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Exploring the Going Concern Statement, Readability and Length Cues as Indicators of Distress at Italian Companies

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ABSTRACT This study explores the going concern statement, readability and length cues as indicators of Italian private companies in default. The results indicate that the disclosures of defaulting companies contain (1) low readability; (2) greater uncertainty and confusing information; and (3) a lengthy going concern statement compared to non-defaulting firms. This is the first study to analyse the going concern statement and its correlation with Italian default by comparing International Financial Reporting Standards (IFRS) and Italian Generally Accepted Accounting Principles (GAAP).

Keywords: Italy; corporate narrative disclosures; going concern; distress indicators

1. Introduction

Financial statements are stakeholders' main tool for analysing corporate performance and identifying business crises. They influence stakeholders' decision making such as investors' decisions to buy stock, banks' decisions to lend money, employees' expectations for their wages and careers, and suppliers' willingness to grant credit (Davern et al., 2019). Financial statements contain numerical data as well as narrative disclosures, whether discretionary or compulsory. They enable stakeholders to assess corporate health status and foresee business prospects, risks and opportunities (Abrahamson & Amir, 1996; Farj et al., 2016; Smith & Taffler, 1995). The current study analyses the narrative disclosure of financial statements' specific sections related to going concern opinions. These sections can be found in: (1) the finan- cial statement notes and (2) Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A).

Analysing narrative disclosures is important for several reasons. First, they are more easily understood than quantitative data, even when the reader is an unsophisticated investor (Strampelli, 2017). Second, they complement numerical data and provide incremental information (Baginski et al., 2016). Third, they offer a different perspective. While numerical data report on past corporate performances, narrative disclosures are more focused on the firm's prospects

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(Kloptchenko et al., 2004; Magnusson et al., 2005) such as future strategies, expectations, and risks. These topics are relevant for investors because future prospects provide the basis for their assessment of whether their interests will be materially satisfied, allowing them to make informed decisions (Abrahamson & Amir, 1996; Smith & Taffler, 1995). Fourth, the analysis of narrative disclosures seems to be particularly useful for predicting or explaining the occur- rence of business crises in small or medium-sized entities (Back, 2005); this is a crucial point because SMEs represent the majority (more than 99%) of firms in Italy and the European Union. Finally, although quantitative models can distinguish bankrupt companies from healthy firms fairly accurately (Danovi & Quagli, 2012; Tennyson et al., 1990),[1] their predictive ability is never perfect, being strongly influenced by firm characteristics such as nationality or size. Narrative information analysis can therefore be used as a support for more traditional finan- cial ratio models and improve their predictive potential.

This study explores the going concern statement, readability and length cues as indicators of default[2] by Italian firms. The sample consists of 48 annual financial reports from Italian private companies, covering two periods. The results indicate greater going concern uncertainty, longer sections and lower readability levels for defaulting companies' narrative disclosures than for non-defaulting firms.

This study makes several contributions. First, it extends the literature on narrative disclosure (Beattie, 2014; Leung et al., 2015; Merkl-Davies et al., 2013). Whereas prior studies analysed the chairman's statement, the letter to shareholders and the auditors' report (e.g. Smith et al.; 2011; Smith & Taffler, 2000), this study examines specific sections of the annual financial report, supported by the MD&A's clarifications. Our results show that these sections are highly correlated with bankruptcy, reinforcing the argument that such documents report information on past performance and the company's future.

Second, to the best of our knowledge, this is the first study that analyses narrative text by private Italian firms, whereas prior literature focused on the UK, the US and the Australian contexts (Smith et al., 2011). A civil law country, Italy is distinguished by a less active capital market, weak investor and creditor protection, and lower litigation rates compared to common-law countries such as the UK, the US, and Australia (Matonti & Iuliano, 2012). Italian companies have low capitalization and make substantial use of bank credit, sometimes leading to lack of transparency (Altman et al., 2013, p. 8). Since banks are the main capital pro- viders for private Italian firms, there is less need for public disclosure from the firm (Matonti & Iuliano, 2012). Therefore, the characteristics of the Italian context might encourage defaulting firms to release non-transparent information and to hide their default risk by making ambiguous disclosures and using opaque language.

More than 99% of Italian companies are private small- and medium-sized companies (Istat, 2016) with few shareholders, who are very often members of the same family. According to the Istat 2013 report, over 70% of Italian firms in industry and services were family run, with an average of over 68% of the shares being owned by the major shareholder, and three family members holding more than 93% of the stake (provisional data of the 2011 census industry and services). In many cases, family owners lead these small Italian firms. When these firms do decide to appoint a company manager, they often select someone unqualified or incompetent (Istat, 2013). For these reasons, family managers may lack valuable knowledge and human capital resources (Al-Okaily et al., 2020; Randolph et al., 2018), which can lead to a higher degree of financial misrepresentation (Anderson et al., 2017) and more obscure language in the MD&A (Sucahyati et al., 2020). Further, minority shareholders in small Italian firms do not pressure managers to provide detailed information, and family managers, for their part, may entrench and opportunistically provide low-quality reporting (Anderson et al., 2017). Given that defaulting firms are reportedly linked to less readable documents (Bloomfield,

2008; Humpherys et al., 2011) and are more likely to conceal relevant information (BenYoussef & Khan, 2017), small Italian firms could follow that same pattern due to their actions going unchecked by minority shareholders and the presence of unqualified managers. For these reasons, their going concern disclosures can be qualified as 'poor', particularly when the firm is in distress. The results of this study could be useful for Italian managers attempting to enhance public/creditor confidence.

Italy is one of the precursor countries in the European Union that considered adoption of IFRS for the financial statements of non-listed companies and small and medium-sized firms (Legislative Decree N. 38, 2005; Pietra, 2017). Since 2005, large Italian private firms have had the option of preparing financial statements according to IFRS and oriented towards 'fulfilling the usefulness principle rather than the stewardship principle' (Pietra, 2017, p. 126). Whereas IFRS adoption favours shareholders, Italian firms adhering to the Civil Code prepare their financial statements with the protection of creditor interests in mind.[3] This leads to the question: Does the adoption of different accounting standards affect the quality of the going concern statement? According to Pietra (2017, p. 129), 'these different approaches are perfectly consistent with the characteristics of the Italian economic and entrepreneurial scenario'. As disclosure and accounting regulations vary among countries, it is important to focus on national characteristics, including those of the Italian context.

Third, our study sets a precedent by comparing IFRS accounting standards to Italian GAAP. In some cases, accounting harmonization needs lead companies to discontinue national accounting regulations in favour of international standards. The content of their disclosures may be influenced not only by national characteristics but also by the distinctive features of the accounting standards that companies choose to adopt (Callao & Jarne, 2010; Sellhorn & Gornik-Tomaszewski, 2006).

Fourth, the current study analyses text that covers a two-year period to note potential changes in the going concern assumption. Two separate periods are examined for each firm, whereas most prior studies focused on the year prior to default. Finally, we test the correlations between the structure and content of the going concern assumption sections and company status, with a view to inspiring scholars and practitioners to improve the accuracy and effectiveness of more traditional quantitative predictive models such as the *Z*-score (Altman et al., 1977) and F-score (Dechow et al., 2011).

Fifth, this study responds to the call by Pietra (2017) to explain the 2015 reform and its impact on comparability with IFRS-compliant financial statements. It also responds to the call by Matonti and Iuliano (2012) for investigating private financial reporting in civil-law countries such as Italy.

This paper is organised as follows. The next section defines the going concern statement and presents a literature review and the theoretical background. The following sections present the hypotheses. The methodology section outlines our research method, sampling, and analysis procedure. The subsequent section tests our research hypothesis and presents and discusses our findings. The paper concludes with a summary of the main research results, their contribution to the literature, and implications for accounting practice.

2. Literature Review and Theoretical Background

2.1. The Going Concern Statement

Across the world, the annual financial report is the official document that informs stakeholders about a company's performance (Hardies et al., 2018; Marshall & Dasaratha, 2006; Seyam & Brickman, 2016). It is drafted on the basis of a fundamental premise known as the going

concern assumption. When that assumption is not met and the business is reasonably assumed to be winding up its operations, the measurement criteria for the company's performance must be changed. In particular, when the use of the going concern assumption is appropriate, assets and liabilities are recorded on the premise that the company will be able to realize assets and discharge liabilities within the normal course of business; otherwise, the company must draft the financial report using the liquidation basis of accounting.

Best accounting practice at the national and international levels recognizes going concern as a key assumption for annual financial statements. In the Italian system, the main account- ing rules relating to the going concern assumption are contained in the Civil Code, article 2423-bis and in OIC accounting principle OIC No. 5 (Financial Statements for Company Liquidation) and OIC No. 29 (Accounting Policies, Changes in Accounting Estimates and Errors, Unusual Events and Transactions, Events after the Reporting Period). In international accounting standards (IAS-IFRS), that assumption is stated and discussed in IAS 1 (Presen- tation of Financial Statements) and IAS 10 (Events after the Reporting Period). Collectively, the foregoing standards recommend that compliance verification of the going concern assumption be completed before preparation of the annual financial statements and be fully explained in the notes. In particular, should doubts arise in regard to compliance with the going concern assumption, managers must explain the reason for the uncertainties and risks, the expected future scenario, and the impact on evaluation criteria adopted for assets and liabilities.

In addition to the notes to the annual financial statement, the MD&A, when available, must also be considered. In that document, managers are required to explain the 'foreseeable evolution' of the business, the main features of the company's performance and financial position, and the principal uncertainties it faces (Italian Civil Code, art. 2428; Document of the Italian National Council of Chartered Accountants and Accounting Experts on the MD&A; IAS 1; IASB 2010, Management Commentary). The MD&A is the logical space, other than the notes, where doubts about going concern would be expressed.

While notes to the company financial statements are always compulsory, many accounting systems include the MD&A, among discretionary disclosures, particularly in the international context (e.g. IAS-IFRS, U.S. GAAP). Nevertheless, MD&A is also mandatory in some jurisdictions, as in the context governed by Italian legislation, regardless of the accounting standards adopted, i.e. national or international, or the additional disclosures required by the Securities and Exchange Commission (SEC) for U.S.-listed companies.

Currently, the assessment of the going concern requirement seems to be particularly important because many companies have been overwhelmed by the global financial crisis (ICAI, 2009). A company crisis is not usually a sudden event but rather the result of a path strewn with difficulties and adverse circumstances, internal and external. Therefore, it seems reasonable to expect that the symptoms of a business crisis can be perceived years before the state of default becomes final. If annual financial reports really achieve their purpose of providing a true and fair view of the business, their notes and the MD&A should report those signals promptly.

2.2. Narrative Disclosure

The annual report has a crucial informative function but also a critical weakness. It is informative because it provides key details on the firm's economic data. Its weakness resides in the risk of being inappropriately used to manipulate and obtain stakeholders' consensus (Savioli, 2004). Indeed, managers are conscious that stakeholder choices are widely based on the annual report. They can therefore use the annual report appropriately to provide data that foster informed decision making among stakeholders (Iatridis & Dimitras, 2013), or managers can behave

opportunistically and communicate distorted information, confusing users and impairing their ability to make rational decisions (Merkl-Davies & Brennan, 2007).

Managerial and business literature defines this risk as 'impression management behavior' (Bowen et al., 2005). This concept is strongly rooted in agency theory, which states that corporate managers act opportunistically and select reporting styles and contents that are more beneficial to them[4] (Clatworthy & Jones, 2006; Leung et al., 2015; Merkl-Davies & Brennan, 2007; Subramanian et al., 1993). An accurate and focused selection of the disclosure approach, tone and content can easily lead users to adopt a distorted perception of corporate performance (Neu et al., 1998; Tama-Sweet, 2014), even without disclosing completely false information.

In the same vein, information manipulation theory (IMT), originating from the communication domain, explains the means that actors use to create deceptive messages or manipulate information (McCornack, 1992). IMT claims that messages are deceptive when they covertly violate conversational maxims. These maxims are quantity, quality, manner, and relation (BenYoussef & Breton, 2018; Grice, 1989; McCornack, 1992). Our study partially uses IMT to analyse the quantity and manner maxims. The quantity maxim is violated when the speaker gives incomplete and/or unnecessary information, while the manner maxim is breached when ambiguous or obscure statements are made (BenYoussef & Breton, 2018; McCornack, 1992).[5] Prior accounting studies have partially used IMT to demonstrate that the information content of press releases can provide significant insights into the likelihood of fraud occurrence (BenYoussef & Khan, 2017), and that the stock market punishes firms that transgress the relation maxim (BenYoussef & Khan, 2018). According to IMT, the firm controls and manipulates the information when unfavourable facts are required to be disclosed (BenYoussef & Breton, 2018; McCornack, 2008), such as going-concern uncertainty.

Smith et al. (2006) classify managerial opportunistic behaviour into two main categories: rationalization and obfuscation. Rationalization consists in hyperbolizing the business by justifying negative events (Aerts, 1994) or emphasizing/magnifying positive information (Courtis, 1998), in application of central elements of attribution theory (Feldman, 1981). Some studies, for instance, support attribution theory by finding evidence that managers tend to attribute bad news to external factors and good news to internal causes (Aerts, 2005; Barton & Mercer, 2005). Conversely, obfuscation entails the manipulation of information in order to increase reading complexities, thus making disclosures less clear, accurate and understandable. Prior studies report that the selection of unnecessary jargon or ambiguous terms (Aerts, 1994; Smith & Taffler, 2000) and the use of inappropriate writing style (Courtis, 2004) are among the methods that fall under obfuscation.

Various hypotheses and theories have suggested explanations for managers' reasons and methods in opting for 'less transparent reporting procedures,' including increasing managerial incentives and overall firm performance. For instance, the obfuscation hypothesis (Courtis, 1998) suggests that firms tend to obscure bad news while emphasizing good news by adopting textual complexity in the form of poor readability. According to the impression management hypothesis (Merkl-Davies & Brennan, 2007), firms tend to use different tactics or disclosure strategies (i.e. reading ease manipulation) to 'control and manipulate the impression conveyed to users of accounting information' (Clatworthy & Jones, 2006, p. 311). Attribution hypothesis suggests that adverse outcomes (i.e. failure) are attributed to external factors while favourable results are attributed to managers' performance (Aerts, 2005; Feldman, 1981). All of these hypotheses use assumptions rooted in agency and signalling theories (Aerts, 2005; Merkl- Davies & Brennan, 2007; Moffitt & Burns, 2009; Smith & Taffler, 1992, 2000), which would predict that managers would conceal bad news and emphasize good news to increase managers' incentives and firm performance. Managers act opportunistically and use various discretionary disclosure strategies for their benefit and self-interests (e.g. Merkl-Davies & Brennan, 2007).

These strategies, which are apparent in the narrative sections of financial statements, are intended to manipulate/deceive investors in their perceptions. Researchers of deception detection (Buller & Burgoon, 1996; McCornack, 1992) identify cues that can help distinguish between deceivers and truth tellers, based on IMT. According to IMT, firms control the information when unfavourable facts must be disclosed. In our study, the unfavourable information (negative news) consists of going concern uncertainty, leading the firm to control the information by using a variety of techniques to obfuscate the information and make it more complex. These techniques include leaving out essential information and providing false or uncertain information (BenYoussef & Breton, 2018). Prior researchers of deception detection have identified a variety of linguistic cues, such as word quantity and readability as a signal of deception (e.g. BenYoussef & Breton, 2018; Moffitt & Burns, 2009; Zhou et al., 2004).

Building on previous research, hypotheses and theories (obfuscation hypothesis, impression management hypothesis, IMT, attribution theory, and signalling and agency theories), our paper examines linguistic cues related to obfuscation and readability as indicators of default by private Italian firms known to lack transparency. Narrative disclosure has the potential to impair the quality of financial reporting, a condition that can result in capital misallocation. Voluntary disclosure, known for its discretionary nature, favours opportunistic behaviours because of managers' crucial role in content selection.

2.3. Annual Financial Report Content Analysis

The content analysis method (Bryman & Bell, 2011; Krippendorff, 2004) underpins most of the research on narrative disclosures, but with important differences in implementation. The differences especially concern two aspects: (1) the analysis object and (2) the analysis orientation.

With regard to the analysis object, a large body of research has focused on the chairman's statement (e.g. Smith et al., 2011; Smith & Taffler, 2000) and the letter to shareholders (e.g. Abrahamson & Park, 1994; Clapham & Schwenk, 1991; Hadro et al., 2017). However, limited studies have examined the MD&A (e.g. Bryan, 1997; Holder-Webb & Cohen, 2007). Like prior studies, the current study has concentrated on the going concern assumption. For instance, Cormier et al. (1995), whose research model was based on current audit practice, found that qualitative disclosures in financial statements provide key signals about going concern failure; similar results are underscored by Kleinman and Anandarajan (1999). Provasi and Riva (2014) analysed the contents of auditors' reports to delineate going concern trends over four years (2009–2012). They found that almost 20% of Italian listed companies had sig- nificant business continuity problems. Selection of the specific analysis object (notes, president's letter, MD&A, auditors' report, etc.) is critical because disclosure regulations vary among countries, and the contents of discretionary and compulsory narrative information are not homo- geneous worldwide.

Second, the research literature (Krippendorff, 2004; Steenkamp & Northcott, 2007) distinguishes two alternative approaches to the second aspect of content analysis: (1) form oriented (objective) analysis, and (2) meaning oriented (subjective) analysis.

Form oriented analysis consists of analysing tone and writing style based on the 'routine counting of words or concrete references' (Smith & Taffler, 2000, p. 627). Meaning oriented analysis focuses on themes or messages conveyed by narrative disclosures. Of the two alternatives, form oriented analysis is more objective because it does not require a great deal of researcher intervention, thereby minimizing the impact of biases (Sydserff & Weetman, 2002).

Pennebaker (2011) suggests that the way people talk about a given topic is more important than the topic itself. This opinion often finds practical confirmation because the object of the analysis can easily be adjusted to the business picture that managers want to convey to

stakeholders, while tone and writing style are frequently more spontaneous and thus more trustworthy characteristics. For instance, Rutherford (2005) and Brennan et al. (2009) find that poorly performing companies tend to emphasize positive information and omit or minimize negative data, hence transmitting a misleading message to annual report users.

The signalling theory states that well-performing companies tend to produce longer disclosures than poorly performing ones, since there is more positive information to be communicated to stakeholders in order to gain and retain their approval and support (Ross, 1977). However, empirical evidence shows conflicting results: some studies confirm a positive association between a company's profitability and its level of disclosure (e.g. Haniffa & Cooke, 2002; Wang et al., 2008), while others fail to discern such a relationship (e.g. Chau & Gray, 2010; Patelli & Prencipe, 2007). Dainelli et al. (2013) suggest that conflicting evidence is obtained for two main reasons: (1) different studies analyse different pieces of information, and (2) dis- closures can have the same purpose but dissimilar contents. Since different disclosure topics are managed through different communication strategies, Dainelli et al. (2013) recommend studying homogeneous types of disclosures written about a single topic, to avoid obfuscating the signalling mechanism. Further, only evidence emerging from studies that rely on similar pieces of information can be properly compared.

The association with corporate 'health status' affects not only the quantity of disclosures, but also their quality. Indeed, the clarity and readability of reports also tend to improve together with corporate performance (e.g. Merkl-Davies & Brennan, 2007; Smith & Taffler, 1992).

3. Hypotheses

Consistent with Italian accounting rules and international accounting standards, when managers have significant doubts about the company's ability to continue as a going concern, their uncertainties must be clearly explained in the notes to the annual financial report and the MD&A. For this reason, and in light of results from similar previous studies, the current study investigates the correlation between going concern statements included in such documents and corporate performance. More precisely, the research objective is to test three hypotheses, developed as follows.

Readability literature has examined the determinants and consequences of the readability level (e.g. Bloomfield, 2002; Lehavy et al., 2011; Li, 2008). For example, Li (2008) found that readability of notes to the financial statements is lower for poorly performing firms, consistent with the obfuscation hypothesis. Other studies analysed the readability of narrative sections of financial statements provided by Italian universities and found low readability levels in their statements of financial position (Allini et al., 2017).

Building on our previous discussion, we expect lower readability levels in defaulting companies' narrative disclosures. Several prior studies found that the inclusion of unclear or ambiguous statements might be specifically intended to manipulate and obfuscate unfavourable corporate information (Aerts, 1994; BenYoussef & Breton, 2018; Courtis, 2004; McCornack, 2008; Smith & Taffler, 2000). It follows that report readability tends to improve together with corporate performance (e.g. Merkl-Davies & Brennan, 2007; Smith & Taffler, 1992). Hence, the first hypothesis is formulated as follows:

> H1: Defaulting companies exhibit lower disclosure readability level in the going-concern statement than non-defaulting companies.

Accounting regulations on going concern infer the presence of higher uncertainty levels in defaulting companies' statements than in the statements of non-defaulting companies.

Impression management and attribution hypotheses use assumptions rooted in agency and signalling theories (e.g. Aerts, 2005; Moffitt & Burns, 2009; Smith & Taffler, 1992, 2000) which would predict that managers conceal bad news by acting opportunistically and using various discretionary disclosure strategies for their own benefit. These strategies could consist of obfuscating and releasing unclear/uncertain information related to going concern issues (e.g. Merkl-Davies & Brennan, 2007).

Based on IMT, prior research on deception detection identified a variety of linguistic cues that signal deception (e.g. BenYoussef & Breton, 2018; Moffitt & Burns, 2009; Zhou et al., 2004). For instance, fraudulent firms are more likely to omit information when discussing restatements, suggesting that they attempt to control the information when disclosing damaging facts (e.g. BenYoussef & Khan, 2017). Holder-Webb and Cohen (2007) find that distressed firms are not forthcoming in their MD&A narratives. Mayew et al. (2015) noted that in the US, management going concern disclosure contains predictive accuracy regarding bankruptcy. Therefore, ceteris paribus, we expect that going concern assumptions may not be clearly explained but rather are obfuscated by statements that avoid the subject, especially when the firm in question is in default. This expectation is tested through the second research hypothesis:

> H2: Defaulting companies exhibit higher opacity and uncertainty in the going concern statement than non-defaulting companies.

Lastly, signalling theory suggests that narrative disclosures should be longer for healthy companies (Ross, 1977), but some empirical evidence does not confirm this association (e.g. Chau & Gray, 2010; Patelli & Prencipe, 2007). Perhaps the critical issue is the type of information selected for the analysis (Dainelli et al., 2013). At any rate, IMT (BenYoussef & Breton, 2018; McCornack, 1992) indicates that firms manipulate readers by publishing long texts peppered with unnecessary or ambiguous information. Also consistent with IMT, prior studies (e.g. Moffitt & Burns, 2009) found that fraudulent firms have higher than average word lengths in their MD&A compared to non-fraudulent firms.

While longer statements might lead to obfuscation and concealing the going concern situation, there is a counter argument that assumes that longer statements could be informative. The statement length might reflect the complexity of the news described (i.e. going concern assumption). Such elaboration requires more complicated and detailed information, and should not be confused with obfuscation (Bloomfield, 2008; Merkl-Davies & Brennan, 2011). Elliott et al. (2008) provided some evidence suggesting that financial reports readability could be improved if they contained additional information. Similarly, Drake et al. (2019) noted that additional information in financial statements is potentially useful to professional users.

In the case of the going concern statement – the focus of the current study – poorly performing companies could choose to either avoid the issue at hand or try to be informative and devote many sentences to explaining uncertainties, problems, and general risks. Since accounting standards do not require specific explanations, the going concern statement is expected to be shorter for healthy companies than for failed ones. This discussion leads to the third research hypothesis:

> H3: Defaulting companies have longer going concern statements than non-defaulting companies.

In view of the foregoing, opacity and uncertainty in the going concern statement, readability and length cues are proposed as distress indicators for Italian companies. As with the correlations and models in similar prior studies, our findings cannot establish a causal relationship between narrative disclosures and the bankruptcy event (Tennyson et al., 1990). A causal model would imply

the possibility of avoiding bankruptcy simply by improving critical points of the disclosure, but this perspective is unrealistic because the contents of annual reports are simply a representation and not the cause of corporate distress. Hence, the real objective of this research is to highlight some signals within disclosures that often anticipate default and thus may be considered predictors of bankruptcy.

4. Empirical Analysis

4.1. Sample Selection

To test our hypotheses, failed private Italian companies[6] were selected and matched with financially healthy companies by using financial year end, industry, and net sales. This method avoids the effects of economic trends (e.g. inflation, financial crisis, etc.) and the differences in firm size and industry sectors.

Working from a database of annual reports of Italian limited companies (AIDA[7]), we began by selecting firms that met all the following requirements on the data extraction date (30 November 2016):

- Manufacturing companies;
- Non-listed companies;
- Failed companies;
- Companies that adopted IAS-IFRS in the last two years before bankruptcy.

Failure is strictly defined as winding up by court order. Voluntary liquidation is not taken into account because it can result from causes other than financial distress (e.g. disagreements among shareholders). For some companies, bankruptcy was the outcome of the voluntary liquidation procedure because their equity was insufficient to meet all their creditors' legitimate claims. For the purposes of the current study, we examined firms' last two separate annual financial statements prior to the start of the liquidation procedure and not before bankruptcy, because during liquidation the going concern assumption had already failed.

Given that IAS-IFRS did not apply in Italy until 2005, all the sample companies were declared bankrupt after that year. Following Smith and Taffler (2000), the Altman's *Z*-Score model was used to ensure that only clearly failed companies and healthy companies were considered. More precisely, the *Z*-Score ratio estimated for private manufacturing companies was adopted (Altman, 1968; Altman et al., 1977; Heine, 2000), and on the basis of that ratio, only companies that clearly settled in the distress zone ($Z<1.23$) and in the safe zone ($Z>2.90$) were selected.

Initially, 10 failed companies were identified as distressed ($Z<1.23$) on the basis of their annual financial statements two years before the distress. The decision to analyse the last two annual reports is due to the fact that the *Z*-Score model appears to effectively forecast bankruptcy up to two years prior to the event, while its accuracy diminishes substantially as the lead time increases (Heine, 2000, p. 21).

During the second step, we found 10 failed companies that were identified as distressed. However, as four of these companies could not be matched with similar healthy companies, we analysed only six failed companies matched with six similar non-failed companies.

Finally, the last step of the sample composition consisted of pairing the six pairs of Italian private companies that adopted IAS-IFRS with six other pairs of Italian private companies that followed the Italian Civil Code and Italian accounting standards for the preparation of their separate annual financial statements. In this manner, the set of accounting standards

adopted by the companies is considered a grouping variable because the companies belong to either the group of IAS-IFRS users or Italian accounting standard adopters, but not both. The research hypothesis test analyses the potential impact of the grouping variable. Our theoretical analysis highlights the similarity between compliance verification of the going concern and references to risks and uncertainties in narrative disclosures (see *The going concern statement*), by group, according to accounting standard. It is therefore expected that our research findings would not suggest significant differences resulting from the type of accounting standard, national or international, that companies choose to use to prepare their annual report.

Hence, our final sample consists of 12 matched pairs of companies. By analysing two financial statements, we obtain 48 observations.[8] Our sample size is consistent with previous studies that analysed bankruptcy (Smith et al., 2011; Smith & Taffler, 2000). Appendix A presents the sample composition.

4.2. Content Analysis

We used content analysis to examine patterns within the text. Following prior studies on going concern assessment, we extracted

- Specific sections in the notes and the MD&A, when available;
- The section in the MD&A dedicated to the foreseeable evolution of the business.

We then merged the two parts and deleted any form of address (e.g. Dear shareholders) or closing (e.g. Yours sincerely). For each company, the two documents obtained from this process (one document for each year investigated) are the analysis objects, referred to as NEWDOCs. All the companies in our sample provided the notes and the MD&A. We probed for duplications[9] in both documents. Two independent researchers analysed the content of the notes and MD&A discussions about going concern assessment for the sample of 48 observations. They matched the selected sections, created the NEWDOC for each company, and compared them. We noticed 96% of similarity. The disparity found in two cases has been solved by selecting the clearer statement. We noted that the concept of 'going concern assessment' presented in the notes was investigated in depth in the MD&As, consistent with Brown and Tucker's (2011) findings. While the notes stated the pos- tulates, the MD&A described underlying conditions. The firms reported in the notes that 'going concern assumption is assessed', whereas they explained in the MD&A the reasons for this assessment. For instance, they disclosed the increase or decrease in revenue, risks attached to future results, etc.

We examined the MD&A and the notes concurrently because accounting regulations require that companies provide an explanation when managers have material doubts about the going concern assumption. If the going concern requirement is fulfilled, notes to that effect are not required, but relevant information should be referenced indirectly in the MD&A, given that the business's foreseeable evolution, which assumes the continuation of the going concern, is required to be described in that section.

We used NEWDOCs to test our hypotheses. The first step of the analysis process consisted in codifying the variables. The research outcome is company status (Y), coded 1 if the company failed and 0 otherwise.

Consistent with Field (2013), we controlled for 'group' (G) and 'period' (P).

The variable 'group' refers to the group of firms that adopted the accounting standards concerned by this study, coded 1 for companies using IAS-IFRS, and 0 for those that followed the Italian Civil Code and national accounting standards.

The variable 'period' represents the year to which the financial statement refers, coded 1 if it is the year preceding the bankruptcy, and 0 otherwise.

Predictors are three dichotomous variables flowing directly from the literature analysis and the research hypotheses:

- X1 = readability;
- X2 = going concern disclosure;
- X3 = length.

The predictor X1 equals 1 for high levels of readability in NEWDOC, and 0 otherwise. Readability level was determined using the Gulpease index, the only measure of text readability used for the Italian language (Lucisano & Piemontese, 1988).

To assess the readability of annual reports, prior academic research (Courtis, 1998, 2004; Li, 2008; Smith & Taffler, 1992) used a variety of sociolinguistic techniques (i.e. CLOZE, the Flesch Reading Ease Index, the Fry, FOG, SMOG, Dale-Chall, Lix, and Rix measures) used for the English Language. 'These measures, designed for general-purpose reading material and for readers of all ages, have shortcomings when applied to technical, specialized financial reports that are designed to be read by adults who are not novices' (Moffitt & Burns, 2009, p. 3). According to Smith and Taffler (1992), traditional readability indexes may not be adequate for judging text complexity. We use the Gulpease index developed for Italian Language to study and address the linguistic structures of readability.

Several Italian studies have used this index to assess the readability of texts (Bambini et al., 2014; Bosco et al., 2017; Masia et al., 2017). The index is also used by public universities to analyse various sections of financial statements (Allini et al., 2017).

The index measures the difficulty of reading a written text (Bambini et al., 2014; Bosco et al., 2017; Masia et al., 2017), including metaphoric sentences (Bambini et al., 2014). It counts the number of letters to avoid the risk of misrepresentation caused by 'long' words (Allini et al., 2017). While the index presents several advantages, its disadvantages consist of differentiation among genres and the impossibility of measuring the presence of figurative language, which may influence comprehension (Bambini et al., 2014). Fortunately, in our study, there is no figurative language in the notes and MD&As concerning going concern assumptions and/or firm prospects.

As reported by Bambini et al. (2014), the index includes two variables: 'length of words and length of sentence' and 'returns a value indicating the ease of reading for populations with different degrees of formal education.'

The formula to calculate the Gulpease index is:

$$\frac{300 * (\text{number of sentences}) - 10 * (\text{number of letters})}{\text{number of words}}$$

The Gulpease index (I) ranges from 0 (very low readability) to 100 (maximum readability), and has three tiers (Lucisano & Piemontese, 1988; Mastidoro, 2003):

- $I < 40$: the text is difficult for high school graduates to read;
- $I < 60$: the text is difficult for middle school graduates to read;
- $I < 80$: the text is difficult for elementary school graduates to read.

The Gulpease index for NEWDOCs never surpassed 60. This result is probably due to the inescapable technical language in official documents like annual financial reports. Hence, for

our research purposes, the readability threshold value is I = 40[10]; X1 equals 1 when readability is higher than 40 (G>40), and 0 otherwise.

The predictor X2 captures the ambiguity/vagueness of management going concern disclosure. It indicates either no specific assessment of going-concern assumption or the presence of great uncertainty regarding fulfilment of financial obligations for the following 12 months, consistent with Mayew et al. (2015). X2 equals 1 if the going concern requirement is not clearly stated in NEWDOC and/or when there is uncertainty about this subject, and 0 otherwise. If management expresses going concern assumption in vague terms and/or does not use specific keywords,[11] then X2 takes the value 1. Following Mayew et al. (2015), we read NEWDOCs for all the firms and flagged disclosures analysing going concern assumption or discussing the firm's ongoing operations. Appendix B provides examples of these statements.

Finally, the predictor X3 equals 1 when the going concern disclosures are longer than average, and 0 otherwise. The length is measured by number of words, and the average length computed on the basis of all observations is the cut-off. Table 1 provides variable definitions and descriptive statistics. The table shows that the mean (median) of the variable length is 294 (170) words and the mean value of the readability variable (proxied by the Gulpease index) is around 38. Appendix C presents detailed examples[12] of management going concern statements excerpted from the MD&A and the notes, consisting of one statement from a healthy firm and one from a failed company.

To ensure the reliability and scientific relevance of the research findings (Bernard & Ryan, 2010; Milne & Adler, 1999; Neuendorf, 2002), two independent coders extracted the NEWDOCs from the annual reports and analysed the content for the 48 observations. Their classifications were compared but no significant differences emerged.

The NEWDOCs content analysis was conducted manually, after which the collected data were analysed using SPSS Statistics software.

5. Results and Discussion

To assess our three hypotheses in regard to company status and each predictor (X1, X2, X3), we used three tools: contingency tables, Pearson's chi square test, and Pearson's *r*.

Table 2 presents the cross tabulation between company status (Y) and the disclosures' readability level (X1). We found a high level of readability for 47.9% of observations. In 73.9% of cases, high readability characterizes non-failed companies' disclosures. Among cases with a low level of disclosure readability (52.1% of the total), 72% are failed companies. It seems that these results are not influenced by the variable 'G', i.e. the type of accounting standard adopted. Indeed, a high readability level was found for 50% of IAS-IFRS adopters and for 45.8% of observations where Italian accounting standards are used.

Readability level was generally observed to improve throughout the two years prior to bankruptcy. Analysis of the variable 'P' shows high readability levels in 37.5% of observations of the second to last year and in 58.3% of observations of the last year. This trend is confirmed for both categories of companies, but particularly for failed companies, showing a doubling trend during the biennium (2–4 cases), when the disclosures are highly readable, whereas well-performing companies experienced a 43% increase (7–10 cases).

Table 3 presents the cross tabulation between company status (Y) and the going concern statement (X2). Results show that in 60.4% of observations, the going concern requirement is addressed in the disclosures and full compliance is claimed. Of these cases, 79.3% are well-performing companies, while the remaining 20.7% are failed companies. In 39.6% of our observations, we noted no specific assessment of going-concern assumption or the presence of

Table 1. Variable definitions and descriptive statistics.

Panel A: Variable definitions

Variables	Coding
Y = Company status	1 = failed 0 = non-failed
G = Group	1 = the company adopts IAS-IFRS 0 = the company adopts Italian Civil Code and national accounting standards
P = Period	1 = last year considered 0 = second to last year considered
X1 = Readability level	1 = high readability level 0 = low readability level
X2 = Going Concern disclosure	1 = full compliance with the going concern assumption is not ensured, as managers indicate great uncertainty that the business will meet its financial obligations for the following 12 months, and/or the assessment of going-concern assumption is unspecified. 0 = full compliance, with the going concern assumption ensured (adapted from Mayew et al., 2015)
X3 = Length	1 = higher than the average 0 = lower than the average

Panel B: Descriptive statistics

Variable	Mean	Maximum	Minimum	Median	Standard deviation
Length (number of words)	294	1251.20	24	169.6	176.63
Readability (Gulpease Index)	37.87	51.41	27.86	38.21	5.12

great uncertainty regarding fulfilment of financial obligations for the following 12 months. The 39.6% consists of failed companies and one healthy firm.

The impact of accounting standards (grouping variable 'G') on these results is low. In 66.7% of cases involving Italian accounting standards and 54.2% of cases involving IAS-IFRS, going concern is confirmed. Within both groups, full compliance with this assumption is claimed by virtually every well-performing company, i.e. 75% of Italian accounting standards users and 84.6% of IAS-IFRS adopters. All cases in which the going concern assumption is not clearly addressed or uncertainties emerge are failed companies, with the sole exception of one well-performing company that used IAS-IFRS.

The variable 'P' has no significant impact on healthy companies. Conversely, with regard to failed companies, annual financial reports exhibit increasing doubts and uncertainties on going

Table 2. Contingency table: company status and level of disclosure readability.

			Level of disclosure readability	
			High	Low
Accounting Standards (variable 'G')				
Italian Civil Code and accounting standards (G=0)	Total observations	Number of observations	11	13
		% in failed/non-failed category	45.80%	54.20%
		% in the same readability category	100.00%	100.00%
		% on the total	45.80%	54.20%
	Total observations	Number of observations	12	12
IAS-IFRS		% in failed/non-failed category	50.00%	50.00%
(G=1)		% in the same readability category	100.00%	100.00%
		% of total	50.00%	50.00%
Year end (variable 'P')				
	Total observations	Number of observations	9	15
$n-1$		% in failed/non-failed category	37.50%	62.50%
(P=0)		% in the same readability category	100.00%	100.00%
		% on the total	37.50%	62.50%
	Total observations	Number of observations	14	10
n		% in failed/non-failed category	58.30%	41.70%
(P=1)		% in the same readability category	100.00%	100.00%
		% of total	58.30%	41.70%
Total				
All observations	Non-failed firms	Number of observations	17	7
		% in failed/non-failed category	70.80%	29.20%
		% in the same readability category	73.90%	28.00%
		% of total	35.40%	14.60%
	Failed firms	Number of observations	6	18
		% in failed/non-failed category	25.00%	75.00%
		% in the same readability category	26.10%	72.00%
		% of total	12.50%	37.50%
	Total observations	Number of observations	23	25
		% in failed/non-failed category	47.90%	52.10%
		% in the same readability category	100.00%	100.00%
		% of total	47.90%	52.10%

Table 3. Contingency table: company status and going concern statement.

			Going concern assumption	
			Assessed	Non-assessed
Accounting Standards (variable 'G')				
Italian Civil Code and accounting standards (G=0)	Non-failed companies	% failed/non-failed category	100.00%	0.00%
		% the same going-concern category	75.00%	0.00%
	Failed companies	% failed/non-failed category	33.30%	66.70%
		% in same going-concern category	25.00%	100.00%
	Total observations	% failed/non-failed category	66.70%	33.30%
		% in same going-concern category	100.00%	100.00%
IAS-IFRS (G=1)	Non-failed companies	% failed/non-failed category	91.70%	8.30%
		% in same going-concern category	84.60%	9.10%
	Failed companies	% failed/non-failed category	16.70%	83.30%
		% in same going-concern category	15.40%	90.90%
	Total observations	% failed/non-failed category	54.20%	45.80%
		% in same going-concern category	100.00%	100.00%
Year end (variable 'P')				
$n-1$ (P=0)	Non-failed companies	% failed/non-failed category	91.70%	8.30%
		% in same going-concern category	73.30%	11.10%
	Failed companies	% failed/non-failed category	33.30%	66.70%
		% in same going-concern category	26.70%	88.90%
	Total observations	% failed/non-failed category	62.50%	37.50%

(*Continued*)

Table 3. Continued

			Going concern assumption	
			Assessed	Non-assessed
		% in same going-concern category	100.00%	100.00%
N	Non-failed companies	% failed/non-failed category	100.00%	0.00%
(P=1)		% in same going-concern category	85.70%	0.00%
	Failed companies	% failed/non-failed category	16.70%	83.30%
		% in same going-concern category	14.30%	100.00%
	Total observations	% failed/non-failed category	58.30%	41.70%
		% in same going-concern category	100.00%	100.00%
All observations	Non-failed companies	Number of observations	23	1
		% failed/non-failed category	95.80%	4.20%
		% in same going-concern category	79.30%	5.30%
		% of total	47.90%	2.10%
	Failed companies	Number of observations	6	18
		% failed/non-failed category	25.00%	75.00%
		% in same going-concern category	20.70%	94.70%
		% of total	12.50%	37.50%
	Total observations	Number of observations	29	19
		% failed/non-failed category	60.40%	39.60%
		% in same going-concern category	100.00%	100.00%

Table 4. Contingency table: company status and disclosure length.

		Length	
		Lower than the average	Higher than the average
Accounting standards (variable 'G')			
Non-failed companies	Number of Observations	22	2
	% failed/non-failed category	91.70%	8.30%
	% the same length category	81.50%	9.50%
	% of total	45.80%	4.20%
Failed companies	Number of observations	5	19
	% failed/non-failed category	20.80%	79.20%
	% the same length category	18.50%	90.50%
	% of total	10.40%	39.60%
Total observations	Number of observations	27	21
	% failed/non-failed category	56.30%	43.80%
	% the same length category	100.00%	100.00%
	% of total	56.30%	43.80%

concern as bankruptcy approaches: 66.7% of failed companies do not ensure going concern in the second last year prior to default, and this percentage increases to 83.3% in the last year.

Table 4 presents the cross tabulation between company status (Y) and disclosure length (X3). It shows that in 43.8% of cases, the going concern statement is longer than average, and that within this group, 90.5% of observations pertain to failed companies. Conversely, among the 56.3% of short disclosures, 81.5% are non-failed companies. This trend is substantially confirmed for both IAS-IFRS users and Italian accounting standards adopters. Thus, accounting standards do not appear to be a significant discriminant variable in regard to disclosure length. The same results are noted for the grouping variable 'period,' which has no significant impact on the general trend.

Table 5 presents the Pearson's chi square test and the Pearson's *r* confirming all our research hypotheses. It shows a significant correlation (Sig. < 0.005) between outcome (Y) and each predictor discussed above (X1, X2 and X3). Grouping variables do not affect these findings. The Pearson's chi square test is judged unsuitable when a sample is too small, but this is not the case here, since the assumption that expected results are greater than 5 is always verified.

The Pearson's *r* measures the direction and size of relationships. All correlations are strong: in particular, the strongest associations are, in descending order, the going concern statement ($r = 0.724$), disclosure length ($r = 0.714$) and readability level ($r = -0.459$).

Overall, our three hypotheses are supported. First, there is a negative correlation between disclosure readability level and default ($r = -0.459$). Similar to the findings of prior studies (Merkl-Davies & Brennan, 2007; Smith & Taffler, 1992), our results reveal that disclosure readability tends to improve together with corporate performance. Consistent with IMT and the impression management argument, our findings suggest that companies intending to hide their default risk ensure that their text is difficult to read. To skirt the subject and divert stakeholders' attention, much of the disclosure is ambiguous, incomplete, obscure, or superfluous.

Second, we note a strong positive correlation between opacity and uncertainty in the statement on the going concern assumption and the default ($r = 0.724$). This result is consistent with IMT, the obfuscation argument, and prior studies (Aerts, 1994; BenYoussef & Breton, 2018; McCornack, 2008; Rutherford, 2005; Smith & Taffler, 2000). IMT (McCornack, 2008) explains methods used by the sender to confuse the readers, including leaving out essential information

Table 5. Summary of propositions.

			Pearson's Chi-square		Pearson's correlation coefficient *r*			
							BC 95% Confidence interval	
Hypothesis	Predictor	Control variables	Value	Sig. (one-tailed)	Value	Sig. (one-tailed)	Lower boundary	Upper boundary
		None	10.101	0.002	−0.459	0.001	−0.709	−0.169
		G = 1	6.000	0.020	−0.500	0.006	−0.837	−0.086
No. 1	X1	G = 0	4.196	0.050	−0.418	0.021	−0.758	−0.064
		P = 1	6.171	0.018	−0.507	0.006	−0.832	−0.151
		P = 0	4.444	0.045	−0.430	0.018	−0.822	−0.022
		None	25.176	0.000	0.724	0.000	0.523	0.882
		G = 1	13.594	0.000	0.753	0.000	0.486	1.000
No. 2	X2	G = 0	12.000	0.001	0.707	0.000	0.486	0.919
		P = 1	17.143	0.000	0.845	0.000	0.655	1.000
		P = 0	8.711	0.005	0.602	0.001	0.239	0.911
		None	24.466	0.000	0.714	0.000	0.495	0.882
		G = 1	10.971	0.001	0.676	0.000	0.378	0.920
No. 3	X3	G = 0	13.594	0.000	0.753	0.000	0.418	1.000
		P = 1	13.594	0.000	0.753	0.000	0.450	1.000
		P = 0	10.971	0.001	0.676	0.000	0.367	0.919

and providing uncertain information (BenYoussef & Breton, 2018). Our empirical analysis indicated that companies try to avoid the topic at hand by using the former.

It seems that highly performing companies tend to clearly specify in the notes that the going concern assumption is confirmed. Conversely, poorly performing companies tend to avoid discussing going concern assumption, mainly in the MD&A. They constantly explain uncertainties and risks regarding the future of the business and attribute them to external causes (e.g. general economic crisis, industry crisis, credit crunch, etc.). Lastly, they fail to explain that the going concern assumption is not satisfied. In our sample, going concern failure is clearly stated in only three statements in the 24 observations of failed companies. This indicates that most of the failed companies circumvent outside inves- tigation of the going concern assumption despite this verification being mandated by the accounting standards.

Third, a significant positive correlation between disclosure length and default is confirmed ($r = 0.714$). Accordingly, whether a company wants to obfuscate or wishes to be informative by providing additional information about its crisis status, it will rely on excessive wordiness to substantiate bad performance, minimize difficulties, and convolute the issue. Conversely, when the going concern is certain, the company will explain this assumption in only a few words.

All hypotheses are supported for the two grouping variables, i.e. accounting standards adopted and reporting year. These findings give rise to two considerations. First, Italian and IAS-IFRS regulations on going concern assessment are so similar that no significant differences in company approach to disclosure based on the accounting standards used can be found. Second, as mentioned in the section on 'The going concern statement', it takes time for a crisis to develop, and certainly more than only two years. To better analyse this evolution, we would need to examine more than two annual financial statements.

6. Conclusion

The purpose of this study is to explore the correlation between various indicators (going concern statement, readability, and length) and occurrences of default of Italian private companies. All our hypotheses are supported. The findings show that the disclosures of defaulting companies contain or exhibit (1) low readability, (2) confusing information, and (3) a lengthy going concern statement compared to non-defaulting firms. It seems that defaulting Italian companies attempt to hide their default risk.

This study makes four contributions. First, it explores the Italian context, contrary to prior literature that provides evidence from the UK, the US, Australia, or other country settings. To the best of our knowledge, this is the first study to analyse Italian notes and MD&A.

The second original aspect is the object of the analysis. Prior studies were largely based on corporate discretionary disclosures (e.g. chairman's statement or letter to shareholders), and more important, on entire documents, combining and mixing different contents and thereby con- veying conflicting and misleading signals. The current research focuses on a specific and man- datory piece of information – the going concern statement. It found strong evidence regarding the correlations between the characteristics of the going concern statement and company default. Our findings support Dainelli et al.'s (2013) suggestion and contribute to signalling theory by asserting that studies must focus on homogeneous pieces of information to accurately capture the significant signals for default prediction.

The third key point is related to our methodology. The Gulpease index, a specific measure calibrated to the Italian language, was adopted to assess readability level. To the best of our knowledge, this index has never been applied to corporate financial statements. The correlation between disclosure readability levels, computed based on this index, and company default is sig- nificant and consistent with prior studies (e.g. Smith & Taffler, 1992) that examined several con- texts using other readability indexes.

The fourth point relates to the two grouping variables used, i.e. accounting standards and reporting year, which are factors that have been neglected by prior studies. Both variables do not affect our research findings significantly, which leads us to make the following conclusions. On the one hand, Italian accounting regulations and IAS-IFRS are so similar in defining going concern assessment that the type of accounting standards adopted appears to have no effect on the related disclosures. Therefore, regarding Italian companies, a single default predictive model pertaining to the going concern statement could be useful for national accounting standard users as well as IAS-IFRS adherents. On the other hand, our results confirm that a business crisis is not a sudden event, and that the going concern statement does not change substantially over a short period of two years. Therefore, when preparing default predictive models based on narrative disclosures, scholars are urged to determine whether a longer timeline should be considered.

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Notes

[1]Previous studies obtained various accuracy levels: e.g. Tennyson et al. (1990) highlight an accuracy level of up to 85–95%, while Danovi and Quagli (2012) indicate accuracy levels between 50% and 85%.

[2]Financial distress, default and bankruptcy are primary stages in the life cycle of firms (Wruck, 1990; Koh et al., 2015). Distress can lead to forced liquidation or bankruptcy. Numerous studies equate financial distress with likelihood of bankruptcy (Altman, 1968; Altman et al., 1977), while other studies consider defaulting firms to be distress-bankrupt firms (e.g. Lin et al., 2012) given their degree of correlation (Beneish & Press, 1995). In this study, failure is defined as winding up by court order and is captured through the Altman *Z*-score ($Z < 1.23$). We use default, distress, failure, and bankrupt interchangeably.

[3]The financial reports of Italian companies, essentially family-owned organizations, are particularly directed to creditors' needs. Creditors include banks, suppliers, and workers. Banks have access to inside information, but suppliers do not. During the economic crisis, many outstanding companies failed after some years because their major clients failed and thus stopped payments, creating a vicious cycle. If suppliers would have been informed about their clients' crisis conditions in a timely manner, they would have stopped sales on credit and avoided their own crisis.

[4]Opportunistic behaviour in financial reporting is more complicated, especially figures, than manipulating narrative disclosures, and it brings an increased risk of fraud.

[5]The four maxims of IMT are quantity, quality, manner and relation. Our study focuses on readability and clarity information, which falls under the quantity and manner maxims. We do not discuss the other two maxims as they are not relevant to this study. Future research could examine quality and relation maxims.

[6]Private companies were selected because they can choose between IAS-IFRS and Italian accounting standards, whereas Italian public companies have been obligated to use only IAS-IFRS since 2005.

[7]AIDA is a database of Italian firms. It can be found at https://aida.bvdinfo.com/version-2017116/home.serv?product=AidaNeo.

[8]The sample size could be a limitation for broad generalization.

[9]Although combining the notes and MD&A sections provide the full picture of going concern assessment and underlying conditions, it could be a limitation for measuring length. Some researchers consider merging the two sections could be an issue as the sections could be saying similar things with different words therefore the length measure would be duplicating the effect. However, in our study the risk of duplication is infinitely low because the issue has been arisen only in two cases and has been solved.

[10]We considered only the first tier because financial statement readers are most probably high school graduates.

[11]Italian keywords are: *continuità aziendale* (going concern), *liquidazione* (liquidation), *crisi economica* (economic crisis), *grave tensione finanziaria* (severe insolvency).

[12]The examples were translated from Italian to English.

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Appendices

Appendix A. Sample Composition

Match	Industrial activity	Accounting standards	Financial year end (n)	Financial year end ($n-1$)	Failed companies	Net sales n (thousands of €)	Net sales $n-1$ (thousands of €)	Z-score n	Z-score $n-1$	Non-failed companies	Net sales n (thousands of €)	Net sales $n-1$ (thousands of €)	Z-score n	Z-score $n-1$
1	Textiles	IAS-IFRS	31/12/2012	31/12/2011	Manifattura Di Valle Brembana S.R.L.	20.104	17.571	0.11	0.98	FTS S.P.A.	9.380	11.597	3.09	3.09
2	Food manuf.	IAS-IFRS	31/12/2010	31/12/2009	Magic S.P.A.	37.809	43.580	0.59	0.66	CENTRO LATTE RAPALLO S.P.A.	24.338	25.269	2.94	2.94
3	Electronics	IAS-IFRS	31/12/2007	31/12/2006	T.T. Elettromec-Canica S.R.L.	28.081	37.383	0.97	1.10	SAES ADVANCED TECHNOLOGIES S.P.A.	75.420	75.128	5.03	4.41
4	Electronics	IAS-IFRS	31/12/2011	31/12/2010	Inter-Compel S.R.L.	1.968	3.111	−0.43	1.05	ST-ERICSSON S.R.L.	5.137	5.667	2.98	2.95
5	Chemicals	IAS-IFRS	31/12/2008	31/12/2007	Wictor S.P.A.	32.402	34.508	0.86	0.70	CHUGOKU – BOAT ITALY S.P.A.	21.245	18.077	4.02	3.65
6	Mechanical	IAS-IFRS	31/12/2014	31/12/2013	Lombardia Impianti S.R.L.	6.782	14.862	−3.10	0.61	FARINGOSI HINGES S.R.L.	6.982	6.646	2.92	2.9
7	Textiles	Italian Accounting Standards	31/12/2012	31/12/2011	Grignasco1984 S. R.L.	5.705	9.091	−0.32	1.21	SATECO S.P.A.	9.063	9.276	3.43	3.08
8	Food manuf.	Italian Accounting Standards	31/12/2010	31/12/2009	Malgara Chiari & Forti S.R.L.	32.701	43.405	−0.42	0.51	FORNO D'ASOLO S.P.A.	56.666	52.004	2.95	3.32
9	Electronics	Italian Accounting Standards	31/12/2007	31/12/2006	Eis S.P.A.	7.185	16.187	−7.21	0.80	THALES ALENIA SPACE ITALIA S.P.A.	75.420	75.198	5.03	4.41
10	Electronics	Italian Accounting Standards	31/12/2011	31/12/2010	Microtel Italia S.R.L.	2.379	2.120	0.49	0.46	COLORZENITH S.R.L.	6.396	6.535	3.71	4.01
11	Chemicals	Italian Accounting Standards	31/12/2007	31/12/2006	Centerplast S.R.L.	16.972	16.306	1.00	1.20	LOXEAL SRL	17.591	15.922	4.44	4.10

(*Continued*)

Continued

Match	Industrial activity	Accounting standards	Financial year end (n)	Financial year end ($n-1$)	Failed companies	Net sales n (thousands of €)	Net sales $n-1$ (thousands of €)	Z-score n	Z-score $n-1$	Non-failed companies	Net sales n (thousands of €)	Net sales $n-1$ (thousands of €)	Z-score n	Z-score $n-1$
12	Mechanical	Italian Accounting Standards	31/12/2014	31/12/2013	Costruzioni Metalliche Prefabbricate S.R.L.	2.122	12.674	−4.65	−12.31	OFMECC SRL	6.068	5.811	6.11	3.74

Appendix B. References to Going Concern in Sample MD&As and Notes

For coding X2 = 1 (i.e. absence of or uncertainty surrounding going concern assumption)

'The accounting principles adopted in the preparation of these financial statements have been modified to take account of the fact that at the date of preparation of these financial statements the going concern assumption is no longer applicable; therefore these financial statements have not been prepared according to operating criteria.'

'It should be noted that the financial statements were prepared on the basis of operating criteria, despite the intention by the corporate bodies to put the company into voluntary liquidation. This is because the assessments made do not differ significantly from any liquidation values.'

For coding X2 = 0 (i.e. compliance with going concern assumption)

'The financial statements have been prepared with a view to the continuity of the company's business.'

'The criteria used for the preparation of these financial statements are those received on the assumption of business continuity.'

Appendix C. Examples of Going Concern Statements in the MD&A and the Notes

(1) Healthy firm

'The financial statements as at 31 December 2010 were prepared under the going concern presumption. As to management's forecast for the upcoming fiscal year, we note an upward trend in the prices of raw materials and a general increase in the cost of goods sold in a context of positive sales growth, thanks to our constant attention to product quality and our focus on meticulous customer service.'

Content Analysis:
X1 = 0 – Gulpease index < 40 ((300 × 2–10 × 378) / 65) = −48.9
X2 = 0 – The going concern disclosure is clearly stated
X3 = 0 – The going concern statement is no longer than the average for the sample
(294 words)

(2) Failed firm

'These financial statements have been prepared under the going concern presumption, which is also deemed appropriate on the basis of the considerations expressed in the management's discussion and analysis to which we refer the reader.

We cannot but reiterate the enormous difficulties facing the Italian pork sector and, consequently, the feed industry to which it is connected.'

In fact, 2010 was also a completely unsatisfactory year in terms of farmers' revenues, so much so that it actually worsened their solvency: rejected bank acceptances, requests for extensions on payments and repayment plans are now a sad daily reality.

It is embarrassing to see how our very distinctive and unique pork heritage is disappearing quickly even as the long-awaited pork labelling has been approved at the community level, making it finally possible for consumers to know whether the pork in their salami is home- grown or from the Arctic!

The foregoing cannot help but affect our company's current financial situation. In fact, without the credit facilities of Bill 46/82 and with about 2 million Euros in legal claims that former clients have deliberately filed so as not to pay for supplies (compounded by the interminable delays of Italian courts), the pending verdicts on lawsuits for significant damages levelled by the

aforementioned former proprietors for a total of 15 million Euros, and, not least, in view of the pending collection of the TVA compensation, Magic is understandably experiencing temporary financial stress which, we repeat, would not be the case if its customers paid somewhat on time. However, as it seems that the proceeds of Bill 46/82, at least from the part dealing with loans, will be paid to us by the end of September, at least two credit institutions intend to open upfront banker's acceptance lines and two important cases (the 2006 liability lawsuit and the Calier case) will finally be decided next autumn. Further, given the smaller amount needed to normalize the situation, management is absolutely confident in its presumption that the company is a going concern.

From an economic perspective, on the other hand, we have decided to reduce further the costs of personnel and outside collaborators in Italy, such that this additional reduction will lead to savings amounting to approximately 2,500,000 Euros in 2011, to which will be added another one million Euros in 2012, net of the cost of new hires. Evidently, these cuts cannot help but lead to an immediate and temporary decrease in sales, which were already recovering strongly and are projected to increase in the coming months not only with the arrival of the new agents but also with overseas sales resulting from the arrival of Dr Simon Tibble and his foreign agents.

As previously stated, the current condition of the target market and its effects on the com- pany's financial situation have required careful assessments of their possible repercussions on assets, economics and finances and consideration of the measures already stated in the previous paragraph which, despite some degree of uncertainty, especially over time, we believe will allow us to overcome the temporary difficulties imposed by the target market and by the temporary contraction of credit lines recorded in 2010.

The Board of Directors has therefore prepared a multi-year plan for the 2011–2015 financial years approved on May 29th of the current year, which provides for the achievement of a positive operating income as early as 2012 (but already an anticipated positive net income for 2011). This will be obtained structurally both through an increase in volumes and the cost containment activity already underway, which was mentioned earlier.

'The corrective measures undertaken in the operational context together with the expected financial revenues related to both the contribution pursuant to Bill 46/82, which will probably already materialize in 2011, and the conclusion of important pending cases, will therefore reasonably guarantee the Company the resources to operate in financial balance.'

Content Analysis:
X1 = 0 – Gulpease index < 40 ((300 × 10–10 × 3683) / 634) = −53
X2 = 1 – The going concern disclosure is not clearly stated. The firm declares the going concern but showing many uncertainties about the future.
X3 = 1 – The going concern statement is longer than the average for the sample (294 words)