	Median	Count	Min	Max	T-test of Difference (P-value)
	-6	-192.60	-152.28	9	-358.72	-52.26	0.33
	-5	-422.25	-169.43	17	-4132.85	-45.32	0.34
	-4	-232.80	-102.72	21	-1718.66	-46.11	0.49
	-3	-261.39	-206.46	26	-1337.22	-54.5	0.23
	-2	-321.98	-188.24	22	-1725.16	-81.28	*0.06
	-1	-385.90	-274.58	22	-1659.75	-38.18	0.29
	0	-669.02	-616.29	10	-1627.85	-40.18	0.91
		Control					
Equivalent Years		Mean	Median	Count	Min	Max	Kruskal Wallis Test (P-value)
	-6	-156.08	-137.69	8	-322.67	-33.35	0.39
	-5	-193.88	-130.31	8	-836.17	-21.26	0.22
	-4	-177.15	-78.20	9	-838.87	-33.53	0.14
	-3	-196.41	-122.49	8	-708.86	-27.95	0.18
	-2	-491.90	-190.79	10	-2598.68	-40.13	0.96
	-1	-299.32	-205.91	10	-1033.05	-96.72	0.57
	0	-688.64	-77.26	9	-4724.89	-31.52	*0.08

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 3: Deception score in the relative timeline – mean scores

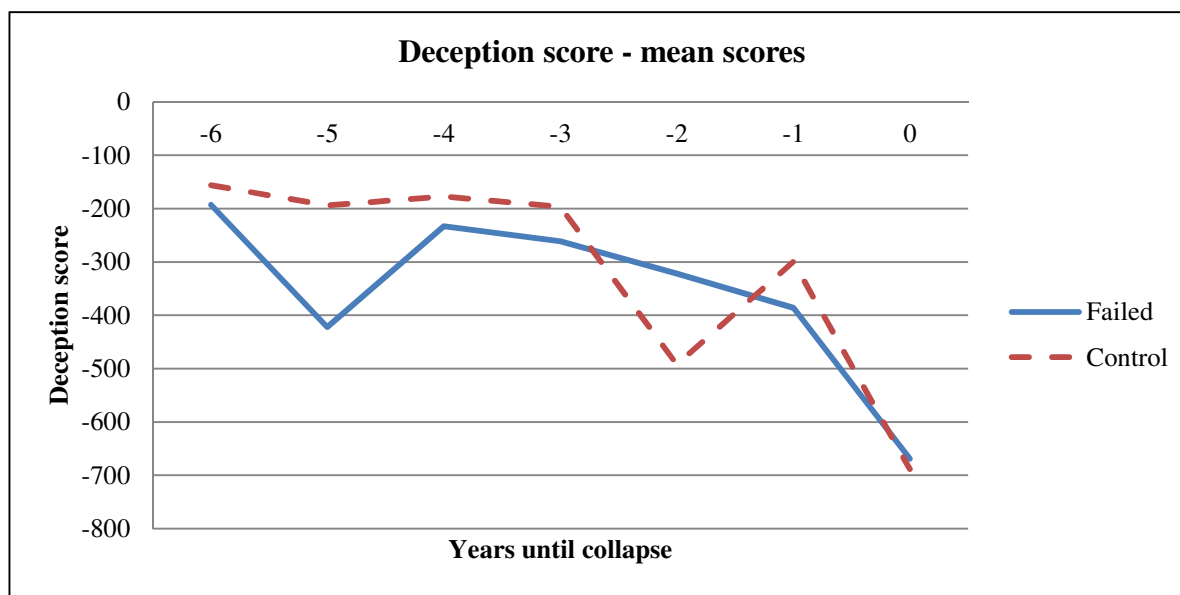
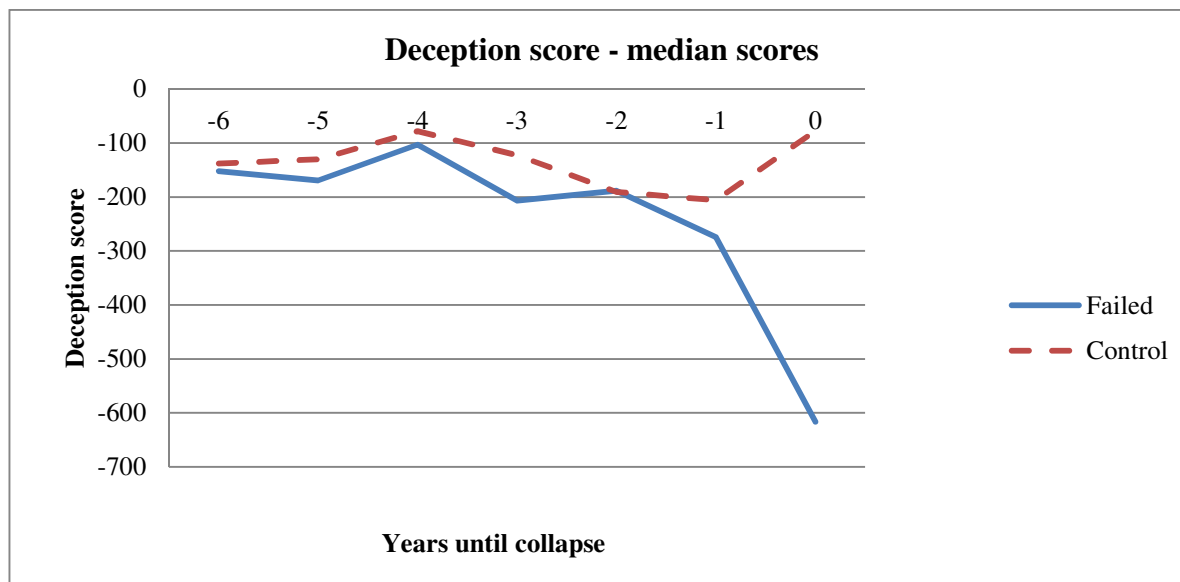


Figure 4: Deception score in the relative timeline – median scores



The deception score is created by the sum of the five prominent signs of deception in psychology and linguistics literature described in Section 5.1:

- = Use of personal pronouns
- + Use of negative emotives
- + Use of descriptions
- + Use of exclusion and causation words
- + Higher frequency of uncertainty words

The higher the score, the more deceptive the written prospectus appears to be in the years leading up to collapse. However, a positive score does not necessarily indicate deceptive behaviour, while similarly, a negative score does not rule out deceptive behaviour. What is important is the relative magnitude of differences, indicating the relative degrees of potential deception between the two samples.

As depicted in Figures 3 and 4, the failed sample returned generally lower (and relatively less deceptive) deception scores than the control sample. Interestingly, in year 0 both the mean and median score for the failed sample dropped to their lowest readings of -669.02 and -616.29 respectively. The control sample followed suit with respect to mean score, dropping to -688.64 in year 0 while the median was and -77.26. The median score tends to suggest that the low mean score from the control sample is only from a few extreme results. Overall the results show that the failed sample is not considered to be deceptive compared to the control sample. On the surface it would seem counter intuitive that the failed sample is less 'deceptive', given they have more incentive to deceive. One interpretation of this result is that the relatively lower deceptive scores by the failed sample may signal more deception due to intentional manipulation of the statements to remain un-deceptive. Moreover, finance companies that did provide truthful news about their performance may be harming their own survival. Companies are well aware of this self-fulfilling prophecy and the effect their words have on the general public (Craig et al., 2012).

As the failed sample appears to return lower (i.e. relatively less deceptive) mean and median deception scores (five of the seven years examined respectively), H_{1A} is not provisionally supported. In order to examine possible factors which contribute to the counter-intuitive result, the next sections will examine each component of the deception score in detail.

6.1.2 Use of personal pronouns

The first part of the analysis will look at the plausibility of H_{2A} .

H_{2A}: The use of personal association words in narrative disclosures by a failed company is significantly lower than that of disclosures by non-failed companies.

Table 3: Summary of use of personal pronouns

		Failed					T-test of Difference (P-value)
Years Until Collapse		Mean	Median	Count	Max	Min	
	-6	15.75	12.62	9	39.99	8.00	*0.05
	-5	21.48	12.75	17	98.19	0.60	0.78
	-4	16.25	11.20	21	49.41	5.09	**0.04
	-3	23.30	21.53	26	66.25	8.00	0.13
	-2	24.66	21.69	22	56.71	6.45	0.72
	-1	26.61	22.78	22	53.96	11.00	*0.06
	0	24.75	19.44	10	65.20	5.70	0.72
		Control					Kruskal Wallis Test (P-value)
Equivalent Years		Mean	Median	Count	Max	Min	
	-6	23.11	18.07	8	46.37	13.00	*0.09
	-5	23.00	22.64	8	38.82	7.70	*0.05
	-4	21.73	18.62	9	38.82	10.00	0.24
	-3	19.38	15.31	8	34.00	6.07	**0.04
	-2	23.70	19.99	10	56.75	12.46	0.43
	-1	21.79	23.87	10	37.10	0.00	0.76
	0	22.81	17.44	9	76.14	1.12	0.54

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 5: Use of personal pronouns in the relative timeline – mean scores

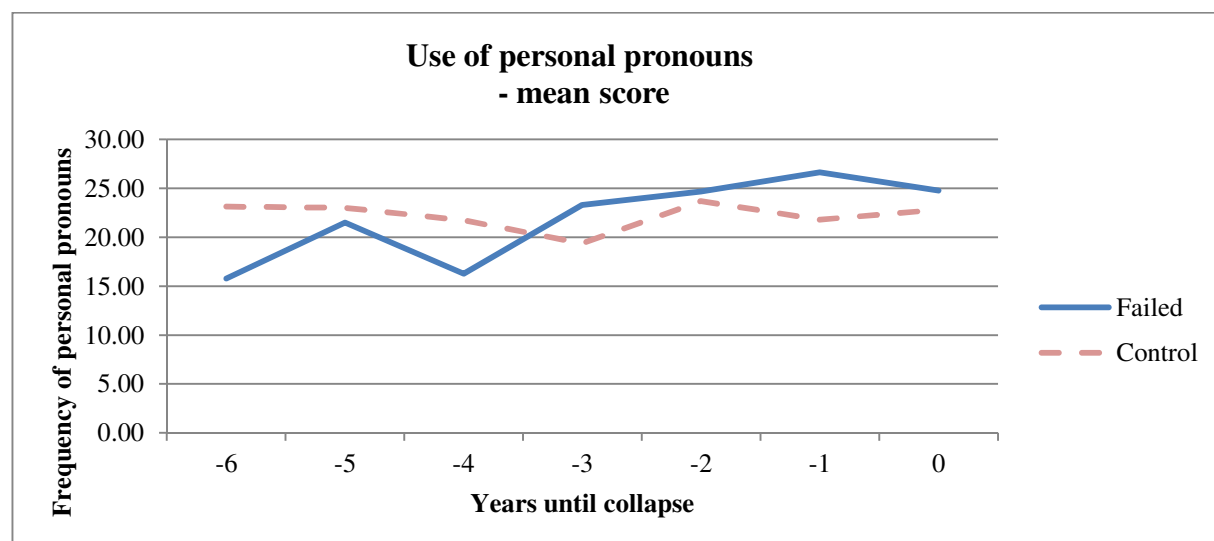
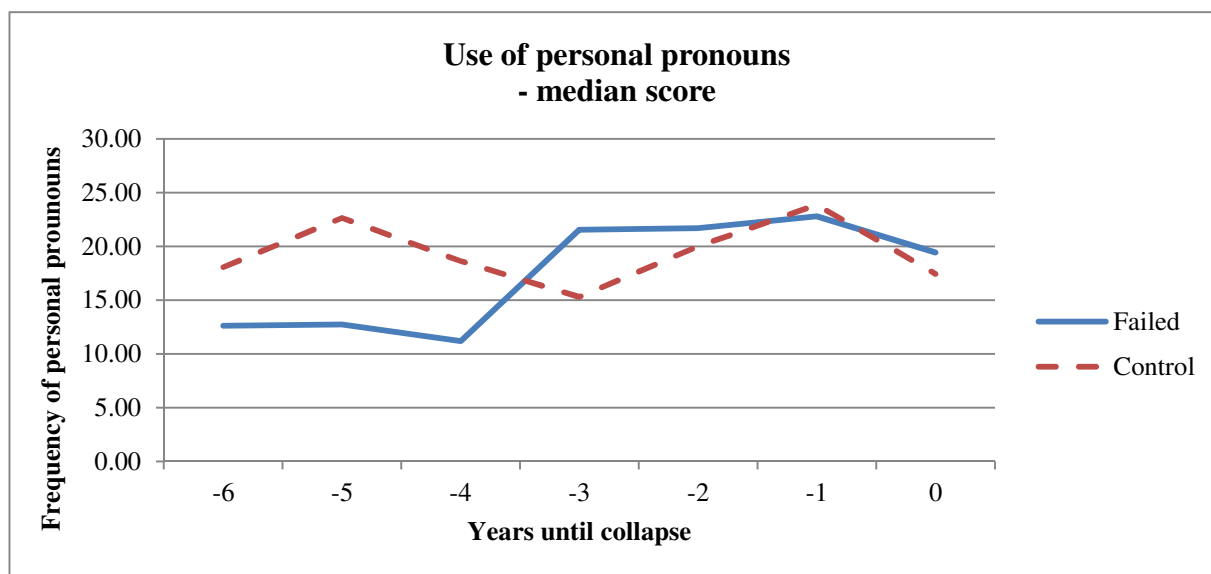


Figure 6: Use of personal pronouns in the relative timeline – median scores



The lower the score, the more deceptive the prospectus appears to be as the components of the score are:

- = Self Reference (Certainty)
- Collectives (Certainty)
- Cooperation (Commonality)

Figure 5 examines the mean scores of the use of personal pronouns from six years before the failure date to the actual year of collapse. The results show that between six and four years before the year of collapse, the failed sample used fewer self-reference words than the control sample, indicated by the lower mean score. The difference was statistically significant per the t-test at the 10% level in year -6, the 5% level in year -4, and at the 1% level in year -1, per Table 3. This is in agreement with prior literature, which suggested deceivers would use fewer self-references. However, from years -3 to the year of collapse, the results are reversed, with the control sample returning lower personal pronoun scores, suggesting that during the years leading up to year in which the failed companies collapsed, the authors of the failed sample made more self-references. This was not to be expected as self-reference words imply association and therefore personal responsibility for potentially undesirable situations. Figure 6 shows that the median scores of the failed sample are

also lower than those of the control sample between years -6 and -4, and the reverse from three years until year zero. Generally Figures 5 and 6 show no significant trends in the use of personal pronouns, with fluctuations in both samples. However, a slight decreasing trend is noted in the failed sample from years -4 to 0 in Figure 5. This suggests that those authors started to distance themselves from their company during the years when they suspected that things had started to deteriorate. This is especially so as from years -3 to 0 the failed sample returned higher personal pronoun score than the control sample. However, this trend is not evident in the median scores in Figure 6, suggesting that the trend evident in the mean scores was created by a few extreme results.

Based on Figures 5 and 6, and Table 3, personal pronouns showed statistically significant differences at the 5% level in year -4, and weaker significance at the 10% level in year -1 and -6. Similarly, only weak and mild significances were found using the Kruskal Wallis test. Overall, H_{2A} , which asserts that the use of personal association words in narrative disclosures by a failed company will be significantly lower than that of disclosures by non-failed companies was not supported (i.e. there was a failure to reject the null hypothesis) as the failed sample does not appear to use fewer personal pronouns leading up to the date of collapse.

6.1.3 Use of negative emotion words

This section will examine H_{3A}:

H_{3A}: The use of negative emotive words in narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies.

Table 4: Summary of use of negative emotives

		Failed					
Years Until Collapse		Mean	Median	Count	Max	Min	T-test of Difference (P-value)
	-6	-14.05	-15.33	9	-8.12	20.12	***0.00
	-5	-17.49	-17.00	17	-4.68	56.44	***0.00
	-4	-14.57	-13.68	21	-3.12	-33.14	***0.00
	-3	-16.75	-15.66	26	-4.10	44.22	***0.00
	-2	-18.66	-14.68	22	-3.98	70.58	**0.01
	-1	-15.68	-15.41	22	-4.12	43.14	***0.00
	0	-14.68	-17.67	10	-1.57	28.12	**0.03
		Control					
Equivalent Years		Mean	Median	Count	Max	Min	Kruskal Wallis Test (P-value)
	-6	-8.51	-8.93	8	0.56	-17.42	**0.02
	-5	-7.22	-6.65	8	0.88	-15.1	**0.03
	-4	-8.31	-9.72	9	4.32	-15.1	***0.00
	-3	-6.03	-6.31	8	-13.92	2.35	*0.07
	-2	-10.85	-7.93	10	-1.64	-29.42	***0.00
	-1	-6.78	-7.02	10	2.35	-15.22	*0.06
	0	-7.65	-10.43	9	6.55	-14.78	0.42

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 7: Use of negative words in the relative timeline – mean scores

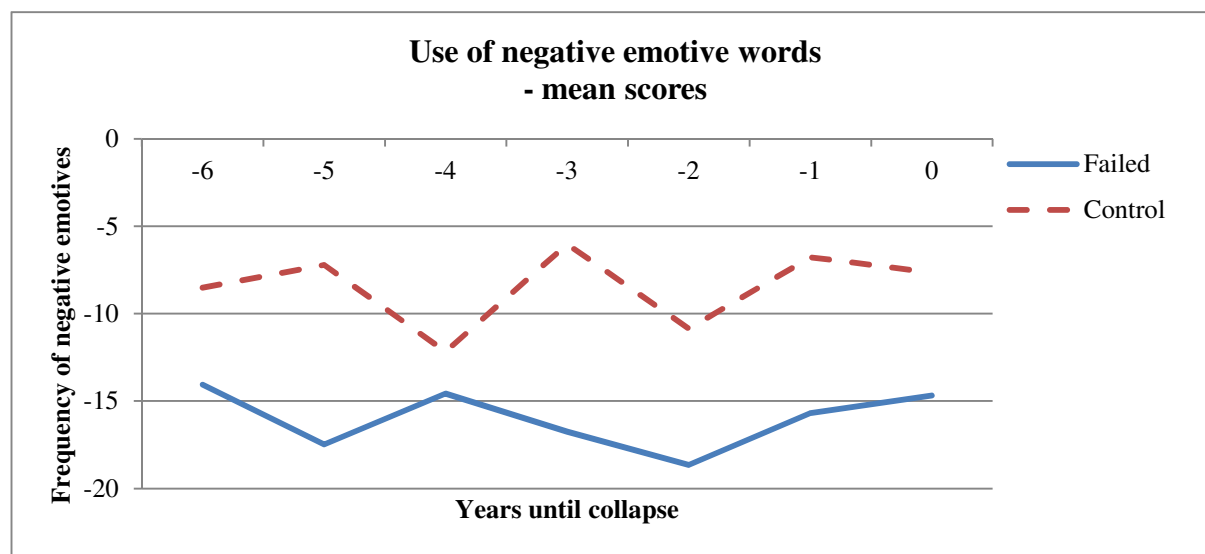


Figure 8: Use of negative words in the relative timeline – median scores

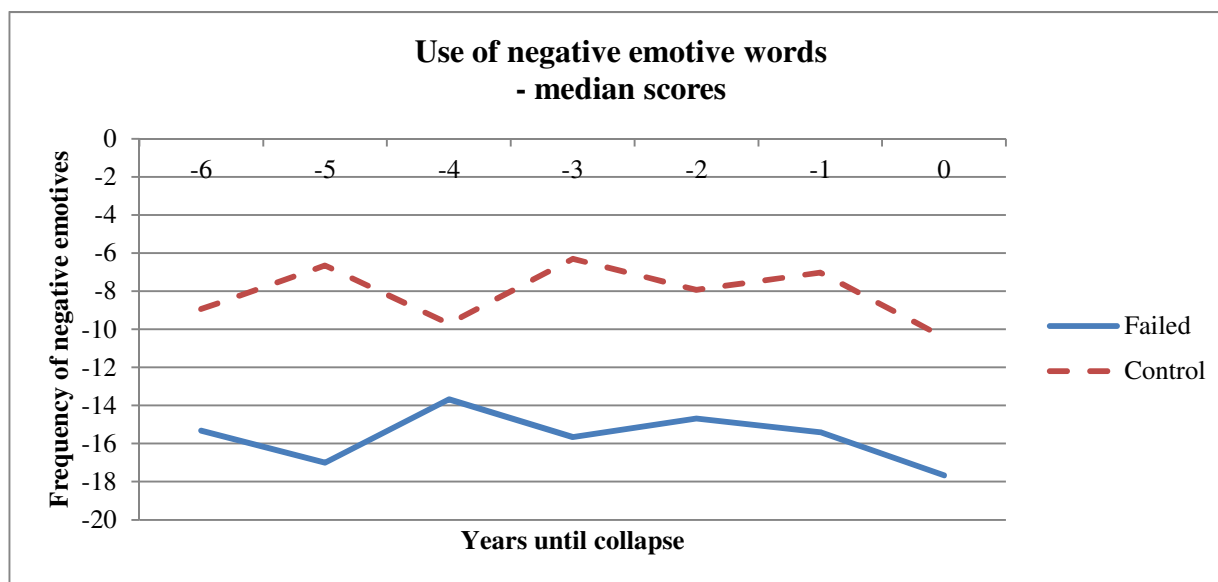


Figure 7 and 8 looks at the use of negative words, which is made up of the components below:

- = Blame (Optimism)
- + Hardship (Optimism)
- + Denial
- Praise (Optimism)
- Satisfaction (Optimism)

A high score indicates negativity on the part of the author, as the positive components are deducted from the negative components. Scores greater than zero indicate that the writer has used more pessimistic or negative words, leading to an overall negative tone. Similarly, a score lower than zero score will indicate that the writer has used more optimistic or positive words, leading to an overall positive tone. This, as suggested by Hobson et al. (2011), can imply the deceptiveness of the author, as the physical and mental discomfort of the author can impact on word usage. Surprisingly, the tone used by failed companies was more “positive”, and significantly so, as indicated by the lower mean and median scores. The mean scores for the control companies range from -.8.51 to -10.85, compared to -14.05 and -18.66 for failed companies. There does not appear to be any time within the research period in which this situation reverses; the failed sample remains more positive for the entire time. They are more positive as the company heads towards collapse. Interestingly, the control sample returned higher negative words scores in the period examined. Intuitively, the control sample should have either more favourable news than the failed sample, or at the very least, less negative conations in their communications. Caso et al. (2005) shed some light on why the control sample would be returning a high (i.e. more negative) score. They argue that since both deceivers and truth tellers benefit from the audience accepting their version of events (be they true or not), both would feel some discomfort from the pressure and therefore both would try and appear convincing. However, as the failed sample returned lower (and less negative) scores than the control sample, this suggests that the failed sample were aware of their dire positions and as a result, they actively and artificially distorted their communications to appear less negative.

Overall, all years had returned statistical readings at the 1% and 5% level. However, by looking at Figures 5 and 6, we see that although there are statistically significant differences as we have expected, the failed sample was actually statistically more positive than the control sample, as indicated by the consistent lower mean and median scores. This seems to hint that that unlike the non-failed firms, failing firms are consciously making an effort to appear more positive, in an

attempt to compensate their declining performance. Of the five variables examined, the Kruskal Wallis test identified only the use of negative words to be significant at the 1% level in years -4 and -2, mild significance at the 5% level in years -6 and -5, and weak significance at 10% for years -3 and -1. The Kruskal Wallis test could not find any differences between uses of negative emotive terms in the year of collapse, which was not the case in Table 4. Based on the results as shown in Table 4 and Figures 7 and 8, H_{3A} was not supported (that is the null hypothesis could not be rejected), as the control sample returned higher (and therefore more negative or pessimistic) scores than the failed sample.

6.1.4 Use of descriptive words

This section examines H_{4A}:

H_{4A}: The use of sensory descriptive words in narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies.

Table 5: Summary of use of descriptive words

		Failed					
Years Until Collapse		Mean	Median	Count	Max	Min	T-test of Difference (P-value)
	-6	25.89	24.42	9	45.50	-15.00	**0.02
	-5	43.38	31.71	17	209.42	-15.25	0.57
	-4	32.55	27.17	21	94.23	13.00	0.97
	-3	40.67	34.86	26	117.91	-13.50	*0.06
	-2	43.58	38.85	22	93.23	-10.50	0.89
	-1	42.31	40.75	22	76.65	-20.23	0.62
	0	59.56	62.84	10	111.23	-10.00	**0.03
		Control					
Equivalent Years		Mean	Median	Count	Max	Min	Kruskal Wallis Test (P-value)
	-6	35.28	35.28	8	60.84	14.91	0.60
	-5	37.25	32.92	8	64.55	21.83	0.80
	-4	32.70	27.33	9	64.55	14.91	0.37
	-3	31.70	32.35	8	50.21	12.29	0.76
	-2	44.17	36.24	10	97.44	24.29	0.74
	-1	40.73	35.82	10	77.08	15.00	0.38
	0	38.71	31.28	9	102.28	16.23	0.31

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 9: Use of descriptive words in the relative timeline – mean scores

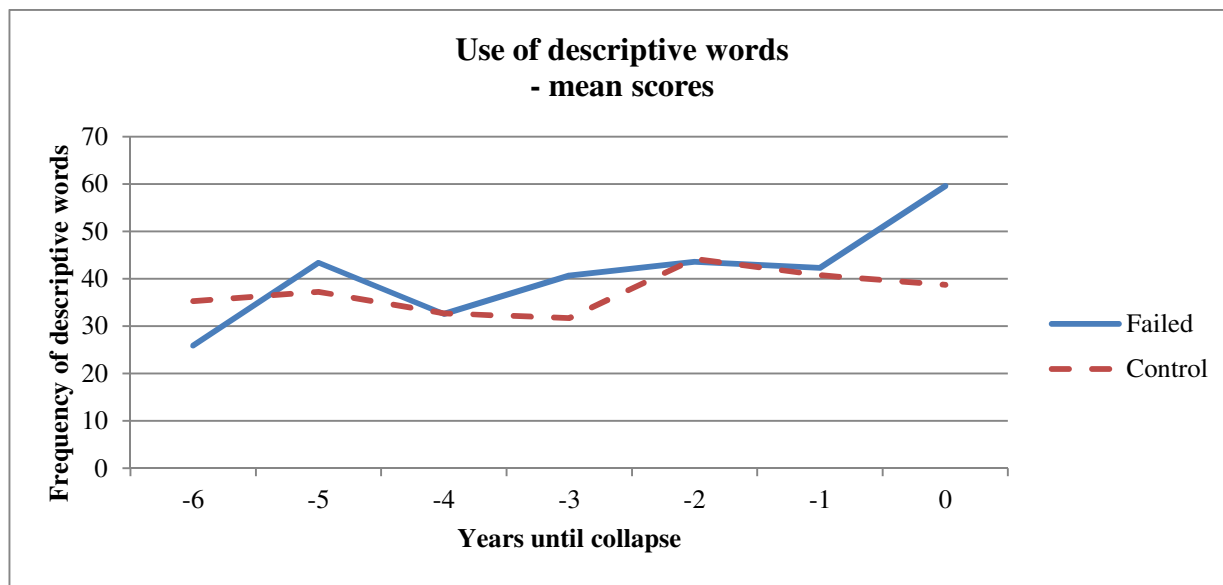
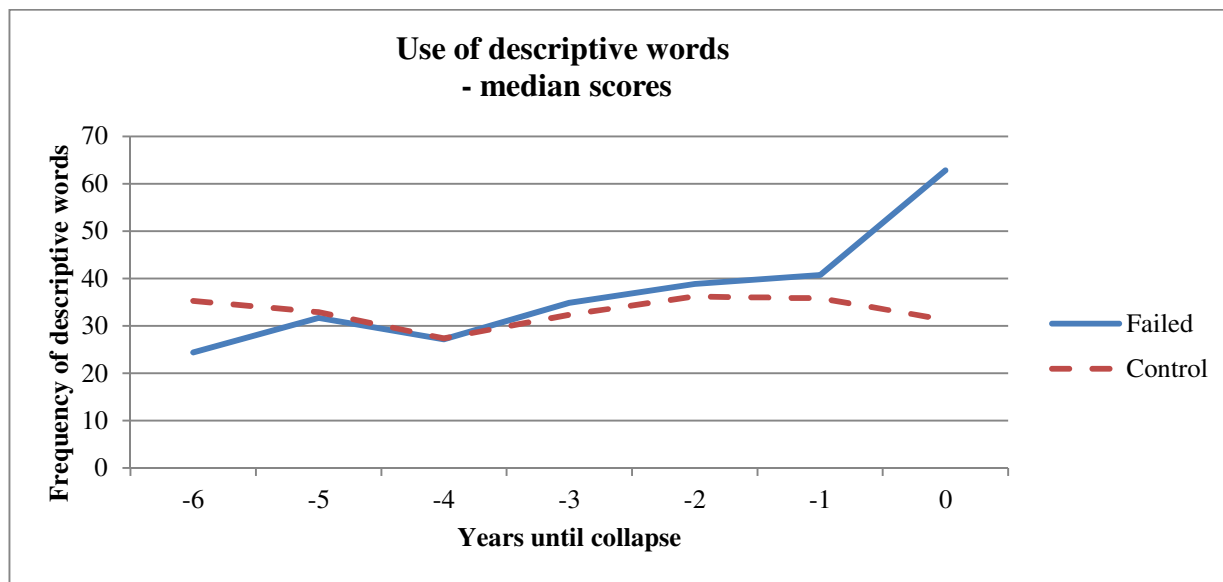


Figure 10: Use of descriptive words in the relative timeline – median scores



The use of descriptive words is measured by an aggregate of components that provides more information regarding a particular activity.

Higher frequency of descriptive words

- = Aggression (Activity)
- + Accomplishment (Activity)
- + Communication (Activity)
- + Motion (Activity)
- + Sensory (User Created – see Appendix II)
- + Cognitive Terms (Activity)

The higher the score, the greater the usage of descriptive words in the examined prospectus, the more deceptive they appear. Drawing from prior literature, it is unclear whether being more descriptive is more deceptive. Some authors (for example, Hancock et al., 2005; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Newman et al., 2003; Zhou et al., 2004) assert that more details provide more support for a deceiver's version of events; while papers such as Marett and George Marett and George (2004) claim that fewer details provide fewer opportunities for deceivers to slip up in their lies. The current paper supports the former view, arguing that deceivers will provide more information in their disclosures, due to potential waffly and floral descriptions. Figures 9 and 10 show both the mean and median descriptive word scores. This is shown by their higher scores for all years, apart from year -6. Failed companies consistently provided more information than the control sample (apart from year -6). The difference is even more prominent in the year of collapse, with the failed sample's mean and median score spiking at 59.56 and 62.84 respectively, in comparison to 38.71 and 31.28 for the control sample. Figures 9 and 10 show an increasing trend of providing more information as the failed sample reaches collapse, possibly as an attempt to convince the investors' of their worth, or perhaps as admission to

their deeds. However, conversely there are no clear trends in the control sample, with the range staying around low thirties to forties. This portrays a difference in disclosure strategies of the two samples.

Use of descriptive words yielded statistically significant results in years -6, -3 and 0. The statistical significances for these years were at the 5%, 10% and 5% levels respectively. The Kruskal Wallis test returned no statistically significant results. Although the scores for the failed sample appears to be increasing (and therefore they appear to be providing more information) as they are closer to collapse, this difference was not statistically significant for most years. Based on Table 5 and Figures 9 and 10, H_{4A} is not supported provisionally (i.e. there is a failure to reject the null), as the current study only found weak support.

6.1.5 Use of exclusion and causation words

Section 6.1.4 examines H_{5A}, which describes the use of exclusive and causation words:

H_{5A}: The use of exclusive words in narrative disclosures by a failed company is significantly lower than that of disclosures by non-failed companies.

Table 6: Summary of use of exclusive and causation words

		Failed					T-test of Difference (P-value)
Years to Collapse		Mean	Median	Count	Max	Min	
	-6	19.55	12	9	48	5	0.39
	-5	29.18	20	17	148	12	0.53
	-4	21.76	20	21	64	5	0.99
	-3	28.27	26	26	84	12	0.12
	-2	32.00	26.5	22	70	15	*0.09
	-1	37.32	37	22	65	8	**0.04
	0	39.80	38	10	71	13	0.11
		Control					Kruskal Wallis Test (P-value)
Equivalent Years		Mean	Median	Count	Max	Min	
	-6	24.12	20	8	48	11	0.27
	-5	24.33	18	8	48	16	0.60
	-4	21.75	19	9	47	11	0.13
	-3	23.70	17	8	63	8	0.69
	-2	37.70	32.5	10	85	19	0.57
	-1	30.44	26	10	60	9	0.22
	0	29.38	17	9	104	9	0.31

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 11: Use of exclusive and causation words in the relative timeline – mean scores

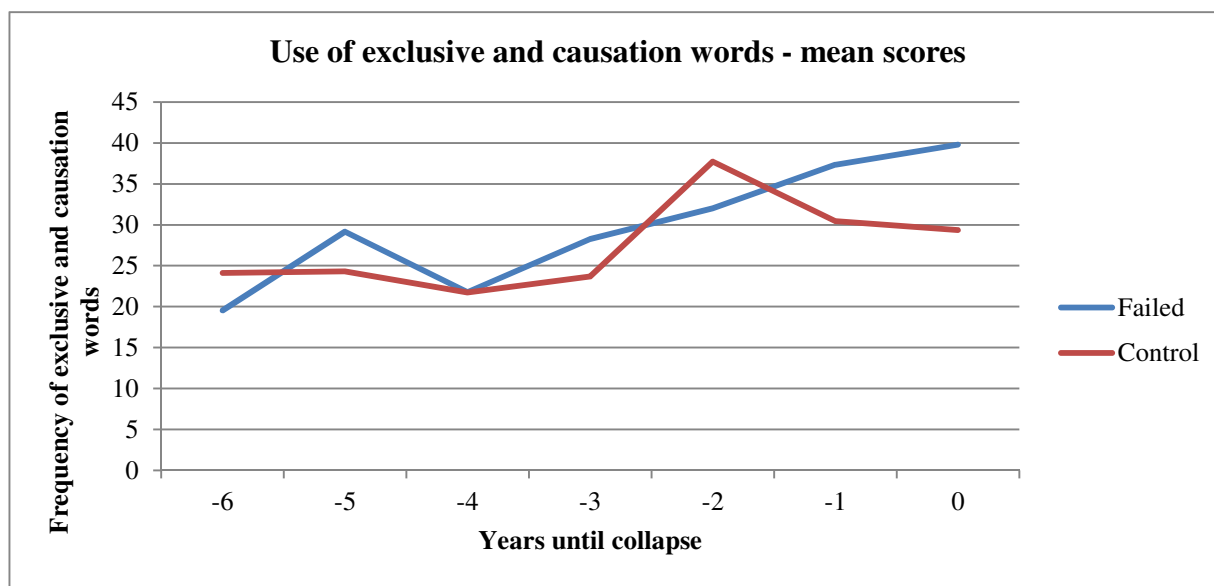
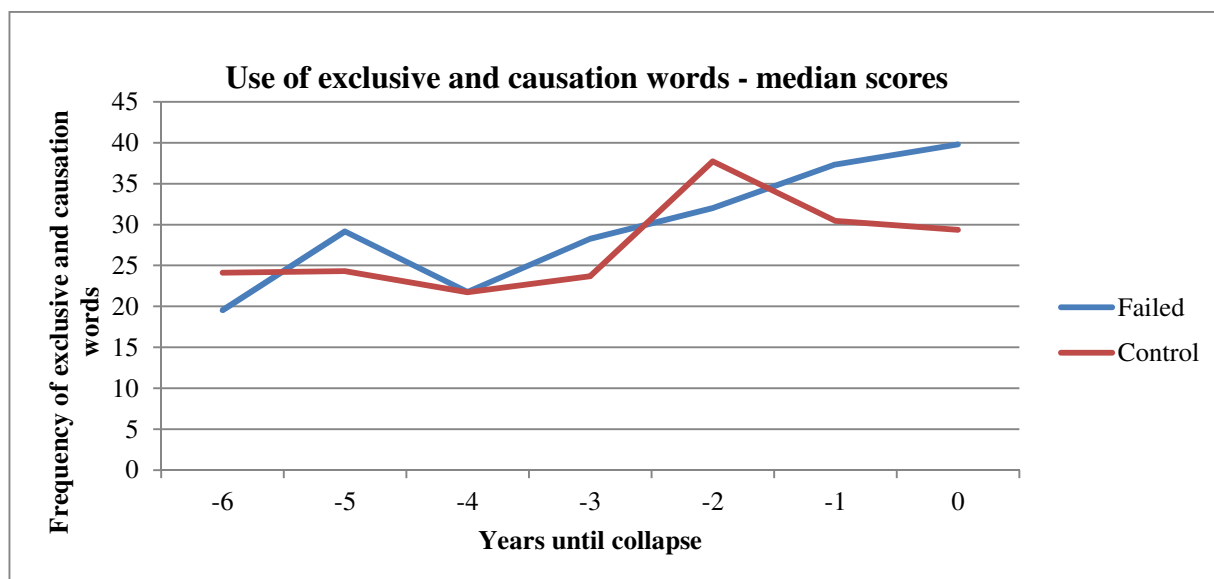


Figure 12: Use of exclusive and causation words in the relative timeline – median scores



The mean and median exclusive and causation scores are shown in Figures 11 and 12. The score is a word count of the frequencies of exclusive or causation words and there is only one component that makes up the score:

$$= \text{Exclusion and Causation (User defined – see Appendix I)}$$

A higher the score indicates that a company is restrictive in the information they provide, as they use more restrictive words such as ‘however’, or ‘because’. It is said that by being more restrictive,

a deceiver could be bound by unnecessary restrictions that may create contradictions in a false version of events. This has the potential to uncover their carefully hidden lies. In the year of collapse, the failed sample used more restrictive words, 39.8 on average compared to 29.38 for the control sample. The difference is more pronounced in Figure 12, where the median scores are examined. In year 0 the failed sample returns a median score of 38, which is significantly higher than 17, which is the median score returned by the control sample. Despite a sharp decrease in year -4 in both Figures 11 and 12, the general trend for both samples is that the use of exclusive and causation words tends to increase as we approach the year of collapse. Apart from years -6 and -2, the failed sample returns higher mean and median scores than the control sample. In effect, the failed sample is more restrictive in their disclosures. One possible rationale for this is the nature of the user defined dictionary. The dictionary contains more words that can potentially divert responsibility such as “however” and “for that reason”. Therefore, as the finance company experiences distress and moves towards collapse, they may want to apportion the blame on to others. Contrary to the study’s initial expectations of the word usage, this shift in blame has been apparent in other retrospective analyses in narratives associated with of corporate collapses. For example, this was found by Craig et al. (2012), in the writings of a former executive of a prominent Indian company.

In terms of the t-test, use of exclusive and causation words had only two statistically significant readings: at the 10% level in year -2, and at the 5% level in year -1. The Kruskal Wallis test returned no significant results. In light of Table 6 and Figures 11 and 12, H_{5A} is not provisionally supported, as the failed sample does not use significantly fewer restrictive words than their non-failed counterparts.

6.1.6 Use of words of uncertainty

This section looks at words signalling uncertainty in written prospectuses, and H_{6A} .

H_{6A} : The degree of certainty in narrative disclosures by a distressed company is significantly less than that of disclosures by non-distressed companies.

Table 7: Summary of words signalling uncertainty

		Failed					T-test of Difference (P-value)
		Mean	Median	Count	Max	Min	
Years to Collapse	-6	-200.64	-164.30	9	-63.60	-367.45	0.60
	-5	-440.37	-177.80	17	-65.20	-4236.02	0.37
	-4	-244.13	-112.25	21	-57.60	-1771.70	0.60
	-3	-280.34	-226.72	26	-54.70	-1393.16	0.26
	-2	-339.56	-205.65	22	-106.60	-1778.20	*0.06
	-1	-401.81	-295.23	22	-73.55	-1647.76	0.44
	0	-698.85	-640.76	10	-90.90	-1683.80	0.93
		Control					Kruskal Wallis Test (P-value)
		Mean	Median	Count	Max	Min	
Equivalent Years	-6	-181.82	-149.25	8	-51.20	-355.40	0.51
	-5	-222.57	-144.00	8	-39.40	-877.00	0.50
	-4	-201.53	-93.05	9	-64.80	-880.70	0.27
	-3	-217.76	-143.45	8	-56.20	-753.30	0.27
	-2	-511.22	-208.45	10	-62.70	-2638.45	0.34
	-1	-324.61	-238.60	10	-101.60	-1081.30	0.41
	0	-713.13	-81.70	9	-52.20	-4805.86	0.46

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 13: Use of words signalling uncertainty in the relative timeline – mean scores

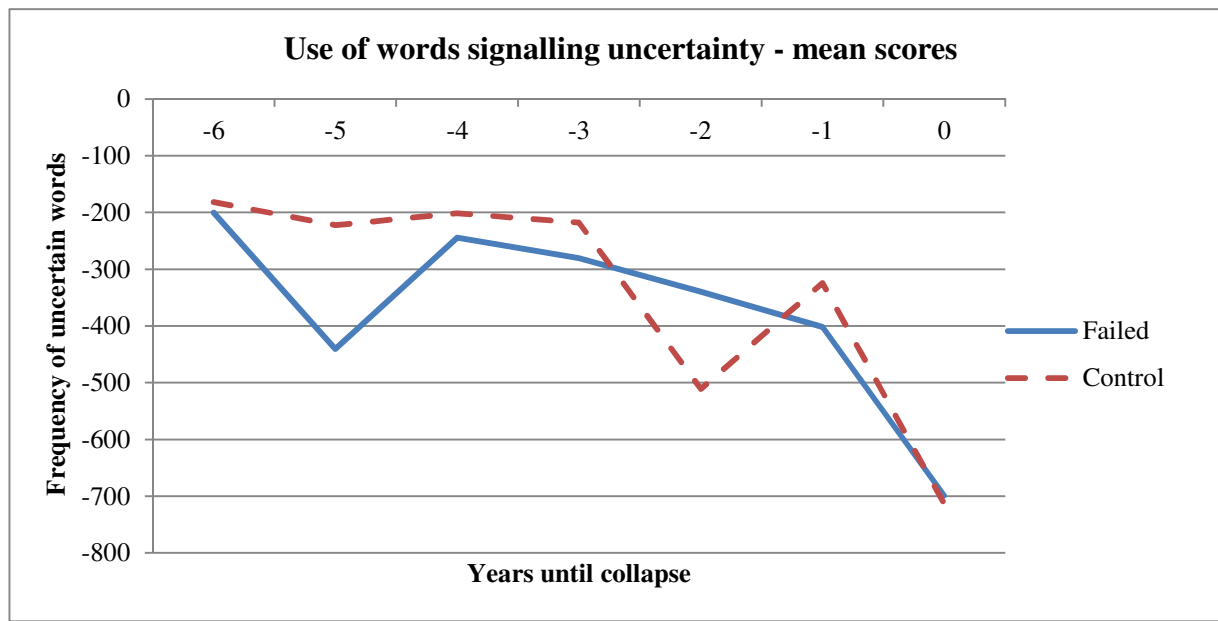
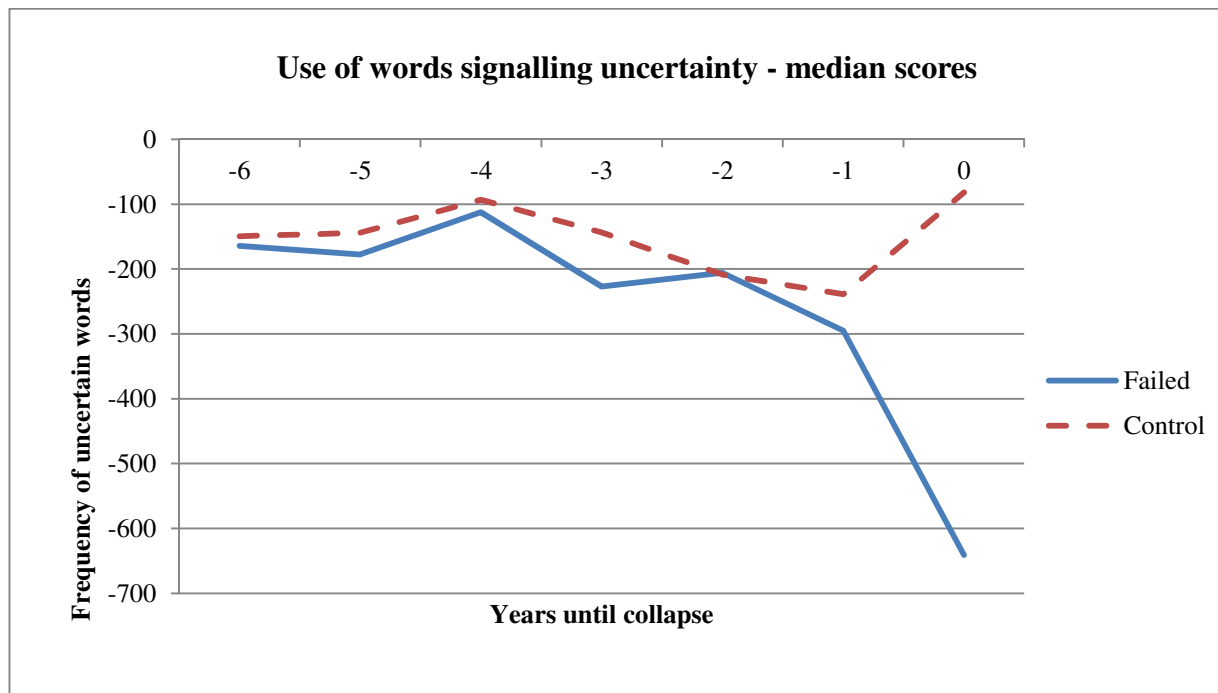


Figure 14: Use of words signalling uncertainty in the relative timeline – median scores



Uncertainty is a big consideration in investment decisions, and therefore is an essential factor in a finance company's survival. The use of words signalling Uncertainty measures this factor using the following components:

- = Ambivalence (Certainty)
- Leveling (Certainty)
- Tenacity (Certainty)
- Insistence (Certainty)
- Numerical Terms (Certainty)

As 'Ambivalence' contains words that portray doubt, the higher the score, the more uncertain the author appears to be. The mean scores as shown in Figure 13 show that despite a slight dip in year -5, there is a very convincing decrease in the Uncertainty Score. This means that as we approach the year of collapse, the failed sample appears increasingly more certain. Figure 13 also shows the same trend for the control sample, in that despite a slight peak in year -1, the control sample appears to be quite certain by year 0, as indicated by the significant negative score.

However, in contrast, the median scores (as shown in Figure 14) tell a different story. Although the failed sample drops past -600, the control sample actually increases at year 0, signalling that they are more uncertain than the failed sample. Figure 13 is possibly skewed by a few extreme scores, due to the significant spread for year 0 in the control sample as shown in Table 7 (maximum -52.20, minimum -4805.86). Both Figure 13 and 14 are in agreement that the failed sample appears to be increasingly less uncertain as we approach the year of collapse.

Interestingly, H_{6A} yielded only one significant result at the 10% level in year -2. Moreover, the Kruskal Wallis test did not return any statistically significant results. Based on Table 7 and, Figures 13 and 14, it would appear that the degree of certainty in narrative disclosures by a distressed

company is not significantly less than that of disclosures by non-distressed companies. On that basis, we did not find support for H_{6A}.

6.2 Calendar timeline

6.2.1 *The overall deception score – calendar timeline*

As described in Section 5.6, the higher the score, the more deceptive the author of the prospectuses of the finance companies appears to be as the deception score is made up of:

- = Use of personal pronouns
- + Use of negative emotives
- + Use of descriptions
- + Use of exclusion and causation words
- + Higher frequency of uncertainty words

This study strives to examine whether the word use of failed and non-failed finance companies differ in corporate disclosures. This mainly achieved by relative timelines, as described in the previous section. As a result, the following hypothesis was derived:

- H_{1A}:** The deception score of narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies.

However, classifying the samples based on the calendar year to standardise external influences is also a point of interest. This section will now group the prospectuses based on the calendar timeline to identify trends that arose from external pressures to the finance companies.

Table 8: Summary of deception scores (calendar time sample)

		Failed					T-test of Difference (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	-712.55	-563.32	4	-93.71	-1629.85	0.07
	2009	-397.84	-307.61	5	-50.27	-983.75	0.78
	2008	-692.62	-617.39	8	-105.14	-1288.49	***0.00
	2007	-481.70	-226.80	18	-40.18	-1659.75	***0.00
	2006	-251.87	-191.67	20	-38.18	-1310.5	0.31
	2005	-327.03	-217.48	23	-54.50	-1725.16	***0.00
	2004	-282.77	-193.93	21	-64.53	-1718.66	***0.00
	2003	-162.45	-150.59	16	-45.11	-324.48	0.29
	2002	-135.28	-111.32	8	-52.26	-337.37	0.63
		Control					Kruskal Wallis Test (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	-297.87	-205.91	9	-96.72	-1033.05	0.41
	2009	-499.80	-183.19	10	-89.30	-2598.68	0.54
	2008	-194.95	-122.49	10	-27.95	-709.86	**0.02
	2007	-177.28	-78.20	8	-33.53	-838.87	0.24
	2006	-193.88	-130.31	9	-21.26	-836.17	0.22
	2005	-154.70	-137.69	8	-33.35	-322.67	**0.02
	2004	-132.09	-114.53	8	-50.43	-376.18	**0.01
	2003	-199.38	-160.05	7	-52.32	-491.09	1.00
	2002	-116.76	-63.60	3	-48.58	-238.11	0.54

*** Significant at the 1% level
 ** Significant at the 5% level
 * Significant at the 10% level

Figure 15: Deception scores in the calendar time sample – mean scores

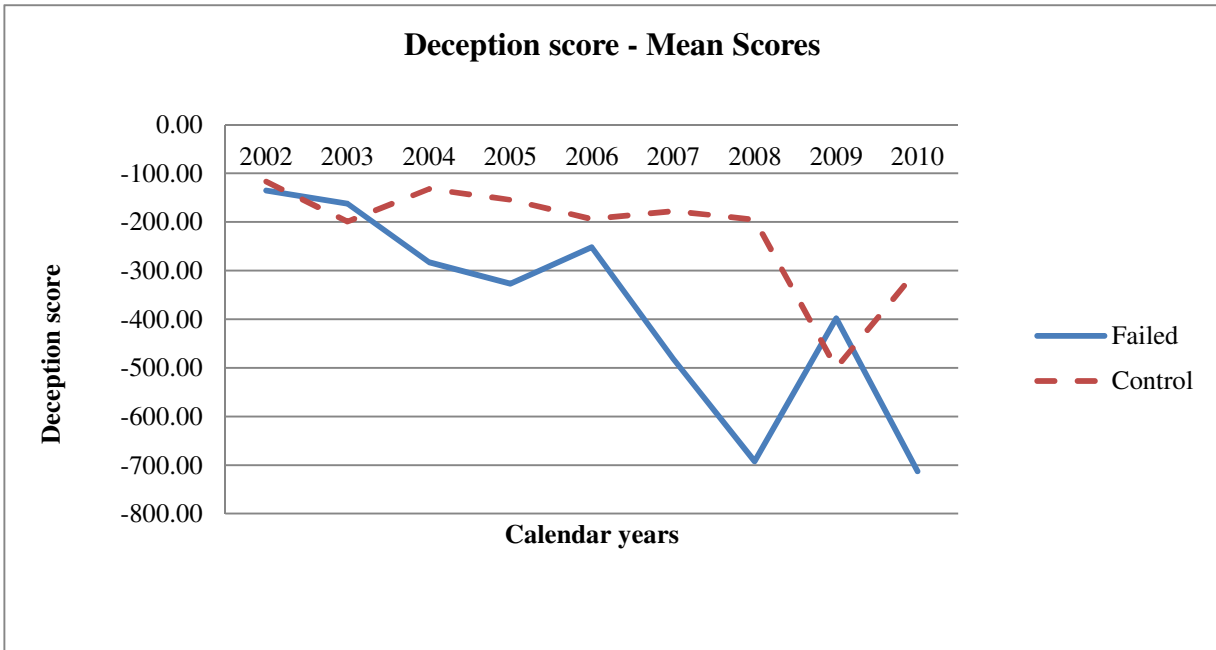
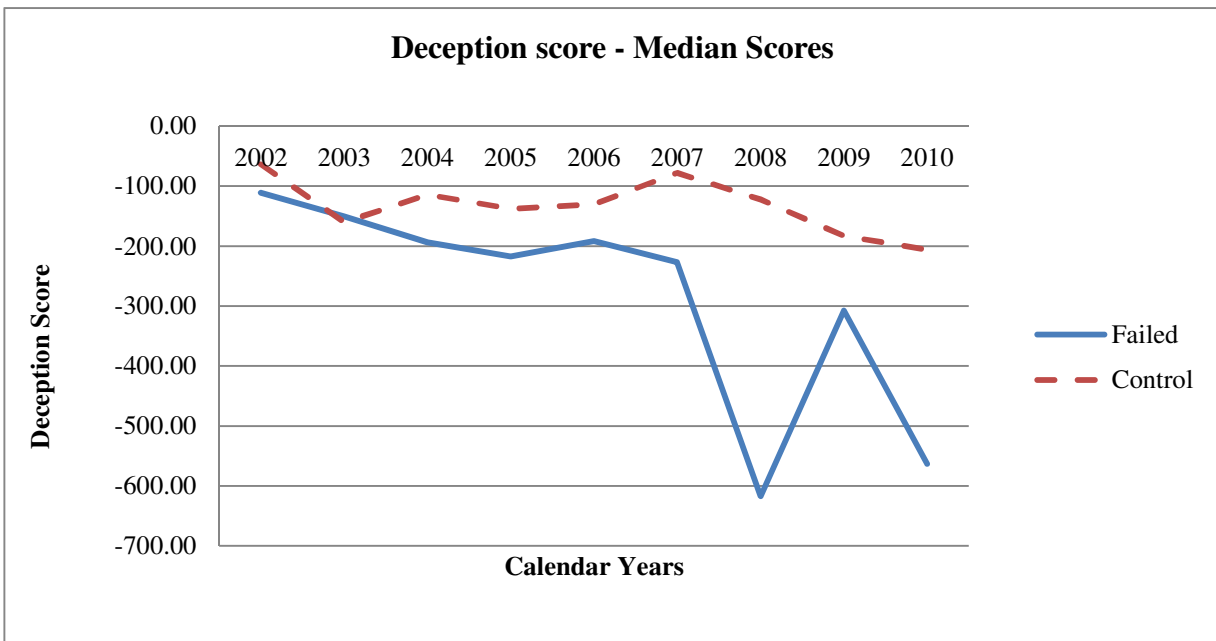


Figure 16: Deception scores in the calendar time sample – median scores



Similar to the mean and median scores in the relative timeline (as shown in Figures 3 and 4), Figures 15 and 16 show that the failed sample generally returned lower and therefore less ‘deceptive’ scores than the control sample. However, the differences are more pronounced in the calendar time analysis. In 2008 the mean and median deception scores for the failed sample dropped

down to -692.62 and -617.39 respectively. After a slight rise to -391.84 and -307.61 in 2009, the deception score plummeted again to -712.55 and -536.32 in 2010. During these three years, the deception scores for the control sample stayed in the vicinity of -122.49 to -499.80, considerable higher (and more deceptive) than the failed sample. The trough in 2008 is noteworthy as it signals how external factors such as the Global Financial Crisis can impact on written prospectuses, due to the uncertainty in the market. As the mean and median scores show similar movements in troughs and spikes, this indicates that the high scores are not a distortion by a few high readings, but possibly by the general activity of the entire failed sample.

Generally a slight decreasing trend was found in the failed samples in Figures 15 and 16, except for the spike in 2009, as described above. The control sample scores remained relatively constant, except for a fall in 2009 in the mean scores (which was not reflected by the median scores). Although Table 8 shows statistically significant differences, as the control sample returned higher scores than the failed sample, H_{1A} is not provisionally supported.

6.2.2 Use of personal pronouns – calendar timeline

Section 6.2.2 examines H_{2A}, which looks at the use of Personal pronouns in the calendar timeline.

H_{2A}: The use of personal association words in narrative disclosures by a failed company is significantly lower than that of disclosures by non-failed companies.

Table 9: Summary of the use of personal pronouns (calendar time sample)

		Failed					T-test of Difference (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	27.79	18.64	4	65.20	8.70	0.67
	2009	31.30	33.00	5	45.99	8.00	0.33
	2008	24.81	16.47	8	53.07	14.82	0.37
	2007	23.81	21.25	18	40.75	10.75	0.61
	2006	24.17	20.87	20	56.71	6.45	0.77
	2005	23.43	21.28	23	66.25	8.00	0.99
	2004	22.30	19.00	21	49.25	8.00	0.39
	2003	14.07	11.10	16	49.36	0.60	0.12
	2002	10.47	8.84	8	25.87	2.00	0.77
		Control					Kruskal Wallis Test (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	21.79	23.87	9	37.10	0.00	1.00
	2009	23.70	19.99	10	56.75	12.46	**0.02
	2008	19.38	15.31	10	34.00	6.07	0.82
	2007	21.73	18.62	8	38.82	10.00	0.96
	2006	23.00	22.64	9	38.82	7.70	0.81
	2005	23.49	18.07	8	49.37	13.00	0.50
	2004	19.58	18.50	8	31.12	14.37	0.18
	2003	23.31	19.00	7	47.32	10.87	0.17
	2002	12.14	8.57	3	21.37	6.47	0.75

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 17: Use of personal pronouns in the calendar time sample – mean scores

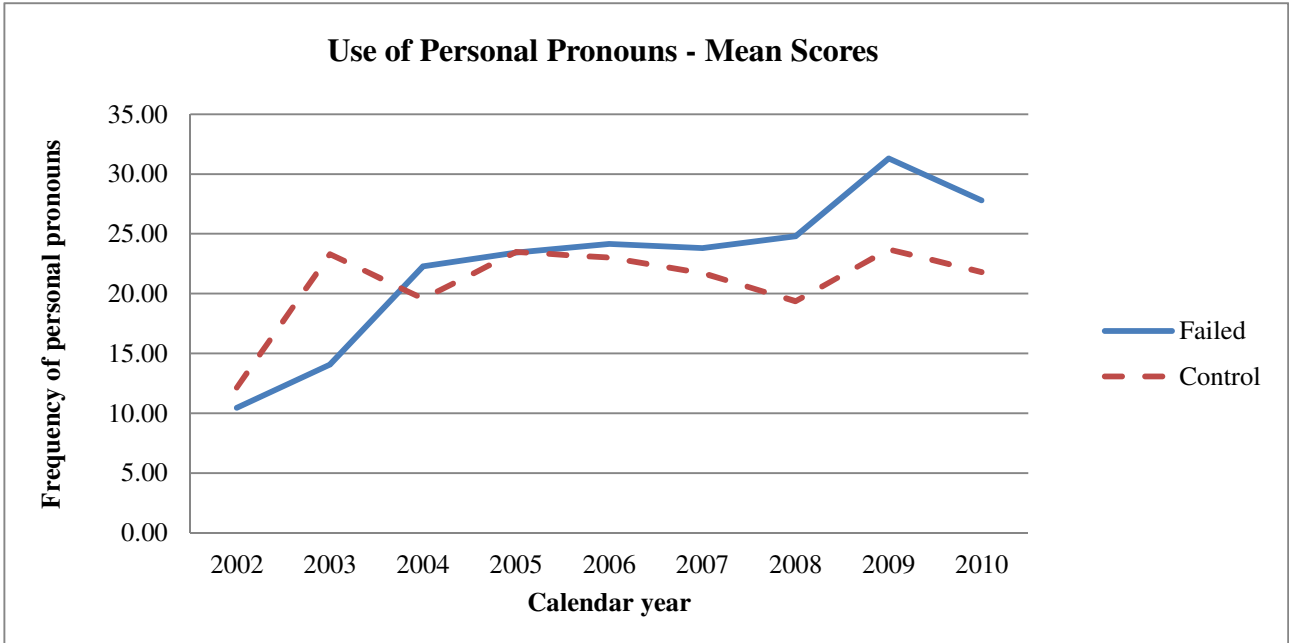
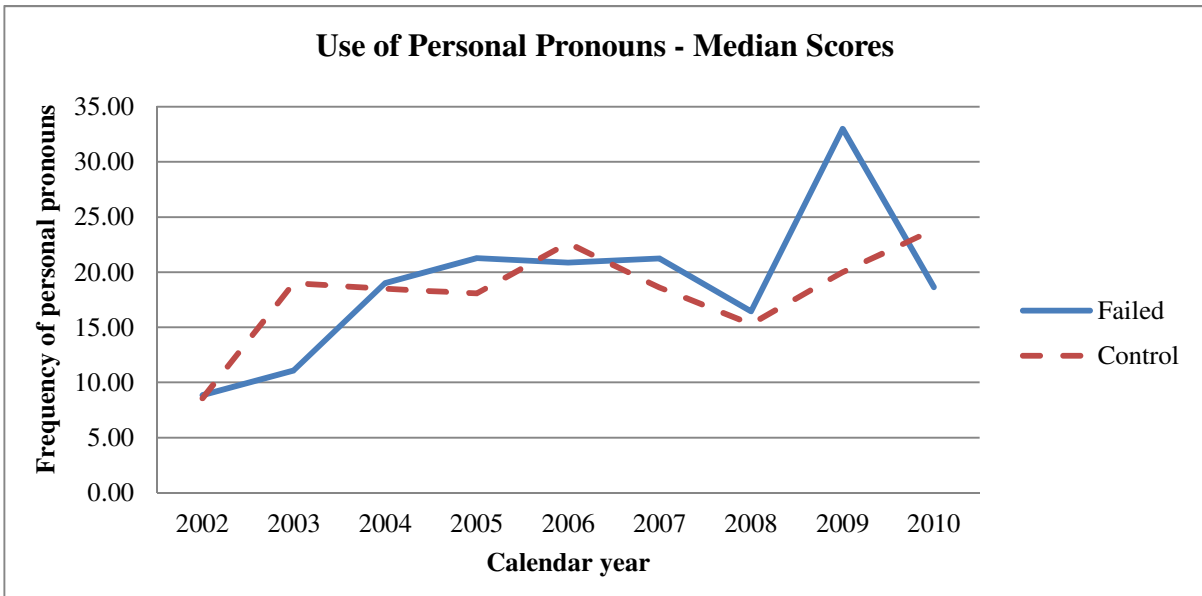


Figure 18: Use of personal pronouns in the calendar time sample – median scores



The use of personal pronouns and words implying personal associations is said to decrease in times when the author wants to distance themselves from communications which can be detrimental to their image. This could be, for example, deceptive communications to the public. The score is made up of:

- = Self Reference (Certainty)
- Collectives (Certainty)
- Cooperation (Commonality)

So in effect, the lower the use of personal pronouns score, the more deceptive the written prospectus appears to be.

Figures 17 and 18 describe the use of personal pronouns by both the failed and control samples from 2002 through to 2010. The failed sample returned higher (and therefore less ‘deceptive’) scores from 2004 onwards, but returned lower scores in the first two years of the study, and in 2005. The range of mean scores for the failed sample is 10.47 to 31.30, in comparison to 12.14 to 23.31 for the control sample, as shown in Table 9. This suggests that although in 2002 and 2003, the failed sample used relatively less personal language in their written prospectus; they become increasingly less personal through time in comparison to the control sample. Figure 19 shows a general increase in the use of personal pronouns on the failed sample in the period examined, however the increase from 2003 to 2004 in the failed sample was quite significant, almost doubling, from 14.07 to 22.30. In 2009 the mean scores returned another spike, to 31.30, which in 2010 dropped back down to 27.79. The median scores in Figure 18 shows a similar story, with the failed sample appearing more personal in 2002 to 2003, but later becoming less personal in the subsequent years, similar to the failed sample. In contrast to Figure 17 and the mean scores, the median score of the failed sample returned higher (and therefore less personal and more ‘deceptive’ scores) in 2005 and 2007. The spike in 2009 (to 33) appears to be more significant in contrast to the mean score, as from 2007 to 2008 the median score for the failed sample dropped to 16.47; a slight dip that was not in the mean scores.

Table 9 does not show statistically significant results, with the exception of the Kruskal Wallis test showing a significant difference at the 5% level in 2009. As the control sample appears to use fewer

personal pronouns (from 2005 to 2010, which accounts for six of the eight years examined), H_{2A} was not tentatively supported.

6.2.3 Use of negative words – calendar timeline

We will now examine H_{3A}, in the calendar timeline sample.

H_{3A}: The use of negative emotive words in narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies.

Table 10: Summary of the use of negative emotives (calendar time sample)

		Failed					T-test of Difference (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	-8.09	-6.93	4	-1.57	-16.94	0.54
	2009	-5.43	-4.12	5	2.35	-16.98	*0.06
	2008	-16.13	-17.79	8	-6.65	-28.12	0.34
	2007	-19.60	-17.91	18	-6.65	-43.14	**0.03
	2006	-17.53	-14.14	20	-4.68	-70.58	0.10
	2005	-17.98	-16.00	23	-6.00	-43.22	0.26
	2004	-16.89	-16.22	21	-8.55	-30.90	*0.06
	2003	-14.74	-14.84	16	-7.44	-23.74	***0.00
	2002	-9.91	-9.90	8	-3.12	-16.44	***0.00
		Control					Kruskal Wallis Test (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	-6.78	-7.02	9	2.35	-15.22	0.75
	2009	-10.75	-7.94	10	-0.64	-29.42	0.11
	2008	-6.04	-6.31	10	2.35	-13.92	***0.00
	2007	-8.31	-9.72	8	4.32	-15.10	***0.00
	2006	-7.22	-6.65	9	0.88	-15.10	***0.00
	2005	-8.52	-8.94	8	0.56	-17.42	***0.00
	2004	-9.43	-9.19	8	-0.68	-14.08	**0.02
	2003	-6.33	-5.68	7	0.46	14.08	***0.00
	2002	-7.59	-6.65	3	-4.68	-11.44	0.47

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 19: Use of negative emotives in the calendar time sample – mean scores

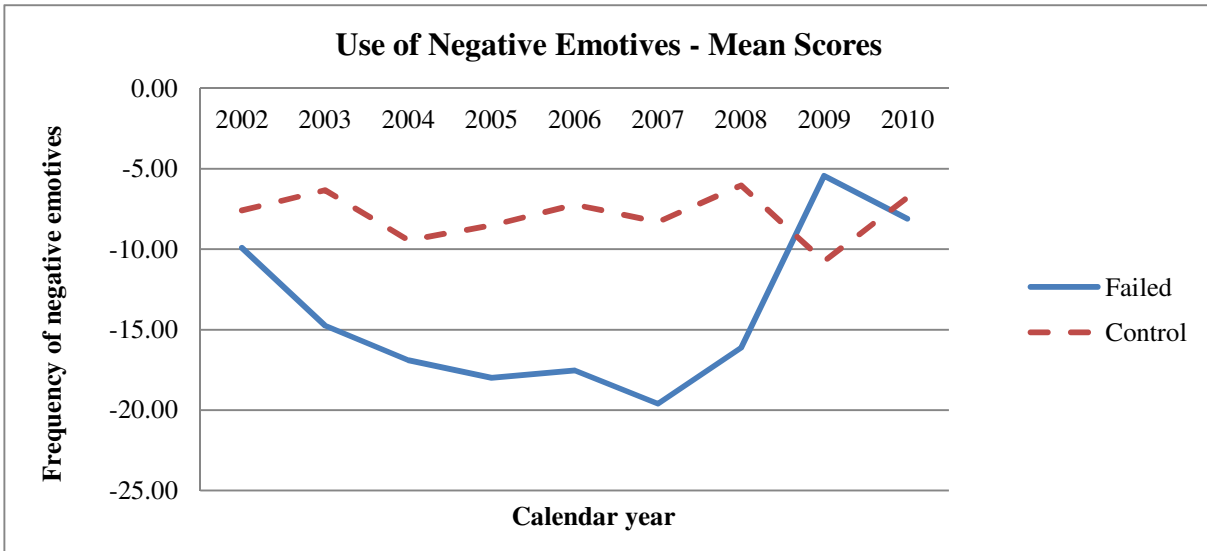
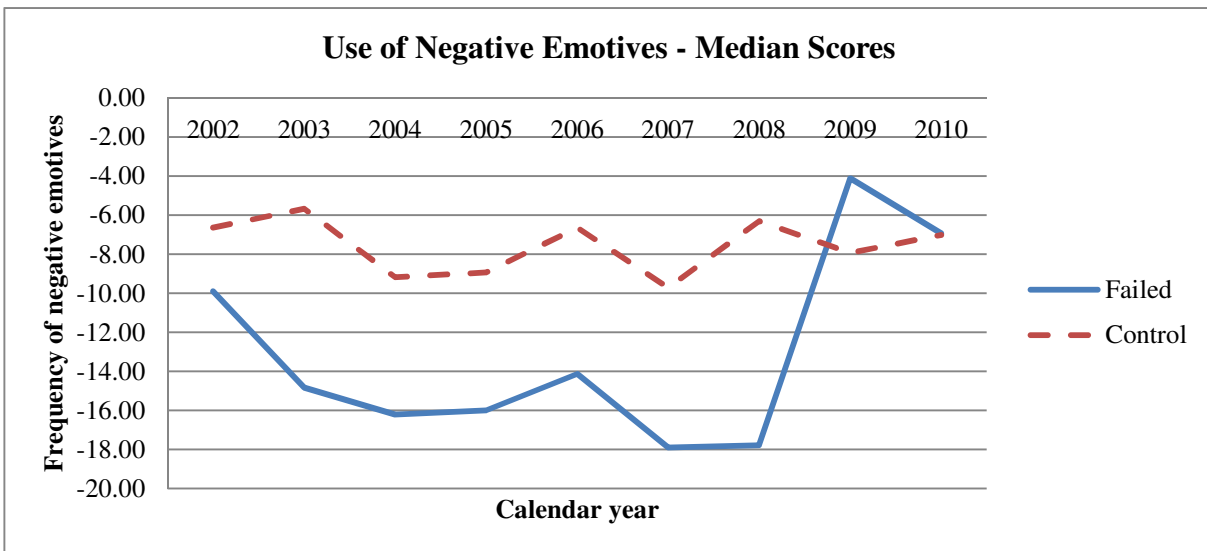


Figure 20: Use of negative emotives in the calendar time sample – median scores



Figures 19 and 20 look at the use of negative words used by the both the failed and control samples. As described in a previous section, a higher score indicates the negativity of the author, which prior literature suggests is linked to the deceptiveness of the author. The score break-up is as follows:

- = Blame (Optimism)
- + Hardship (Optimism)
- + Denial

- Praise (Optimism)
- Satisfaction (Optimism)
- Inspiration (Optimism)

Overall Figure 19 shows that the failed sample is more negative than the control sample, and appears to remain more negative in the entire period examined, due to the higher mean scores returned. In contrast to Figure 19, Figure 20 shows that in 2002 the control sample returned a higher score, which would make them appear to be more deceptive except for the year 2009. In general, Figure 19 shows a significant decreasing trend for the failed sample from 2002 to 2007, and despite a slight fluctuation in year 2006. However, in 2009, the use of negative words score spikes up to -5.43, a sharp increase from -16.13 in the previous year. The trend reverts back to a decrease, and the score drops back down to -8.09 in 2010. Likewise, Figure 20 shows a similar result, with more fluctuations in both the failed and control samples.

The t-test yielded statistical significant results in 2002 and 2003, and mild significant results in 2004 and 2009 at the 10% level, and 2007 at the 5% level using the t-test. This is in contrast to the relative timeline test (section 6.1), in which all 6 years to the year of collapse were statistically significant. The Kruskal Wallis test disagrees with the standard t-test to some extent and found strong statistical differences in 2003 and 2005 to 2008 in the use of negative words, and mild statistical difference in 2004. In contrast, the t-test only found strong significant results in 2002 and 2003. Overall, as shown in Table 10 and Figures 19 and 20, as the failed sample returned lower mean and median negative emotive scores in most of the years examined, there were no grounds to tentatively support H_{3A} .

6.2.4 Use of descriptive words – calendar timeline

This section examines H_{4A} and how the descriptive word usage changes in the calendar timeline sample.

H_{4A}: The use of sensory descriptive words in narrative disclosures by a failed company is significantly higher than that of disclosures by non-failed companies.

Table 11: Summary of the use of descriptive words (calendar time sample)

		Failed					T-test of Difference (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	44.14	48.16	4	70.26	10.00	0.26
	2009	39.96	34.23	5	66.80	21.91	*0.07
	2008	63.01	68.00	8	111.23	10.50	***0.00
	2007	42.56	40.91	18	76.65	13.50	*0.06
	2006	39.24	33.04	20	91.52	13.00	0.62
	2005	46.06	41.83	23	117.91	15.00	**0.02
	2004	35.93	33.21	21	94.23	15.00	0.72
	2003	28.07	28.19	16	39.70	15.25	0.22
	2002	25.41	24.9	8	39.84	16.23	0.62
		Control					Kruskal Wallis Test (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	40.61	34.82	9	77.08	15.00	0.87
	2009	44.07	36.24	10	97.44	24.21	0.80
	2008	31.50	32.35	10	49.21	12.29	**0.03
	2007	32.70	27.33	8	64.55	14.91	0.13
	2006	37.25	32.92	9	64.55	21.83	0.83
	2005	35.27	35.28	8	60.84	14.91	0.29
	2004	31.42	30.70	8	47.73	14.63	0.51
	2003	39.57	36.99	7	72.23	22.42	0.15
	2002	32.95	33.00	3	52.00	13.87	0.53

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 21: Use of descriptive words in the calendar time sample – mean scores

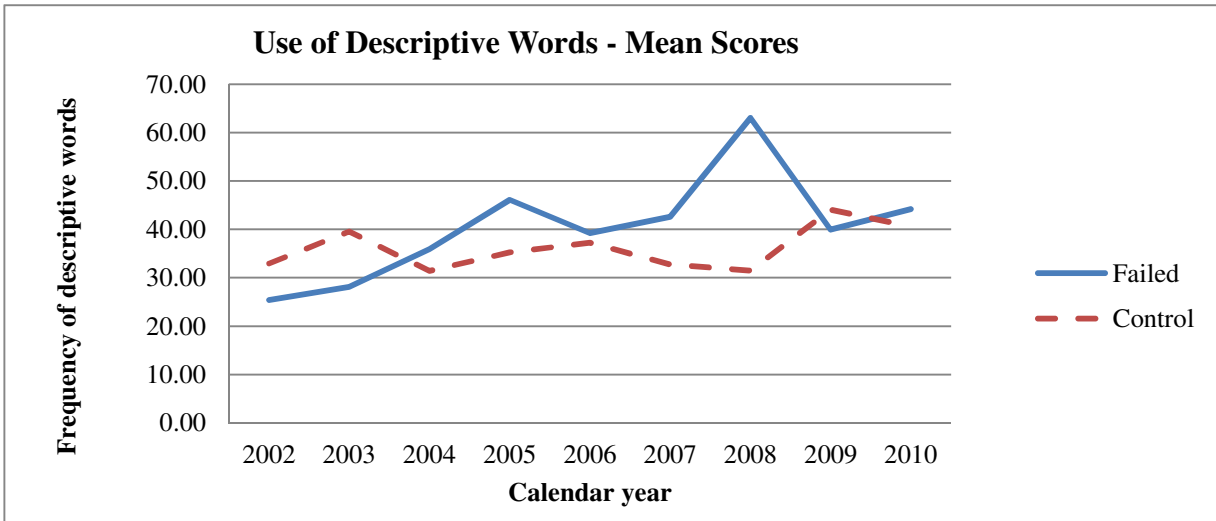
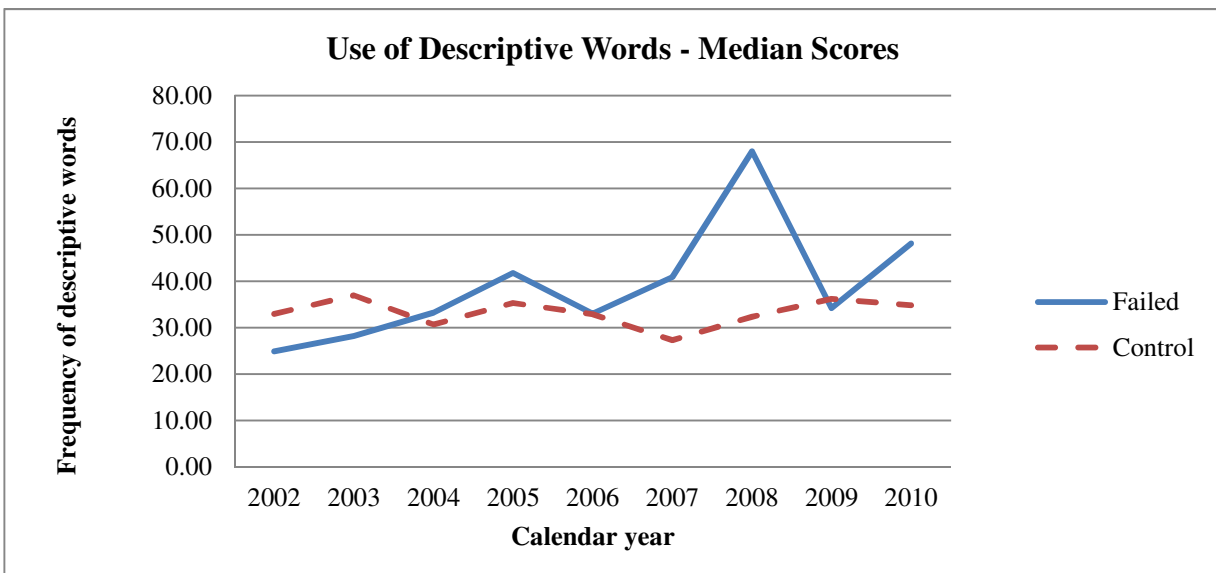


Figure 22: Use of descriptive words in the calendar time sample – median scores



Figures 21 and 22 show the use of descriptive words scores, and measures how much information the author provides about a particular activity. The higher the score, the more descriptive the prospectus, and therefore the more deceptive they appear to be. The Score is derived from the following:

$$= \text{Aggression (Activity)}$$

- + Accomplishment (Activity)
- + Communication (Activity)
- + Motion (Activity)
- + Sensory (User Created – see Appendix II)
- + Cognitive Terms (Activity)

From 2002 to 2004, the control sample appears to be more descriptive (and therefore more ‘deceptive’) than the failed sample. However, this reverses from 2004 to 2009, where the failed sample has a higher use of descriptive words score. This is evident in both Figures 23 and 24, where the ranges for the mean and median scores for the failed samples were 35.93 to 39.96 and 33.21 to 34.23 respectively, in comparison to the control sample mean and median scores, which are 31.42 to 44.07 and 30.70 to 36.24 respectively. Throughout 2002 to 2010, there is an increasing trend in the failed sample, with the failed finance companies providing more information over time. In 2005 and 2008, the use of descriptive words scores spiked, at 46.06 and 63.01 respectively in mean scores, and 41.83 and 68.00 in the median scores.

Overall, the mean and median scores portray the same story, with the control sample providing more information in the first two years, 2002 to 2003, and later in 2009. The only difference is the sharper spikes in 2008 and 2010 in the median scores. In terms of statistical significance, the usage of descriptive words had strong statistical significance at the 1% level in 2008, and mild and weak significance in 2005, and 2007 and 2009 respectively. This shows that although the failed sample to provide more information in four of the nine years examined and therefore there appears to be support for H_{4A} .

6.2.5 Use of exclusion and causation words – calendar timeline

This section examines H_{5A} in the calendar timeline sample.

H_{5A}: The use of exclusive words in narrative disclosures by a failed company is significantly lower than that of disclosures by non-failed companies.

Table 12: Summary of the use of exclusive and causation words (calendar time sample)

		Failed					
Years		Mean	Median	Count	Max	Min	T-test of Difference (P-value)
	2010	43.50	44.50	4	72	13	0.92
	2009	43.40	51.00	5	60	20	0.49
	2008	40.87	40.00	8	68	16	0.48
	2007	33.78	32.50	18	66	8	*0.07
	2006	29.40	26.00	20	70	10	0.15
	2005	31.83	25.00	23	85	12	***0.00
	2004	26.00	26.00	21	490	5	***0.00
	2003	20.88	20.00	16	40	11	**0.02
	2002	16.75	12.50	8	38	5	**0.01
		Control					
Years		Mean	Median	Count	Max	Min	Kruskal Wallis Test (P-value)
	2010	30.67	26.00	9	60	9	0.44
	2009	38.20	33.50	10	85	19	0.58
	2008	23.90	17.00	10	63	8	**0.02
	2007	21.87	19.50	8	47	11	*0.08
	2006	24.33	18.00	9	48	16	0.49
	2005	24.12	20.00	8	48	11	0.24
	2004	21.44	20.00	8	41	12	0.27
	2003	26.43	23.00	7	42	-15	0.20
	2002	15.33	17.00	3	18	11	0.91

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 23: Use of exclusive and causation words in the calendar time sample – mean scores

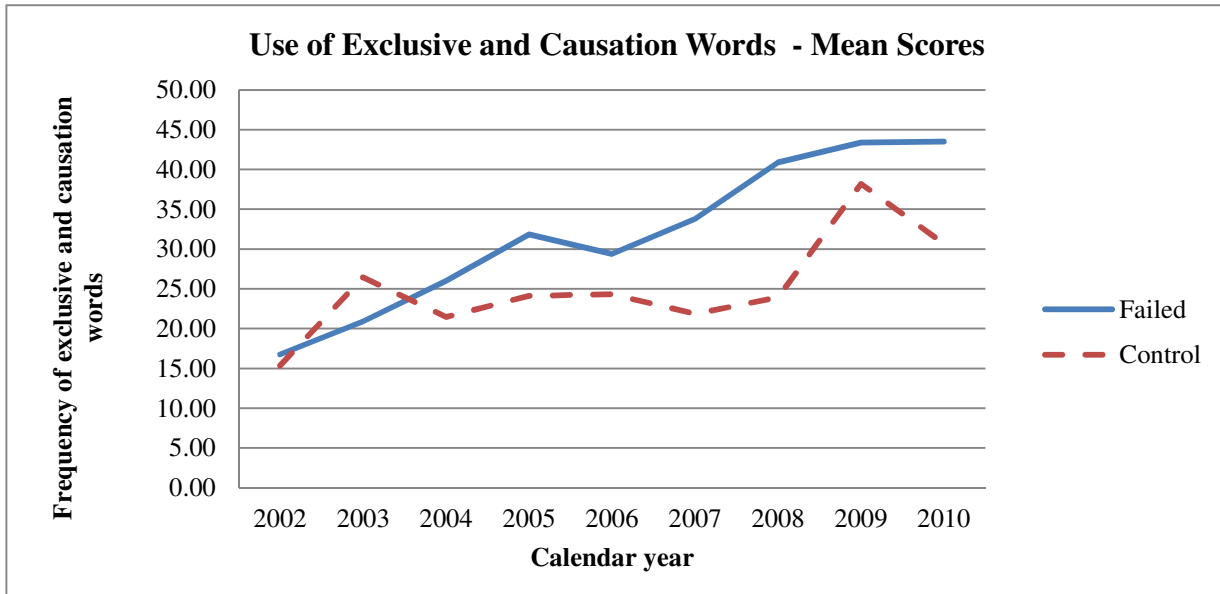
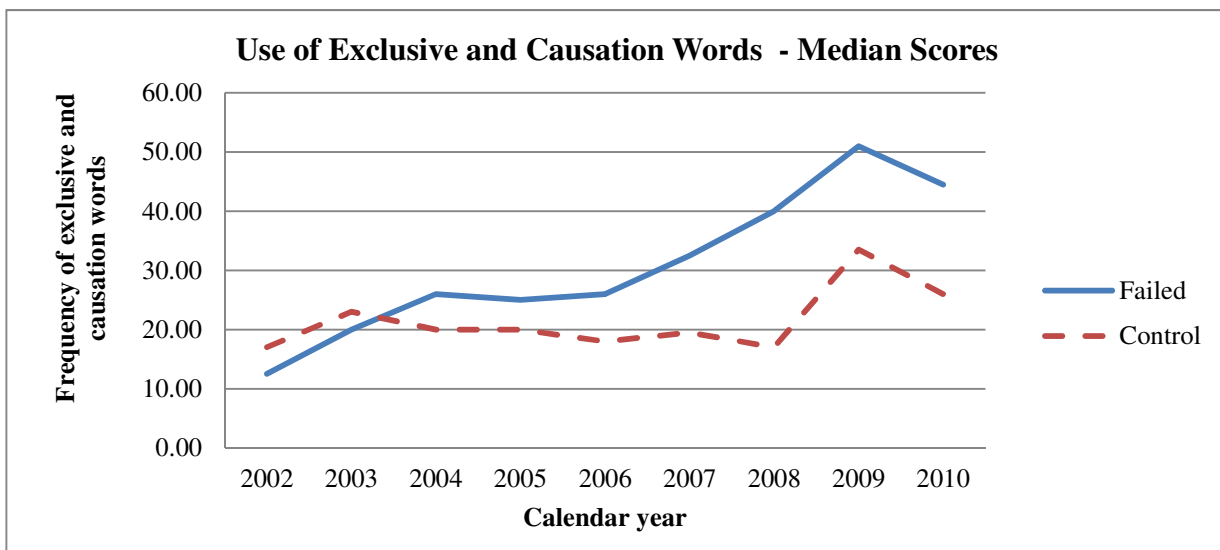


Figure 24: Use of exclusive and causation words in the calendar time sample – median scores



The use of exclusion and causation score measures the frequency of restrictive words such as ‘however’, and ‘except for’, and reason words such as ‘because’ and ‘for that reason’. Prior literature asserts that a deceptive company will use fewer exclusive and causation words to avoid creating unnecessary restrictions that may contradict their version of events. Therefore, a deceptive prospectus should contain fewer exclusive and causation words, and therefore a lower score. The score is a word count of the relevant words:

= Exclusion and Causation (User defined – see Appendix I)

Figures 23 and 24 show the mean and median scores for the Use of Exclusive and Causation words, which is measured by a word count. The failed sample returned higher scores from 2004 onwards, with the mean and median scores ranging between 26.00 to 43.50 and 26.00 to 44.50 respectively, in comparison to 21.44 to 30.67 and 20.00 to 26.00 for the control sample respectively. In the first two years however, the control sample returned higher median scores (17.00 and 23.00 in comparison to 12.50 and 20.00 respectively by the failed sample), indicating that in the first two years of the study the control sample provided more information.

Overall, both Figures 23 and 24 show an increasing trend for the failed sample, with the failed finance companies using more exclusive and causation words from 2002 to 2010. The median score (Figure 24) shows a spike in 2009 for the failed sample, in which the Use of Exclusive and Causation Score jumped to 51.00. By the next year, 2010, the score settles back down to 44.50. Although the control sample did not return an obvious trend, in both the mean and median scores, after fluctuations in 2003 and 2009, the score appears to be increasing with time. Tables 12 show statistically significant results, with the t-test returning two statistically significant readings at the 1% level in 2004 and 2005, and mild statistical differences at the 5% level in 2002 and 2003, and at the 10% level in 2007. This was not supported by the Kruskal Wallis test where only two years returned significant results. Overall, this study had predicted fewer uses of exclusive and causation words by the failed sample. Based on this, the failed sample appears to use more exclusive and causation words. Therefore, H_{5A} is not supported.

6.2.6 Use of words signalling uncertainty – calendar timeline

This section examines H_{6A} , which looks at the tone of uncertainty, in the calendar timeline.

H_{6A} : The degree of certainty in narrative disclosures by a distressed company is significantly less than that of disclosures by non-distressed companies.

Table 13: Summary of words signalling uncertainty (calendar time sample)

		Failed					T-test of Difference (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	-732.89	-570.67	4	-106.41	-1683.80	0.34
	2009	-420.26	-332.46	5	-73.55	-1030.00	0.75
	2008	-723.44	-640.36	8	-106.60	-1370.46	**0.01
	2007	-494.70	-240.30	18	-63.30	-1647.76	0.07
	2006	-268.34	-203.50	20	-78.50	-1318.15	0.81
	2005	-346.71	-242.20	23	-54.70	-1778.20	0.09
	2004	-300.09	-200.50	23	-73.06	-1771.70	0.07
	2003	-169.20	-158.57	18	-57.60	-334.20	0.38
	2002	-144.50	-119.35	8	-63.60	-360.40	0.94
		Control					Kruskal Wallis Test (P-value)
		Mean	Median	Count	Max	Min	
Years	2010	-322.71	-238.60	9	-101.60	-1081.30	0.44
	2009	-518.61	-200.35	10	-105.40	-2638.45	0.90
	2008	-215.90	-143.45	10	-56.20	-753.30	**0.02
	2007	-201.53	-93.05	8	-64.80	-880.70	**0.01
	2006	-222.57	-144.00	9	-39.40	-877.00	0.60
	2005	-180.82	-149.25	8	-51.20	-355.40	0.32
	2004	-152.22	-121.60	8	-67.20	-400.70	**0.04
	2003	-229.51	-198.61	7	-68.80	569.10	0.41
	2002	-138.93	-98.30	3	-61.50	-257.00	0.68

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Figure 25: Use of words signalling uncertainty in the calendar time sample – mean scores

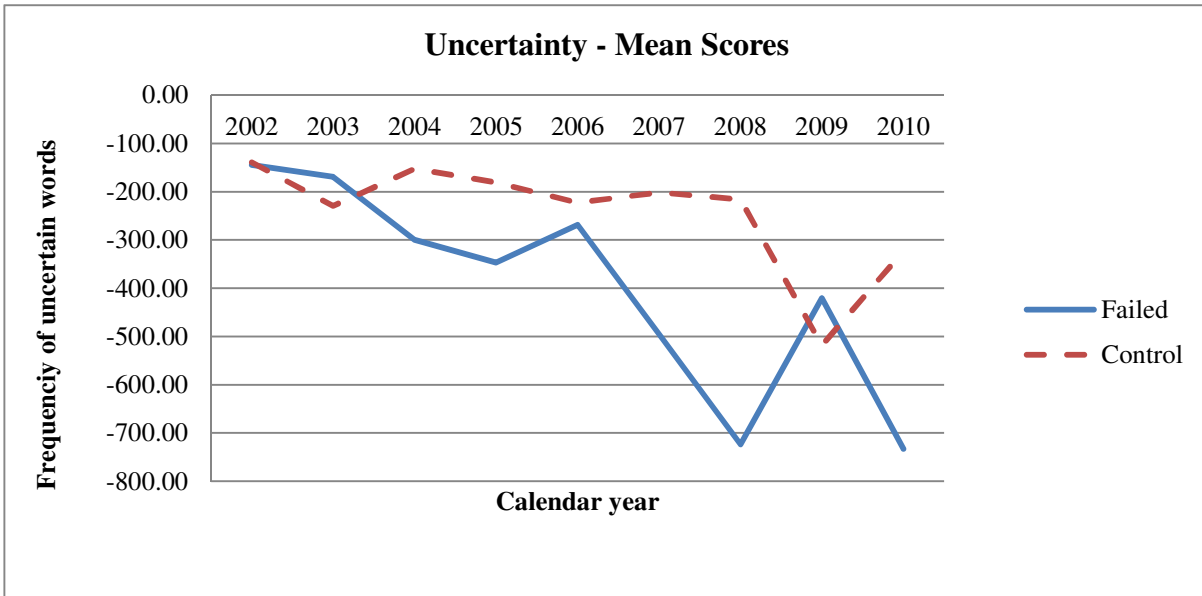
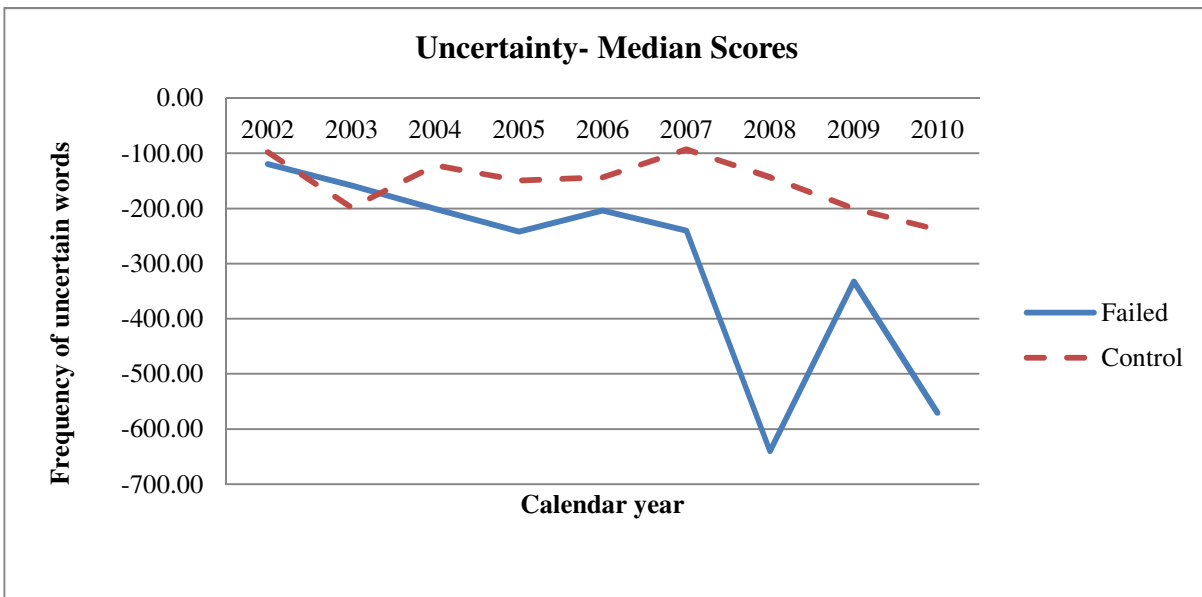


Figure 26: Use of words signalling uncertainty in the calendar time sample – median scores



Although the tone of uncertainty in written communications as a factor of deception as not explicitly examined in prior deception literature, this study is of the view that confidence is crucial for the survival of finance companies. For that reason the Uncertainty Score makes up the sixth component of the deception score examined.

- = Ambivalence (Certainty)
- Levelling (Certainty)
- Tenacity (Certainty)
- Insistence (Certainty)
- Numerical Terms (Certainty)

The greater the score, the more uncertain the author appears to be.

In the entire period examined, with the exception of 2003 and 2009 for the mean scores, and 2003 only for the median scores, Figures 25 and 26 shows the failed sample returned lower uncertainty scores. Therefore the written communications of the failed sample appear less uncertain, and less 'deceptive' than their control sample counterparts. Interestingly this trend does not reverse in the period examined, except for in 2003 and 2009 for the mean score. Table 13 shows the range for the mean and median scores to be -144.50 to -732.89, and -119.35 to -640.36 respectively for the failed sample, and -138.93 to -518.61, and -93.05 to -238.60 respectively for the control sample.

Figures 25 and 26 show a very smooth decrease for the failed sample from 2002 to 2010, as the tone of their corporate communications began to appear more certain as the full effects of the Global Financial Crisis unfolded. The control sample follows a similar decreasing trend. Although Figure 25 shows that the mean score for the control sample shows an overall decrease, in 2003 and 2009 the score dipped severely, to -229.51 and -518.62 respectively. In 2008 the mean and median uncertainty score for the failed sample dipped severely to -723.44 and -640.36 respectively, with the control sample following suit one year later in 2009. However, in 2009 the failed sample shot back up, before plunging to another low in 2010. Aside from the mentioned major fluctuations, there appears to be a decreasing trend for both the failed and control sample. The spread between in the maximum and minimum scores indicate that the tone of uncertainty between the different failed finance companies varies significantly; however, generally, the failed sample appears to use certain words.

Differences in the use of uncertain words returned no significant result for all years bar 2008, where the level of significance was at the 5% level using the t-test. Using the Kruskal Wallis test strong statistical differences at the 5% level was noted in in 2004 to 2007, and 2008. Overall, the degree of uncertainty for the failed sample appears to be lower, indicated by the lower uncertainty score of the distressed sample. On this basis, H_{6A} is tentatively not supported.

7. Discussion

This section examines the results of the variables in detail and draws from prior literature to ascertain rationales for the study's findings. Hypotheses for which support was not found is first discussed, followed by the hypotheses for which support as found. The unique nature of finance companies – the relationship between financial health and investor confidence, appeared to be an important factor in the lack of support for the hypotheses. This affected the motives to deceive and the subsequent disclosure strategies employed by failed finance companies.

7.1 Summary of differences – relative timeline

Table 14 summarises the differences of the five components between the two samples using the standard t-test, and reinforces the significant differences shown by Figures 3 to 14. Generally there is some evidence supporting statistical differences between the failed and non-failed samples in the use of personal pronouns, descriptive words, and exclusive and causation words. The use of negative words returned statistically significant differences in all the years, with most at the 1% level. In contrast, Table 15 shows the summary of difference using the Kruskal Wallis test which, as previously discussed, is a more powerful statistical tool as it is non-parametric in nature. The Kruskal Wallis test could not find the statistically significant results identified by the standard t test, although similarities in the use of personal pronouns and negative emotives were noted.

In summary:

- H_{1A} Is not provisionally supported
- H_{2A} Is not provisionally supported
- H_{3A} Is not provisionally supported
- H_{4A} Is not provisionally supported
- H_{5A} Is not provisionally supported
- H_{6A} Is not provisionally supported

Table 14: Summary of differences – T Test

	H_{1A}: Deception Score	H_{2A}: Personal Pronouns	H_{3A}: Negative Words	H_{4A}: Descriptive	H_{5A}: Exclusive/ Causation	H_{6A}: Uncertainty
-6	0.33	0.05*	0.00***	0.02**	0.39	0.60
-5	0.34	0.78	0.00***	0.57	0.53	0.37
-4	0.49	0.04**	0.00***	0.97	0.99	0.60
-3	0.23	0.13	0.00***	0.06*	0.12	0.26
-2	0.06*	0.72	0.01**	0.89	0.09*	0.06 *
-1	0.29	0.06*	0.00***	0.62	0.04**	0.44
0	0.91	0.72	0.03**	0.03**	0.11	0.93

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Table 15: Summary of differences – Kruskal Wallis test

	H_{1A}: Deception Score	H_{2A}: Personal Pronouns	H_{3A}: Negative Words	H_{4A}: Descriptive	H_{5A}: Exclusive/ Causation	H_{6A}: Uncertainty
-6	0.39	0.09*	0.02**	0.60	0.27	0.51
-5	0.22	0.05	0.03**	0.80	0.60	0.50
-4	0.14	0.24	0.00***	0.37	0.13	0.27
-3	0.18	0.04**	0.07*	0.76	0.69	0.27
-2	0.96	0.43	0.00***	0.74	0.57	0.34
-1	0.57	0.76	0.06*	0.38	0.22	0.41
0	0.08*	0.54	0.42	0.31	0.31	0.46

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

7.2 Summary of differences – calendar timeline

Tables 16 and 17 (shown on the next page) summarise the differences of the five components between the two samples, and reinforces the significant differences shown by Figures 15 to 26. Generally there is evidence supporting statistical differences using the t-test between failed and non-failed companies in the deception score. Components that show some statistically significant differences include the usage of negative emotives, descriptive words, and exclusive and causation words. In contrast, the Kruskal Wallis test did not find the statically significant results to support H_{4A} , H_{5A} and H_{6A} , with no years returning significant differences at the 1% level. The Kruskal Wallis test also found significant results in the difference of use of negative emotives.

In summary:

H_{1A}	Is not provisionally supported
H_{2A}	Is not provisionally supported
H_{3A}	Is not provisionally supported
H_{4A}	Is provisionally supported
H_{5A}	Is not provisionally supported
H_{6A}	Is not provisionally supported

Table 16: Summary of differences – T Test (calendar time sample)

	H_{1A}: Deception Score	H_{2A}: Personal Pronouns	H_{3A}: Negative Words	H_{4A}: Descriptive	H_{5A}: Exclusive/ Causation	H_{6A}: Uncertainty
2010	0.07	0.67	0.54	0.26	0.92	0.34
2009	0.78	0.33	0.06*	0.07*	0.49	0.75
2008	0.00***	0.37	0.34	0.00***	0.48	0.01**
2007	0.00***	0.61	0.03**	0.06*	0.07*	0.07
2006	0.31	0.77	0.10	0.62	0.15	0.81
2005	0.00***	0.99	0.26	0.02**	0.00***	0.09
2004	0.00***	0.39	0.06*	0.72	0.00***	0.07
2003	0.29	0.12	0.00***	0.22	0.02**	0.38
2002	0.63	0.77	0.00***	0.62	0.01**	0.94

*** Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

Table 17: Summary of differences – Kruskal Wallis test (calendar time sample)

	H_{1A}: Deception Score	H_{2A}: Personal Pronouns	H_{3A}: Negative Words	H_{4A}: Descriptive	H_{5A}: Exclusive/ Causation	H_{6A}: Uncertainty
2010	0.41	1.00	0.75	0.87	0.44	0.44
2009	0.54	0.02**	0.11	0.80	0.58	0.90
2008	0.02**	0.82	0.00***	0.03**	0.02**	0.02 **
2007	0.24	0.96	0.00***	0.13	0.08*	0.01 **
2006	0.22	0.81	0.00***	0.83	0.49	0.60
2005	0.02**	0.5	0.00***	0.29	0.24	0.32
2004	0.01**	0.18	0.02**	0.51	0.27	0.04**
2003	1.00	0.17	0.00***	0.15	0.20	0.41
2002	0.54	0.75	0.47	0.53	0.91	0.68

*** Significant at the 1% level

** Significant at the 5% level

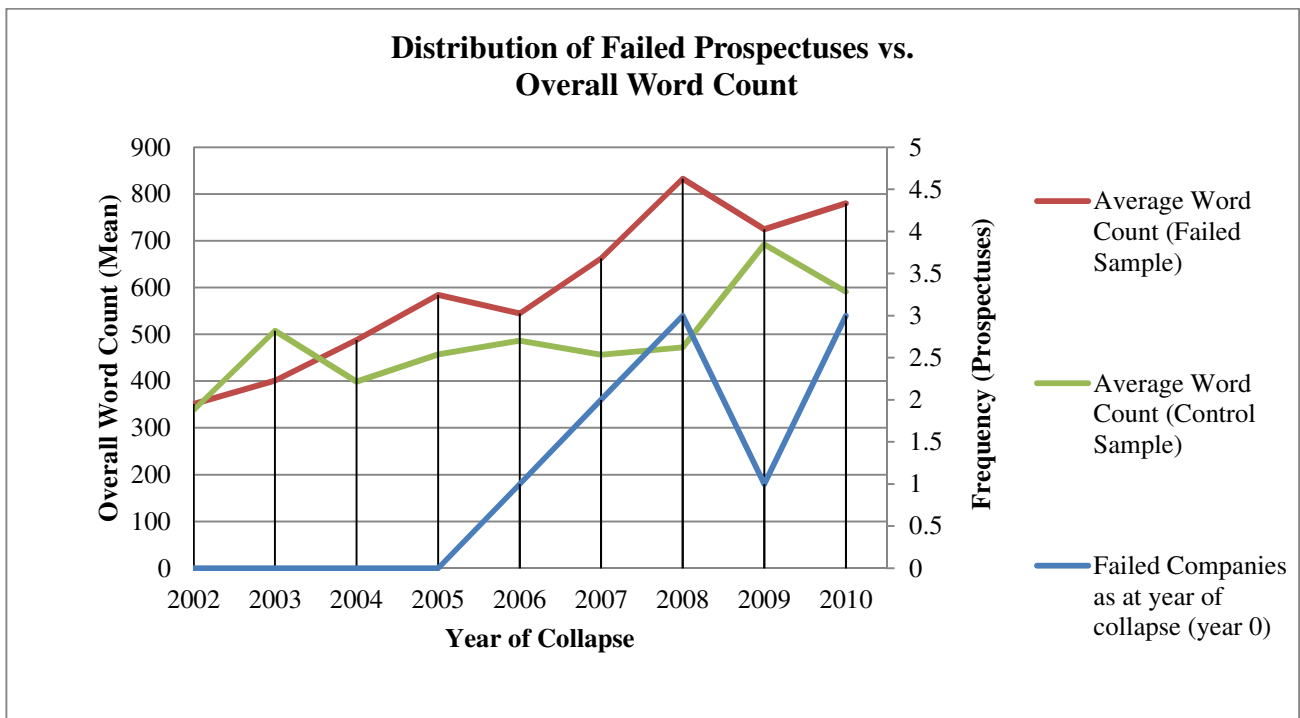
* Significant at the 10% level

7.3 Alternative hypotheses that were supported

The paper finds evidence to support one of the alternate hypotheses proposed. Prior literature (for example Hancock et al., 2005, 2007; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Newman et al., 2003; Zhou et al., 2004) suggests that deceivers will attempt to substantiate their version of events with more information. As expected by the current study, the frequency of descriptive words of the failed and control samples increased over both the relative and calendar timelines. Interestingly, we did not find failing companies using fewer exclusive or causation words, rather, an increasing trend was found. This tends to suggest that in times of

financial difficulties, finance companies feel the need to win back the confidence of their investors by more floral descriptions; more ‘evidence’ to substantiate their possible untruths. For non-failed companies, this could be as ‘harmless’ as the chief representative providing words of relief to ease investors into their continual investment.

Figure 27: Distribution of failed prospectuses vs. word count



However, for failed companies, this could be harmful deception, as a means to substantiate their false version of reality. This view was borne out by further analysis. When the distribution of failed prospectuses was mapped against the actual word count (see Figure 27), we find that during the years where the failing finance companies collapsed, the word count for those two years (2008 and 2010) actually spiked to 832 and 780 respectively. This could signal the very desperate and ultimately vain attempts of the chief representative to win back investor confidence. The increase in words attributed solely to the increase in lies (i.e. deceptive disclosures) is detrimental to all users of financial and non-financial information. This highlights the issue of narrative disclosures, as company financial disclosures are becoming increasingly difficult to digest due to the overload of

information (Darrough & Stoughton, 1990). In this situation, the words of the chief representative, when in plain English, appears more inviting to read (Henry, 2008). The increase in deceptive communications has severe consequences for not only investors, but regulators and consequently the finance companies themselves. Narrative portions of corporate disclosures are currently unregulated and heavily controlled by management (Geppert and Lawrence, 2008). How should the regulators regulate the registered prospectuses, as they are designed to be the “principal point of sale document” (Securities Commission, 2005 p.5), and not an unbiased account of the financial affairs (Benschop and Meihuizen, 2002). As alluded to by KPMG (2007), attempts by firms to comply with all existing necessary regulations of the registered prospectuses and investment statements could increase the total length of the document to well over seventy pages in length, and compromising users’ understanding.

7.4 Alternative hypotheses that were not supported

Overall, the results were not as expected for the overall deception score, with the failed sample generally returning lower and therefore less deceptive scores than the control sample in the relative timeline analysis. This is an interesting result, with both intuitive and counter intuitive facets. Intuitively, finance companies in bona fide financial distress (i.e., the failed sample) should appear more deceptive as they have more motivation to produce deceptive narratives, possibly as a means of ensuring their own survival. However, in the study they returned lower and therefore ‘less deceptive’ mean and median scores than their non-failed counterparts in six of the seven years examined. A possible rationale for this relates back to the definition of ‘deception’ in Section 240 (2) of the Crimes Act 1961:

“[A] false representation, whether oral, documentary, or by conduct whereby the person making the representation **intends** to deceive any other person and know that it is false in a

material particular; or is reckless as to whether it is false in a material particular; or an omission to disclose a material particular...[emphasis added]”

As the key element of the definition is the word “intends”, this indicates that the misrepresentation in narratives is a deliberate move by the author. As it is a deliberate move, detection may not be as simple as an analysis of word choice. The fundamental notion of the Interpersonal Deception Theory (See Buller et al., 1994) assumes that based on feedback by the receiver, deceivers will adapt their behaviour so as to not arouse suspicion. Although this notion was not derived from written media, or rather, face-to-face interviews or experiments, as the chairman and CEOs’ letters are reviewed by many parties beforehand, these reviews will bring up feedback which will help shape the communication in a way that the lies are more cleverly concealed. In effect, the failed sample may have returned a lower deception score as they artificially adjust their word choice to enhance their image. A closer examination of the individual components of the deception score reveals the extent the intention to deceive can distort the word usage of communications of finance companies.

The study’s relative and calendar timeline analyses indicate that the failed sample did not use fewer personal pronouns, more negative emotive terms than the control sample. This seems to be in contrast with some prior findings. For example, Bournois and Point (2006) found that the bulk of the CEOs in their study take credit for favourable results while unfavourable results are blamed on external economic climate. Extensive uses of the word “we” can imply that authors do not want to assume responsibility for the action. Craig et al. (2012) share similar findings. They found the reduction in personal pronouns to be a deliberate move as a subtle change in blame. Based on prior psychology and linguistic literature, the researcher had hypothesized that emotional discomfort from deceptive behaviour may cause the deceiver to subconsciously use more negative words (Hancock et al., 2005, 2007; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan,

2010; Newman et al., 2003; Zhou et al., 2004). The nervousness, and to some extent, discomfort of the author were also found to increase as the stakes were raised (Caso et al., 2005). Therefore, as we approach the date of collapse, we should see an increase in the use of negative emotive words. Craig et al. (2012) found that the level of confidence expressed in the CEO letters they examined declined in the early stages of financial distress, then staying constant at a lower level. Kwon and Wild (1994) supports this and notes that financial distress is an important environmental factor affecting the usefulness of accounting disclosures. The authors found that the level of market uncertainty is greater as a firm nears financial distress. However, the current study finds contradicting results, and the special nature of the companies studied helps explains these discrepancies.

In terms of degree of certainty, although the failed sample returned lower and therefore more certain words than the control sample, the difference is not significantly different. Moreover, the degree of uncertainty actually decreases drastically for the distress sample in the years leading to the collapse. Looking at the five components of uncertainty in Table 18, the largest and most influential component is 'Insistence'. Insistence measures "repetition of words, as repetition of words indicates preference of an ordered world" (Hart, 2000). As a particular message is reiterated and repeated, this reduces the uncertainty or doubt attached to it. It is deducted from Ambivalence and the greater the Insistence score, the smaller the Uncertainty score will become. If one is being deceptive, it is unlikely they will put conviction to particular statements. From years -6 to 0 there is an increasing trend in the Insistence score, possibly due to the increasingly dire financial situation of the company, requiring confident messages from the chief representative in a possible 'last resort' attempt to win back investors. Overall, although the study expected more uncertainty from the failed sample, the opposite result was returned. A possible explanation for this may relate back to the nature of the companies examined. As finance companies are reliant on the confidence of their investors and the market, any hesitation or vagueness portrayed by the authors may ring warning bells for their investors. Signs of uncertainty in a company portrayed by the

chief representatives can often be intensified by investors, leading to the loss of confidence and possibly expedite the ultimate collapse of the company.

Table 18: Components of the uncertainty score

		Failed				
		Ambivalence	Numerical Terms	Tenacity	Leveling Terms	Insistence
Years to Collapse	-6	1.85	-22.33	-14.91	-4.00	-161.24
	-5	4.39	-28.29	-23.47	-5.59	-387.40
	-4	2.24	-19.86	-17.86	-4.48	-204.18
	-3	3.96	-23.54	-23.60	-6.42	-230.74
	-2	4.00	-29.75	-25.31	-6.95	-281.55
	-1	4.46	-26.52	-30.46	-6.84	-342.45
	0	5.90	-38.50	-37.27	-10.85	-618.13
			Control			
		Ambivalence	Numerical Terms	Tenacity	Leveling Terms	Insistence
Equivalent Years	-6	2.29	-25.88	-18.23	-3.13	-136.89
	-5	4.18	-22.89	-22.35	-5.44	-176.08
	-4	3.52	-21.38	-20.76	-4.25	-158.66
	-3	2.98	-27.80	-19.36	-4.00	-169.58
	-2	5.66	-30.30	-31.79	-7.25	-447.53
	-1	2.77	-29.78	-23.99	-4.11	-269.51
	0	2.49	-35.25	-30.08	-5.19	-645.11

The nature of finance companies makes them susceptible to a self-fulfilling prophecy, where the collapse of the finance company is caused by a mass exit of investors who may be ‘spooked’ by any negative received cue, as seen in the banking sector (Linsley & Slack, 2010; Shin, 2009). Consumer confidence is vital for finance companies, and positivity for financially distressed companies may be beneficial for their survival. The need to reassure their investors overrides many of the other effects found in prior literature. Existing literature has found examples of narratives that exhibit such optimism. Hildebrandt and Snyder (1981) found positive words to feature more often in annual reports of companies, regardless of their financial health. Similarly, Rutherford (2005) found evidence of the Pollyanna effect, with loss making companies making more references to ‘profits’ than losses, and to the top line of the income statement (i.e. earnings). Boo and Simnett (2002) found that financially distressed companies that provided optimistic management prospective

comments were less likely to fail within in the next year, in comparison to other financially distressed companies. Craig et al. (2012) argues that putting a ‘positive spin’ on narrative disclosures is a form of impression management and can enhance the CEO’s personal image. Bournois and Point (2006) found half of their sample of CEO letters portrayed a disastrous year 2002 as favourable, and only a minority included negative aspects in their writing. This is especially true for finance companies, where one miscalculation in disclosure strategy may result in the collapse of the company. Finance companies have unique characteristics which may lead to results which may be in contrast with past findings which are mostly based on Annual Reports. Results of all prior studies using sample firms outside the finance industry may not generalise to the finance industry as the latter is driven so much more by investor confidence. Consequently, very subtle wording changes could have a profound effect on actions by the users of the registered prospectuses (i.e., the investors). After all, the intention of registered prospectuses is to entice the investment of both prospective and existing investors which may further motivate the authors of the documents to report in a particular manner. This could jeopardize liquidity if the investors choose to pull their investment out of the company. Representatives of such firms may be unwilling to make any significant deviation in the tone or form of wording from previous periods so as to arouse suspicion.

Bournois and Point (2006) note that the use of self-references may be very motivational at times, and may introduce a positive style of discourse. This could explain why the failed sample in the current study returned higher person pronoun scores. The negative emotive scores also show the desperation of CEOs to remain more positive for the sake of their survival. Management tend to make more disclosures when they have good news, and in particular, positive disclosures (García Osma & Guillamón-Saorín, 2011). This could be one possible rationale to why the study’s failed sample appeared so positive, despite being in bona fide financial distress which should suggest that they do not have any ‘good’ news to report on. This could suggest that any ‘good news’, no matter how material it is, is given more prominence than the unfavourable news, which may be more

important to investors for their decision making. The prominent themes of CEO letters³³ are said to vary depending on the financial performance of the company (Bournois & Point, 2006). Above all, the authors believe that negative results are not supposed to appear in CEO statements, and CEOs will adapt the prominent themes to suit the financial situation. The nature of finance companies may also be an attributing factor. As finance companies are reliant on the confidence of their investors and the market, signs of trouble from the authors may ring warning bells for their investors. Any significant risks detected by investors may trigger the self-fulfilling prophecy, leading to the ultimate collapse of the company.

The lack of significant differences in the study's results does not suggest that the chief representatives of the failed sample appeared ignorant of their self-image. Traces of 'hubris', a form of "self-deception or egocentric bias" (p.170 Craig & Brennan, 2012) may have been present. As discussed in chapter 3, the lax entry requirements of New Zealand's non-bank sector provided a 'boom' of NBDT in the market, accounting for quite a notable portion of the country's GDP within a short time frame (Economic Intelligence, 2007). This may have fuelled the confidence of the chief representatives, possibly to a point where they did not see, and did not want to see, their impending demise. Overall, in the current study it is shown that entities and individuals with strong incentives to deceive do communicate differently than those with less incentive to deceive, particularly with respect to changes in the tone and style of written communications. This supports findings of prior literature (for example, Amernic & Craig, 2006, 2010; Craig et al., 2012; Sydserff & Weetman, 2002 to name a few.) In particular, deceivers do become more descriptive, and hence use more words when deceiving. However, they are found to not use fewer personal pronouns, exclusion and causation words, and more negative emotive words. The different legislative requirements of the Securities Act 1978 (governs registered prospectuses) and Financial Reporting Act 1993 (governs Annual Reports) may also have moderated the content of the disclosures. The Securities Act

³³ Which are: the market, growth, strategic plans, product mix, imminent losses, future profits, confidence, the results for the year, assertion of optimism about the future (Bournois & Point, 2006).

imposes harsh penalties for breaches³⁴ which may serve as incentive not to include misleading messages in the narrative disclosures.

Craig et al. (2012) assert that the general assumption from theories that underpin deception is that it is an intended action done to achieve a desired outcome, whether at an individual or organisational level. Using this argument, the motivation is particularly strong for finance companies. From a personal perspective (agency and impression management theories as described in Craig et al. (2012)), CEOs have their own name and ego at stake to report deceptively. It is detrimental to their own status to represent a failing company. From an organisational level (stakeholder theory, as described in Craig et al. (2012)), they possibly have stronger motivation to report deceptively for the survival of their organisation, as finance companies are dependent on the confidence of their investors. In the end, the survival of the organisation will also impact on the CEOs at a personal level. Since May 2012, the newly established Financial Markets Authority investigated 26 of the 57 failed finance companies (Financial Markets Authority, 2011a), and have since referred nine cases to the courts for gross misconduct. This suggests that some companies in the failed sample were indeed deceitful in their communications, whether picked up by the study's current model or not. However, there is no guarantee that companies not flagged by the Financial Markets Authority are 'not deceptive' – they may simply have not been 'caught out'. South Canterbury Finance is an example of a stellar performer in the market until the fraudulent practices were uncovered.

The findings of the study support the notion that deception detection is extremely difficult, if not impossible (Carlson et al., 2004; Hobson et al., 2011). As regulation surrounding narrative portions of registered prospectuses is vague³⁵, it gives the authors full discretion on what to include, and what to omit, helping them mould changes to their desired image (García Osma & Guillamón-

³⁴ Section 55F(1) of the Securities Act 1978 states that the maximum amount of a pecuniary penalty is \$500,000 for an individual and \$5,000,000 for a body corporate, for each civil liability event.

³⁵ The Securities Act 1978 defines 'false and misleading' statements as those that fail to refer, or give proper emphasis, to adverse circumstances (s34 (1)). These adverse circumstances could be offset by false assurances by the chief representative.

Saorín, 2011). This can impede the detection of deception, as the authors have flexibility over what they choose to disclose, and how they disclose it. These are possible weaknesses to the current study, and the researcher acknowledges these difficulties. However we have found that cues of deception can be identified in the early stages of financial distress through analysis of word use. Purda and Skillicorn (2012) found that firms start to become less truthful (i.e. more deceitful) around three quarters prior to the actual fraudulent event. This seems to echo Anderson and Chang (2011) and Frino et al. (2007), who found that news of financial distress is often known to the market, and the effects felt, before the actual official announcement. Financial misrepresentation is, despite how it is often portrayed particularly in terms of finance companies, a relatively uncommon event (Purda & Skillicorn, 2012). In contrast, in the current study it is shown that a high proportion of the population of finance companies had failed. However, Purda and Skillicorn (2012) excluded finance companies in their research, so their findings may not be applicable.

Time and resource constraints make up the major limitations of the research. However, such effect is minimised to ensure that fundamental assumptions of the research are not impaired and the impact they have on the empirical findings is kept to a minimum. The first limitation is the limited scope and size of the research, which included 189 prospectuses from 59 finance companies. This is mainly due to the availability of information, as some prospectuses did not include a narrative portion in their prospectuses. However, as discussed in section 5.1.1, there are prominent literatures in the field of financial distress which is based on small sample sizes³⁶. Potential bias may be introduced in the selection the subcomponents to define each variable of the deception score, and consequently, the composition of the deception score. The selection of words in each dictionary of the variables tested may also introduce more bias. This is particularly so in the user defined dictionaries set up to test H_{4A} and H_{5A}. As it is not possible to compile a comprehensive list for the linguistic software to check through, such effect is mitigated by including as many words as

³⁶ For example, see Altman (1968)

possible in the user defined dictionaries. There were no changes to the other dictionaries for the variables, which is the same approach used by other studies such as Linsley and Slack (2010) and Yuthas et al. (2002), which used DICTION in its default setting. This is appropriate so as to not introduce more bias into the study.

Although this study contributes to some of the gaps left by existing literature in the field of deception in narratives, there are future research opportunities which stem from the results of the study. An in-depth examination of the relationship between the negative tone of narratives and the financial health of the company should be examined. Using prior literature the study posits that financially failing and deceitful finance companies will appear more negative in their narratives. However, the results from the study contradict this notion, and at a statistically significant level. Another interpretation for such a contradicting result could be that it is deceptive to be reporting significantly more positively when the financial health of the company is failing. This is an area worthy of future research indeed. The main assumption of the study is that bona fide financially distressed companies, measured by their actual failure, are more prone to using deceptive reporting measures to appear positively to continue their survival. It would be interesting to see whether non-failed companies also employ such deceptive reporting strategies to enhance their performance to appear relatively more favourable and to further capitalise on their position in minds of investors.

Investor sophistication is another interesting area that future research should consider. The majority of the investors affected by the GFC were “mum and dad” investors, with little knowledge and experience in dealing with investments. This may have affected the extent of narrative disclosures provided by the stricken companies, and the messages the narrative disclosures may have held.

8. Conclusion

In light of the GFC and the billions of dollars in lost investments, this study examines whether deception played a role in the collapse of the finance sector in New Zealand. Using the computer-assisted text analysis programme, DICTION, this study examines five cues of deception prescribed by existing psychology and linguistic literatures. Looking at the entire population of registered prospectuses from failed finance companies with available information in the Companies Register, this study found interesting results that complement, and contradict existing literature. Language is an important factor to examine in deception detection. Deceitful people may communicate differently than non-deceitful people, particularly with respect to changes in the tone and the style of written communications (Amernic & Craig, 2006, 2010; Craig et al., 2012; Sydserff & Weetman, 2002). The study finds support for Larcker and Zakolyukina (2011) that "...the language composition of true narratives differs from that of false narratives" (p. 2). In terms of the variables tested, the study did not find support for most of the hypotheses tested. This can suggest that authors of deceitful written communications are often well aware of the consequences the disclosure of the company's real financial health may bring. Deceivers knowingly try to positively portray their poor performance, while concealing their mismanagement and/or misdeeds (Craig et al., 2012). However, deception detection is difficult (Carlson et al., 2004; Hobson et al., 2011) as reports are compiled and reviewed by many individuals, often including those who are unaware of fraud, and therefore have no intention to deceive (Purda & Skillicorn, 2012). Methods of perpetrating deception are adaptive by nature, with no clear cut 'cues' of deceptive behaviour as deceivers adapt to remain 'legitimate'.

In a number of areas the study found results contradictory to prior findings. In particular, the failed sample did not use significantly fewer personal pronouns and fewer negative emotive terms than non-failed firms in the lead up to collapse. In the relative timeline we find support for the notion that failed finance companies will use more causation or exclusive words. However, findings from

the calendar timeline were not consistent with these results in all areas. Both the relative and calendar timelines found that failed and non-failed finance companies will be more descriptive in their written media, as we had hypothesised. A possible explanation for the contradictory findings is that the theories and assumptions that underpinned the hypotheses were based on research drawn from psychology, linguistics and accounting studies dedicated to Annual Reports. Such assumptions may not apply to registered prospectuses of NBDTs such as finance companies. For example, the main aim of the registered prospectus is different to that of the annual report. The registered prospectus is designed to entice and encourage potential investors, whereas the annual report is designed to report and account to existing investors. They are therefore governed by different legislation. The nature of finance companies is also different, as the confidence of investors not only guarantees the source of capital, but their survival as well. Wording choice could potentially have immediate and profound impacts in the credibility-based finance industry. If investors interpret the registered prospectuses in a way that is detrimental to the company (i.e., if they find unfavourable news regarding performance, or if they cannot take the at their face value), they may choose to pull their invested capital out. Prior studies may not be able to be generalised to the finance industry and prospectus-like disclosures.

A number of inconclusive results found in this study emphasises the significant gaps identified in the literature. It was found that behavioural traits for deceivers found in the psychology and linguistic literature may not be able to be generalised to fit all types of deceivers. These type of studies typically examined verbal based communications such as transcripts of interviews (Hancock et al., 2005; Hancock et al., 2004; Keila & Skillicorn, 2005; Larcker & Tayan, 2010; Larcker & Zakolyukina, 2011; Newman et al., 2003; Zhou et al., 2004) which, as discussed earlier, may not be applicable to written, formal corporate disclosures reviewed by many parties. The registered prospectus is different to the Annual Report, with different underlying aims. Additional research in deception in narratives is essential, particularly with regards to accounting disclosures where the

deceiver is trying to deceive multiple audiences, with differing levels of sophistication. The study's inconclusive results also show that deception detection is difficult, supporting papers such as Purda and Skillicorn (2012), Carlson et al. (2004) and Hobson et al. (2011). It is said that 11% of frauds go undetected by either quantitative or qualitative models, indicating that a mixed approach of both models can severely reduce letting financial misrepresentations go un-noticed (Purda & Skillicorn, 2012). Even though strong governance reduces the potential for deception to occur in narratives (García Osma & Guillamón-Saorín, 2011), ultimately users of such reports should be prudent in their interpretation of such communication from the company (Bournois & Point, 2006). The ability of voluntary disclosures to achieve the intended effects is largely dependent on the perceived credibility of disclosures, which declines with the financial health of the company (Healy & Palepu, 2001). However, there is a discrepancy between moral and economic motivations to disclose information, and management's self-interest may allow the latter to override the former (Holder-Webb & Cohen, 2007). Management's self-interest is a key component in the definition of deception, causing the most of the troubles in the GFC, and may be the reason why it is a phenomenon that is unlikely to disappear soon.

9. References

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Appendix I – List of Words in Exclusion and Causation Dictionary

Exclusion

afterall	be that as it may	per contra
all the same	But	Withal
Anyhow	Despite	without regard to
Barring	for all that	Yet
Besides	how be it	However
But	in spite of	apart from
excepting	nonetheless	aside from
excluding	on the other hand	Bar
exclusive of	Omitting	with the exception of
exempting	outside of	Without
if not	Rejecting	other than
Lacking	Save	Except
leaving out	Saving	not for
Minus	short of	exclusive of
whereas,	for that reason	

Causation

Because	due to	on the grounds that
As	For	Over
as a result of	for the reason that	owing to
as long as	for the sake of	Seeing
as things go	in as much as	Since
Being	in behalf of	thanks to
by cause of	in that	Through

by reason of	in the interest of	due to
by virtue of	in view of	now that
considering		

Appendix II – List of Words in Sensory Dictionary

round	Flat	Curved
wave	Wavy	Ruffled
angular	Tender	Hollow
tapered	Wiry	Lopsided
freckled	Wrinkled	Striped
bright	Clear	Glossy
jeweled	Fiery	Shimmering
muddy	Drab	Dark
grimy	Worn	Cluttered
fresh	Flowery	Transparent
sheer	Opaque	Muscular
handsome	Robust	Fragile
Pale	Perky	Lacy
shadowy	Crash	Squawk
crackle	Chime	Ring
thud	Whine	Buzz
laugh	Silence	Bump
Bark	Clink	Gurgle
chuckle	Boom	Bleat
Hiss	Giggle	Cry
thunder	Bray	Snort
guffaw	Bawled	Bang
blare	Bellow	Sing
crow	Roar	Rumble

growl	Hum	Chatter
scream	Grate	Whimper
mutter	Mumble	Screech
Slam	Stammer	Murmur
Wail	Shout	Clap
snap	Whisper	Babble
Yell	Stomp	Rustle
Sigh	Cheer	Whistle
jangle	Whir	Hush
storm	Oily	Rich
bland	Ripe	Buttery
hearty	Tasteless	Medicinal
salty	Mellow	Sour
fishy	Bitter	Sugary
vinegary	Spicy	Bittersweet
Crisp	Fruity	Hot
sweet	Savory	Tangy
burnt	Sweet	Piney
acid	Sickly	Scented
pungent	Burnt	Stagnant
fragrant	Spicy	Gaseous
musty	Aromatic	Gamy
putrid	Moldy	Perfumed
fishy	Spoiled	Dry
fresh	Briny	Sour

damp	Earthy	Sharp
rancid	Dank	Cool
Wet	Silky	Sandy
Cold	Slippery	Velvety
gritty	Icy	Spongy
smooth	Rough	Luke
warm	Mushy	Soft
sharp	Tepid	Oily
woolly	Thick	Warm
waxy	Furry	Dry
hot	Fleshy	Feathery
dull	Steamy	Rubbery
fuzzy	Thin	Sticky
bumpy	Hairy	Fragile
damp	Crisp	Leathery

Appendix III – List of finance companies in the failed sample

Company	Year of Collapse	Available Prospectuses
Allied Finance	August 2010	4
Babcock & Brown Ltd	June 2009	1
Bridecorp	July 2007	5
Bridgecorp Investment	July 2007	5
Capital+Merchant Finance Ltd	November 2007	5
Dominion Finance	June 2008	3
Dorchester	June 2008	6
Equitable Mortgage Limited	November 2010	3
Finance and Leasing	January 2011	3
Geneva Finance	October 2007	5
Hanover Capital	July 2008	5
Hanover Finance	July 2008	6
Irongage Property Limited	May 2011	4
Mascot Finance	March 2009	6
Mutual Finance	July 2010	6
Nathans Finance	August 2007	5
North South Finance	June 2008	5
Numeria	December 2007	3
Provincial Finance	June 2006	5
Rural Portfolio Capital	May 2010	5
South Canterbury Finance	August 2010	6
St Kilda Finance	August 2008	6
St Laurence	June 2008	4
Strata Finance Ltd	April 2009	3
Strategic Finance	August 2008	5
Tower	April 2008	2
United Finance	July 2008	7
Viaduct Capital	May 2010	2
Vision Securities	April 2010	2

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