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Risk Disclosure In The Financial Statements: An Analysis Of The Notes Of Portuguese Non-Financial Corporations

Abstract

This study aims to analyze the risk disclosure of Portuguese non-financial corporations listed in the Lisbon Euronext in 2011 and 2012. The information characteristics disseminated in risk-related material were analyzed, considering the temporal context, the quantitative or qualitative nature of the information, the nature and classification of the risk disclosed. The data for this study were collected through the content analysis of the notes to the reports and accounts (consolidated accounts) of the entities in the study population during 2011 and 2012, resulting in a population of 36 entities. The data were then submitted to univariate and bivariate analysis techniques, based on non-parametric tests, namely the Wilcoxon test. The results demonstrate that the qualitative disclosure of financial information is predominant, referring to the past, and classified as "good news". The research results are intended to contribute to the understanding of the theme, like in the case of the elements in the information disclosure based on risk-related material.

Key words: Notes, Internal Control, Disclosure, Theories to Justify Risk, Risk

Maria de Lima e Silva
M.Sc. from Instituto Superior de Contabilidade e Administração de Lisboa and Auditor at Pricewaterhouse Coopers. **Contact:** Rua Augusto Gil, 29, : Lisbon. Lisbon-Portugal. CEP.: 1000-063
E-mail: marialimsilva@gmail.com

Fábio Henrique Ferreira de Albuquerque
Ph.D. from Universidade de Extremadura and Adjunct Professor at Instituto Superior de Contabilidade e Administração de Lisboa. **Contact:** Av. Miguel Bombarda, 20, Lisbon. Lisbon-Portugal. CEP.: 1069-035
E-mail: fhalbuquerque@iscal.ipl.pt

Manuela Maria Marcelino
M.Sc. from Instituto Superior de Contabilidade e Administração de Lisboa and Superior Financial and Equity Technician, School of Pharmacy, Universidade de Lisboa. **Contact:** Av.Professor Gama Pinto, Lisbon. Lisbon-Portugal. CEP.: 1649-003
E-mail: mmarcelino@ff.ulisboa.pt

Joaquín Texeira Quirós
Ph.D. from Universidade de Extremadura and Coordinating Professor, Universidade Autónoma de Lisboa. **Contact:** Rua de Santa Marta, 56, Lisbon. Lisbon-Portugal. CEP.: 1169-023
E-mail: jquiros@ual.pt

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1. Introduction

As a result of the globalization of the economy, an increasing competition was felt, which forced the authorities to innovate in order to create value for their stakeholders. The issue of fraud, because of its economic and social component, is a highly present and relevant matter in various spheres of society.

Thus, and given the frequent disclosure of fraud cases in multinational organizations, there were two currents that more recently emerged, one in the United States of America (USA), with the advent of the Sarbanes-Oxley Act (SOX), known as the Sarbanes-Oxley Law, and another in Europe. In either case, the targets are companies listed on regulated markets, which did not prevent, however, the disappearance of economic crimes.

All entities face uncertainties, and the challenge of these entities is to determine the level of uncertainty they are willing to accept. Risk can be defined as a probability that some adverse event will occur and that affects the entity, which may come in a variety of situations and be linked to investment decisions, creating a new product, marketing strategy, market competitiveness, etc. From this point of view, risk is a factor inherent to the entity itself. Risk management allows us to identify, assess and manage risks in the face of uncertainties and integrates the process of value creation. Among other documents identified in the literature, reports and internal control models of international reference, known as the Treadway Report, Cadbury Report, Turnbull Report, Criteria of Control Framework (Coco), Committee of Sponsoring Organizations (Coso) and Control Objectives for Information and Related Technology (COBIT), all antecedentes of SOX, identify relevant issues related to risk management.

The appropriate disclosure of the accounting policies the entity adopts and the observation of qualitative characteristics that underlie the preparation of financial statements (FS) - together with the proper compliance with the accounting standards (accounting and financial reporting standards) applicable - are the first guarantee of the quality and, also, the usefulness of financial information for the various users of that information. Also relevant in the context of an entity's compulsory disclosure are the key assumptions concerning the future and other sources of uncertainty of estimates made at the balance sheet date that represent a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities during the next financial year.

In fact, the relevance of this matter is intrinsically related to the ability to have these sources of uncertainty present in the elaboration of the report, to influence the decision making of users. Note, however, that although the reporting of risk, in a broad sense, is not exclusive of FSs, the scope of the Framework (F), as a document that establishes the qualitative characteristics that financial information should observe, is limited to that information, particularly in the context of the notes. The risk disclosed in the notes is also complemented by the relevant national legislation regarding this matter.

This study aims to examine, in general terms, the risk disclosed in the annual report and accounts (RA), more precisely in the notes, of the companies listed on Euronext Lisbon during the years 2011 and 2012. After the data collection then performed, the population identified for this study consists of 36 entities. The study focuses on the mandatory disclosures in the financial reporting of entities, particularly in the notes, either through the International Accounting Standard (IAS) 1, "Presentation of Financial Statements" of the International Accounting Standards Board (IASB) or by virtue of compliance with mandatory requirements under Portuguese law, in particular the Commercial Companies Code (CCC).

The objective of this study is to analyze the information disclosed in relation to the temporal scope (backward versus (vs.) forward), the nature of the information (qualitative vs. quantitative), and also about the nature of the disclosure ("good" vs. "bad" news) and the respective classification of the risk disclosed (financial vs. non-financial).

The disclosure of risks for the stake of this study was classified into two main categories:

- Financial risks, including market, liquidity, credit and capital risks; and
- Non-financial risks, including operational, business (or strategic) and legal (or compliance) risks.

In this study, the risk analyzed includes the mandatory disclosure of the "main premises for the future and other main sources of uncertainty of the estimates made", in accordance with IAS 1 (∫116) and specific Portuguese legislation (CCC).

This research thus fits into the context of risk disclosure in the consolidated financial reporting of (non-financial) corporations in Portugal, based on the analysis of the notes. In this sense, the selection of this source of information collection is one of the main motivations for conducting this research, to the extent that most studies related to this issue, namely risk disclosure, has mainly focused on the analysis of the management, and not specifically on the financial statements, which include the notes.

2.Theoretical framework

Most studies conducted on risk disclosure are based on empirical evidence, departing from regulations of Anglo-Saxon origin (Abraham & Cox, 2007; Deumes & Knechel, 2008; Lajili & Zéghal, 2005; Linsley & Shrives, 2006 ; Oliveira, Rodrigues & Craig, 2011a) as well as within continental countries (Beretta & Bozzolan, 2004).

As a consequence of the publication by the main regulators of standards or specific recommendations on the disclosure of information on financial instruments, particularly derivatives, several authors have been concerned with studying the degree of compliance with the disclosure requirements contained in the standards, or with the impact of the obligation to adopt a certain standard in the information financial entities disclose. On this subject, Lemos and Rodrigues (2011, p. 10) state that "although the banks use derivatives, [...] the information they disclose in their accountability documents [...] is still quite limited" . In the study by Lemos and Rodrigues (2011), the authors analyzed the level of disclosure on derivatives by part of the 34 financial institutions that operated in Portugal during the financial year 2009. This study revealed that qualitative information is more frequently disclosed than quantitative information. Also, Alves (2005) followed a similar analysis to analyze the degree of compliance with the recommendations of the Basel Committee (on operational risk), for the largest banks in Brazil and nine US and European banks. The author identified an increase in the level of disclosure between 2003 and 2004, both in Brazil and abroad, and that the banks in the US and Europe released more information than banks in Brazil. Linsley and Shrives (2006) analyzed the information disclosed in the largest banks in the UK and Canada and found that the main focus of the information disclosed is quantitative information and information on management policies.

In Portugal, Oliveira et al. (2011a) analyzed the annual reports of 101 Portuguese commercial banks who disclosed the information at the Bank of Portugal on December 31st 2007. According to the results, the disclosure of risk-related information is reduced and based on entities that adopt the national standards. These results corroborate the view that the adoption of the IAS / International Financial Reporting Standarts (IFRS) has led to an increased disclosure of risk-related subjects.

Guthrie, Petty, Youngvanich and Ricceri (2004) report that the annual report is a source to obtain useful information, since the managers of corporations use the reports as an importante vehicle to signal information to the market. It is perhaps the document the entities disclose most and on a regular base.

Although the corporations regard the management report as a communication tool, other authors in recent years have used other media as a source of information. This is the case of Hernández-Madrigal, Blanco-Dopico and Aibar-Guzmán (2012), who analyzed the "corporate governance annual reports" published on the company websites.

The companies' annual report is a formal document that contains quantitative and narrative information and graphs, and enables the stakeholders to obtain information about the financial position and expected direction of the entity. It is also a response to mandatory disclosure requirements of regulators (Yampolskaya, 2006). The annual report shall contain both financial and non financial information in order to provide a true and comprehensive picture of the entity's situation. The information in the report needs to be reliable in order to avoid market failures (Johansson & Thöonberg, 2011).

One of the possible risk classifications serves to analyze the amount of numerical / quantitative information and the non-numeric / qualitative information disclosed by the entities in this sphere. These studies rest on the assumption that entities disclose more strictly qualitative information when compared to the quantitative information (Beretta & Bozzolan, 2004; Lajili & Zéghal, 2005; Linsley & Shrives, 2006; Oliveira et al, 2011a).

Studies related to the risk of disclosure based on content analysis of the information disclosed based on a previous classification of risks in risk categories or types.

Content analysis is used from a qualitative or quantitative perspective (Hernández-Madrigal et al., 2012). The classification of risks in these categories is fundamentally based on the creation of a disclosure index associated with the type of risk defined, which in a next phase, serves to analyze the hypotheses defined in the study (Beretta & Bozzolan, 2004 ; Deumes & Knechel, 2008). In a quantitative perspective, the way to analyze the extent of compliance of the risk disclosure includes: "counting" phrases (Beretta & Bozzolan, 2004; Ereira, 2007; Lajili & Zéghal, 2005; Linsley & Shrives, 2006; Michiels, 2008 ; Oliveira et al, 2011a) by registering the number of words (Abraham & Cox, 2007;. & Lajili Zéghal, 2005), or registering the number of paragraphs (Hassan, 2012).

In short, with regard to the type of risks, the classifications relating to control risks, financial risks, operational risks, business venture or strategic risks, legal risks, in addition to environmental and safety risks (Ereira, 2007; Hernández-Madrigal et al, 2012; Höring & Gründl, 2011; Jiang, 2008; Kongprajya, 2010; Meijer, 2011; Michiels, 2008; Oliveira & Rodrigues, 2011; Puga, 2012; Vandemaele, Vergauwen & Michiels, 2009; Yampolskaya, 2006), or approaches based on risks identified in international references of internal control models (Deumes & Knechel, 2008; Tröster, 2005). In the study by Linsley and Shrives (2006), the authors concluded that the disclosure of financial risk was well below the disclosure of the operational risk, with only 23%.

In the literature discussed, there were also studies that classify the risk information depending on the nature of the content of the information disclosed as "good", "bad" or "neutral" (Ereira, 2007; Linsley & Shrives, 2006; Oliveira & Roberts, 2011; Puga, 2012). Linsley and Shrives (2006) in particular concluded that the nature of the disclosure of bad news is approximately 20%, good news 26% and neutral news 54% of the disclosure.

Another risk rating classifies them according to a backward-looking or forward-looking perspective (Beattie, Mcinnes & Fearnley, 2004; Beretta & Bozzolan, 2004; Lajili & Zéghal, 2005; Linsley & Shrives, 2006;. Oliveira et al, 2011a; Puga, 2012; Solomon, Solomon, & Joseph Norton, 2000). Some studies, like the study by Shrives and Linsley (2006), demonstrate the reluctance in backward-looking information disclosure, whereas studies like Beattie et al. (2004), Beretta and Bozollan (2004) and Puga (2012) showed the opposite.

Solomon et al. (2000) also found that investors prefer detailed / specific information about the risks to comprehensive risk information.

The study by Oliveira et al. (2011a) differs from the results by Shrives and Linsley (2006). The difference can be attributed to different environmental contexts of the studies, i.e. there is much less emphasis on the interests of investors and the information needs of securities markets in Portugal than in the UK.

According to several authors, to enhance the quality of risk disclosure, it is recommended that the entities quantify, to the extent possible, the extent of the risk (Beretta & Bozzolan, 2004; Linsley & Shrives, 2006), which allows the users of the disclosed information to calculate its impact on the entity. As it is difficult to quantify these risks, since they are associated with various obstacles (such as lack of data), more non-monetary information is disclosed in the statements (Ereira, 2007).

According to the evidence from the theories that justify voluntary disclosure, the two most frequente theories in the literature as justifications of voluntary reporting are the Agency theory and Signalling theory.

The Agency theory and the theory of Legitimacy indicate that larger entities have greater public interest and, as such, have additional requirements for disclosure, supporting the existence of a relationship and / or association and / or significant differences between the size of entities and the risk disclosure (Beattie et al., 2004; Deumes, 2008; Ereira, 2007; horing & Gründl, 2011; Jiang, 2008; Kongprajya, 2010; Linsley & Shrives, 2006; Meijer, 2011; Rajab & Handley- Schachler, 2009; Tröster, 2005; Vandemaele et al, 2009;. Yampolskaya, 2006).

The Signalling theory states that the most profitable entities may want to signal their situation, disclosing further information in this case to be able to distinguish themselves from the less profitable entities in the market, this to explain the reasons for their lesser performance and to guarantee the expectations of future growth to the market. Therefore, some people consider that the risk disclosure level is related with the performance (Ereira, 2007).

The Agency theory also supports hypotheses about the relation and / or association and / or analysis of differences between the disclosure of risk-related matters and the entity's own risk (particularly based on corporate debt), profitability and the dividend distribution policy (Ereira, 2007; Höring & Gründl, 2011; Kongprajya, 2010; Michiels, 2008; Oliveira & Rodrigues, 2011; Rajab & Handley-Schachler, 2009; Tröster, 2005; Vandemele et al, 2009), as well as between the sector or market of the analyzed entities (Deumes, 2008; Jiang, 2008; Kongprajya, 2010; Oliveira & Rodrigues, 2011; Rajab & Handley-Schachler, 2009; Yampolskaya, 2006).

In summary, in the review of the various studies on the level of risk disclosed by the companies, whether voluntarily or compulsorily, in general, the positive relationship between the level of disclosure and the size of the entity is found. This positive correlation between the size of the entity and the amount of information disclosed can be explained by the fact that the large entities have a larger number of stakeholders whom they have to report risk-related information to (Linsley & Shrives, 2006); or because these entities face greater risks and, consequently, present a larger amount of risk-related information (Yamploskaya, 2006).

The relevance of the entity dimension in the risk disclosure context is easily understood by the Agency theory, since it highlights the fact that, the larger the company, the higher the agency costs, due to the existence of information asymmetries (Zadeh & Eskandari, 2012).

With regard to indebtedness, the developed studies intend to analyze the relation between the report made by the entities and their level of indebtedness. In the light of the Signalling theory in its relation to the cost of capital, namely, the more the entities need to resort to borrowing, the greater the amount of information disclosed (Ereira, 2007).

Semper and Beltran (2014), inter alia, analyzed whether the cost of the company's equity is, or is not, related to the risk disclosure. The results obtained from the analysis of the information disclosed in the annual management reports of non-financial companies listed on the Madrid Stock Exchange from 2007 to 2009 revealed a statistically significant and positive relationship between the cost of equity and dissemination of financial risk. This relation was not found between the cost of equity and the disclosure of non-financial risk. In this sense, Semper and Beltran (2014) suggest that the companies' risk disclosures seem to introduce unknown contingencies and risk factors, and not just an update of information on known risks.

Other studies have focused on the corporate governance component, which includes the analysis of relationships / associations, or significant differences depending on the existence or not of an audit committee or the number of non-executive managers who take part in the governing bodies, audit quality, as well as the ownership structure of capital and composition of the governing bodies, namely, the concentration of capital and the shares not held by majority shareholders (Abraham & Cox, 2007; Deumes & Knechel, 2008; Hernández-Madrigal et al, 2012; Höring & Gründl, 2011; Jiang, 2008; Michiels, 2008; Tröster, 2005; Vandemaele et al, 2009).

One point the most recent studies on risk disclosure seem to have in common is the improved disclosure observed in this area, particularly by virtue of the greater demands prescribed by regulators (either by implementing the recommendation of new forms of reporting or by requiring compulsory reporting).

An example is the study of Rajab and Handley-Schachler (2009), based on 53 non-financial entities listed in the United Kingdom. The authors found that disclosure increased over certain time periods (1998-2000, 1998-2004, 2001-2004), as a result of the application of regulations. The study by Liu (2006) contained a population of seven telecommunication entities, listed from 2001 to 2006, also from the UK, and found increased disclosure in the period 2001-2002 and 2005-2006 (the latter with a higher percentage number of words related to the disclosure of risk). Oliveira et al. (2011a) evaluated 42 companies listed on the Securities Market Commission (CMVM) and reported no increase in the amount of risk information disclosed as a result of the adoption of IAS and IFRS. In the study by Hernández-Madrigal et al. (2012), the review period was divided into two parts. The first consisted of the pre-release period and the second was the post-release period between 2006 and 2009. The first period was the years 2004 and 2005 and was preceded by the publication of important codes and standards, both in Spain, with the Olivencia Code and the Aldama Code, and in other countries, such as the publication of SOX, the Winter Report and the Coso. The authors identified an increase, however small, in the disclosure of quantitative and detailed information on the risks, and gradual improvement in the average value of the risk of disclosure rates in post-release period compared to the pre-release period, thus indicating the influence of the publication of the law. The results also suggest the entities' effort to improve the information disclosed, although limited to the minimum requirements established by law, not considering other information useful to the user / investor.

Abraham and Shrives (2014), in turn, developed a model based on three questions that can help to assess the entities' risk disclosure, namely: "information disclosure should be both specific to the company and regularly updated" ; the "corporate managers must assess the risk disclosures on a regular basis in the annual reports"; and "disclosures in the annual reports should incorporate the discussion of real experiences of risk." According to the authors, the research on the topic identifies that the managers need to consider these three issues in relation to the risk disclosures, helping to improve the quality of information. The proposed model was then applied to four companies in the food production and food processing sector belonging to the FTSE 100 and, in order to assess how the risk disclosures have changed over time, the annual reports for the financial years 2002-2007 were analyzed. The results suggest that corporate managers prefer to provide disclosures that are symbolic rather than substantive. Abraham and Shrives (2014) argue that institutional factors and ownership costs can contribute and explain this behavior. The authors also call attention to the role that stakeholders, in particular managers, users, regulators and auditors can play in improving the quality of risk reports.

As statistical techniques identified in several studies, regression analysis and / or statistical correlation techniques were identified, which include the Pearson and Spearman correlation tests, as well as other multivariate analysis techniques based on reliability analysis, factor analysis and principal components analysis techniques (Deumes, 2008; Höring & Gründl, 2011; Meijer, 2011; Michiels, 2008; Puga, 2012; Taylor, Tower & Neilson, 2010; Tröster, 2005; Vandemaele et al, 2009), according to the normal distribution or not of the variables. In addition, studies are identified that are based on tests of differences of means, such as the t-test, Mann-Whitney's U-test or the sign test and the Wilcoxon test and ANOVA and Kruskal-Wallis analyses of variance (Hernandez-Madrigal et al, 2012;. Meijer, 2011; Michiels, 2008; Oliveira & Rodrigues, 2011; Tröster, 2005; Vandemaele et al, 2009).

Other studies also seek to identify how the perception of risk influences the information users' behavior, particularly with regard to purchasing decisions and short positions by investors and / or the judgment of the analysts (Deumes, 2008; Slovic, Fischhoff & Lichtenstein, 1980).

Risk analysis from the perspective of users also gains particular importance in that, according to Slovic et al. (1980), the risk disclosures are likely to be interpreted by FS users in a different way than originally intended.

In the Portuguese context, the studies by Ereira (2007) and Oliveira and Rodrigues (2011) have been identified. However, in these studies, the notes were not the sole focus of the analysis.

3. Method

In this chapter, the general methodological lines followed to conduct this study are presented.

The objective of this study is the analysis of compulsory disclosure materials relating to the risk identified in financial reporting (specifically in the notes), identified in the various legal sources, whether through IAS 1 or in compliance with mandatory requirements under Portuguese law, in particular CCC.

In this sense, the risk-related disclosure was classified into various categories or key attributes. Four hypotheses were created (H1-H4), deduced from the literature review performed in this area and in order to meet the objectives set for this study. The development of each of the hypotheses will be presented in the following points.

3.1 Research hypotheses

3.1.1 Financial *vs.* non-financial disclosure

Although the companies have improved the information disclosure about financial risks, this disclosure does not provide enough information about the financial position of the entity, as its financial performance is also affected by the non-financial risk (Beretta & Bozzolan, 2004). It is therefore necessary to assess whether the trend towards risk disclosure is more related to financial or non-financial information.

In recent years, the major standardizers have progressively extended the scope of financial reporting, so that the risks and uncertainties inherent in the companies' activity can be available to users (although different subtypes within the concept of risk have been treated differently). Thus, some IAS / IFRS, particularly corporate law in European terms came to incorporate various aspects of risk in the notes to the Financial Statements, namely the management and risk disclosure requirements arising from financial instruments and the effect of contingencies on assets and liabilities. One can therefore say, in general terms, that these entities tend to introduce the disclosure of risk in financial reporting in a fragmented way, with special focus on financial risk.

Thus, the financial risk is directly introduced in the accounting and financial reporting standards or corporate law (CCC) through disclosure requirements, allowing users to discover the exposure of entities to these risk factors. The remaining risk types are presented in many cases, in turn, as voluntary disclosure requirements (Lajili & Zéghal 2005) or such requirements are defined in less precise terms, leaving it up to the administrators to decide on the best form of disclosure (Dobler, 2008; Serrasqueiro, 2011).

Despite the aforementioned trend, Beretta and Bozzolan (2004), Ereira (2007), Kongprajya (2010), Linsley and Shrives (2006), Liu (2006) and Serrasqueiro (2011) concluded that the number of disclosures relating to the non-financial risk was significantly higher than the number of financial risk disclosures. Since this study focuses on the notes, a larger volume of relating to the financial risk is expected, since the main requirements are focused on this risk. Thus, the following hypothesis is defined:

H1: The disclosure of risk-related aspects is significantly higher with regard to financial than non-financial risk.

3.1.2 The disclosure of "good news" *vs.* "bad news"

Assuming that RC is a means for organizations to control their reputation in the market (Kongprajya, 2010; Linsley & Shrives, 2006), entities tend to prefer spreading "good news" (positive). Therefore, the disclosure of the "good news" is expected to go beyond the disclosure of the "bad news", since the companies tend to cover up the "bad news" so as not to damage their reputation in the market (Skinner, 1994) . The cause of this "bad news" is usually attributed to events external to the entity (Abrahamson &

Park, 1994; Beretta & Bozzolan, 2004), so that the nature of the information disclosed can be understood through the theory of attribution.

On the other hand, if the companies do not disclose "bad news", that would be interpreted as if they were hiding a problem (Deegan & Gordon, 1996). Thus, based on the theory of legitimacy, the administrators decrease the proprietary costs and thus increase their credibility in the market, by disseminating the "bad news" (Oliveira et al., 2011a).

In the study by Serrasqueiro (2011), although without great discrepancy in the number of registrations, the information disclosed regarding "bad news" had to be superior to the "good news", while Ereira (2007), Linsley and Shrives (2006) and Oliveira et al. (2011a) concluded that the information disclosed had been mainly positive. In this sense, and based on the previously presented literature review, the next hypothesis is defined as follows:

H2: The disclosure of risk-related aspects is significantly higher for "good news" than for "bad news".

3.1.3 "Forward" *vs.* "backward" disclosure

One of the problems associated with future information is its uncertainty. However, the information concerning the future is more useful to users than information concerning past risks (Linsley & Shrives, 2006).

Linsley and Shrives (2000) state that the disclosure of forward information is an uncertain information, and administrators are afraid that their insecurity can expose them to possible complaints, while the forward information is most useful to stakeholders for their decision making than the backward information. The directors are probably reluctant to disclose information about the future risk, as well as to quantify that risk.

Although Linsley and Shrives (2006) and Serrasqueiro (2011) have noted that the information disclosed on the risk presented was forward-looking, in studies by Beretta and Bozzolan (2004), Ereira (2007), Lajili and Zéghal (2005), Liu (2006) and Oliveira et al. (2011a, 2011b), the information concerning the risk tended to be focused on the past.

Thus, in view of the reality identified in most studies, the following hypothesis was defined:

H3: The disclosure of risk-related aspects was significantly higher for backward than for forward information.

3.1.4 "Qualitative" *vs.* "quantitative" information

According to some authors, to improve the quality of information provided, the various entities have to quantify as much as possible the extent of the risk they are subject to (Beretta & Bozzolan, 2004; Linsley & Shrives, 2006). Quantitative information gains relevance for many investors (Oliveira et al., 2011a), since this risk quantification provides a clearer picture of the expected result of that risk (Kongprajya, 2010), which reduces the uncertainties and improves transparency and market efficiency (Oliveira & Rodrigues, 2011). Also, Beretta and Bozzolan (2004) report that this quantification of risk by the entities enables many information users to have an idea of the impact these risks will have on the entity.

In practice, this risk quantification in monetary terms is not easy to apply (Kongprajya, 2010). One of the problems in the quantification of these risks is the subjectivity, since this information depends largely on the judgment of who prepares it (Kongprajya, 2010); another issue relates to the lack of data and possible future censorship (of the administrators for having used common sense to estimate the extent of the risk, when the result of this risk differs from the initially disclosed estimate) (Linsley & Shrives, 2006).

These problems to disclose quantitative information makes the entities be more prone to disclose more qualitative information than quantitative. Beretta and Bozzolan (2004), Lajili & Zéghal (2005), Linsley & Shrives (2006), Oliveira et al. (2011a) and Serrasqueiro (2011) noted that the disclosed information on the risk is essentially qualitative. Hence, in the same sense as previous studies, the next hypothesis is presented as follows:

H4: The disclosure of risk-related aspects is significantly higher for qualitative than quantitative information.

3.2 Methodological characteristics

3.2.1 Population

To develop this study, initially, the entities listed on the General Portuguese Stock Index (PSI) of the New York Stock Exchange (NYSE) Euronext Lisbon on December 31st 2012 were identified. This choice is based on the fact that these entities presented their FR in a way accessible to the general public.

Access to the information was obtained by consulting the website of NYSE Euronext Lisbon. The data analyzed in this study were obtained from the collection of consolidated FR, for the financial year ending December 31st, 2011 and 2012, thus initially corresponding to an approach based primarily on content analysis. It is important to note that, for the study, Sports Corporations (SC) were excluded, because their reporting period is different from the civil year and different from the period of the other entities in the population, as well as entities beyond the Portuguese territory and financial companies, due to reasons equally related to information comparability. To ensure greater comparability, entities whose risk disclosure is included in another FR component than the notes, namely the Management Report. In addition, the aim is to develop the analysis in terms of a constant sample over the two years proposed for this study, so that the selection of the entities is based on the uninterrupted information disclosure during this period. Hence, and after applying the abovementioned selection criteria, a total of 36 companies listed on the General PSI were included in this study population.

Table 1 shows the selection of the entities under study.

Table 1
Entities in the population

	No. companies
Total complies listed on Euronext Lisbon on 12/31/2012	48
Entities excluded due to:	
Different financial year (SAD)	3
Financial Corporations	7
Entities without information in the notes	2
Total entities included in the study	36

In Portugal, some studies are known that have previously analyzed the relative risk disclosure by Portuguese companies, particularly the studies by Ereira (2007), Oliveira et al. (2011a, 2011b) and Serrasqueiro (2011). However, unlike de Oliveira et al. (2011b), this study incorporates not only the Portuguese credit institutions with the reports published in the Bank of Portugal. On the other hand, distinctly from Serrasqueiro (2011), this study does not focus on non-financial entities in the PSI 20 but rather on non-financial entities in the General PSI of NYSE Euronext Lisbon.

This study also differs from the studies by Ereira (2007) and Oliveira et al. (2011a), since these authors' method focused on the corporate governance report and the management report, respectively, and this study focuses on the content analysis of the notes (exclusively) of each of the entities in the study. The choice of the notes as the baseline document for the content analysis is the fact that the document is mandatory and regulated, and that the content is easily comparable among the different entities.

3.2.2 Definition of the variables

In view of the objective of this study, namely the identification of the relative risk disclosure determined in several legal sources (IAS / IFRS and CCC), the following items were identified at the root of these requirements, and are developed as follows:

- Companies should provide information in the notes to the accounts, about the nature and business purpose of transactions not included in the balance sheet and the respective financial impact, when the risks or benefits arising from such arrangements are material and in so far as disclosure of such risks or benefits is necessary for assessing the financial position of the company (CCC, article 66-A, No. 1, alinea a.));
- Disseminate information on a continuous base and, if there is none, disclose uncertainties that may cast those doubts (IAS 1, § 25-26);
- An entity shall disclose information about the assumptions it makes about the future and other important sources of uncertainty in the estimate at the end of the reporting period, that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year (IAS 1, §125-133).
- The collection of information on risk disclosure comprises the need to characterize / classify the phrases based on the attributes defined in each hypothesis, namely:
- As to the nature of the information: if the information is financial or non-financial;
- As for the characteristics of the information: whether it is "good news", "bad news" or "neutral news";
- As for the temporal scope of the information: if it is about the past or the future; and

The classification of the phrases, in terms of the nature of the information, aims to identify if the information disclosed relates to financial risks or non-financial risks, particularly operational risks, empowerment risks, information and technological risks, integrity risks and strategic risks.

Another possible classification refers to the characteristics of the information, i.e. if the sentences convey good news, bad news or no impact (the information is considered as positive news if it influences or may influence the business).

The classification around the future or past refers to the temporal perspective implicit in each of the sentences, that is, if they refer to the past or future.

Finally, the classification of the nature of information refers to the explanation in monetary or non-monetary terms of the disclosure item. As the risk can be divided into distinct categories, the risk categorization in the studies by Ereira (2007), Kongprajya (2010) and Linsley and Shrives (2006) was used, shown in Figure 1:

Type of Risk	Attribute disclosed
Financial Risk	• Interest rate • Exchange rate • Liquidity risk • Credit risk
Operational Risk	• Client satisfaction • Product development • Efficiency and performance • Obsolescence of stock • Product or service error • Health and safety
Empowerment Risk	• Empowerment • Outsourcing • Performance incentives • Communication
Information Risk and Technological Risk	• Integrity • Availability • Infrastructure
Integrity Risk	• Frauds • Illegal acts
Strategy Risk	• Environmental and performance assessment • Industry/competitors • Prices • Planning • Useful life • Rules/policy

Figure 1. Risk disclosure attributes

Source: Linsley and Shrives (2006)

As shown in Figure 1, and taking into account the nature of the information, the risk can be divided into several categories, namely: financial risk and non-financial risk, including operational risk; empowerment risk; information and technology risk; integrity risk; and strategic risk.

For the categorization of sentences, first, the management reports will be read, with a provisional classification of the phrases to create decision rules on the intended classifications. After this first reading, there was a second reading, in order to categorize the phrases definitely. Following the final categorization of sentences, a test was designed focused on the consistency of categorizations, comparing phrases with the same type of risk and thus validating the category chosen. This procedure was also followed by Ereira (2007).

Thus, in addition to defining the risk of disclosure of the items (for the categorization of sentences), it was necessary to create decision rules. These rules were established according to the grid that served as the base for the study by Linsley and Shrives (2006), identified next:

- To identify the risk disclosures, a clear definition of risk should be adopted.
- The phrases are coded as risk disclosures if they contain information about any opportunity or danger, harm, threat or display, which has had or will have an impact on the entity.
- Although the definition of risk is broad, the risk disclosures should be clearly indicated and cannot be implicit information.
- Risk disclosures should be recorded and classified according to Figure 2.
- Quantitative risk disclosures are the disclosures that clearly disclose the financial impact of the risk or disclose sufficient information to enable the reader to calculate the financial impact of this risk.
- If the phrase in question has more than one possible classification, the information is classified in the risk category with more emphasis.
- Tables (with either quantitative or qualitative information) that provide risk information should be interpreted as phrases.

- Quantitative information contained in the tables will be classified as monetary and neutral, so as to make the information as objective as possible and avoid value judgments that bias the analysis.
- In case of repetition in the disclosed sentences, it shall be recorded each time it is mentioned.
- Should the disclosure be very vague in its reference to the risk, then it should not be recorded.

To categorize the FR, a grid showing the information disclosed had to be used, illustrated in Figure 2, with a view to the summary of the information at the end of the content analysis.

	Financial Risk	Non-Financial Risk					Total %
		Operational Risk	Empowerment Risk	Information and Technology Risk	Integrity Risk	Strategy Risk	
Quantitative/ Future/ Good							
Quantitative / Futuro/ Neutral							
Quantitative / Futuro/ Bad							
Quantitative / Past/ Good							
Quantitative / Past / Neutral							
Quantitative / Past / Bad							
Qualitative/ Futuro/ Good							
Qualitative/ Futuro/ Neutral							
Qualitative/ Futuro/ Bad							
Qualitative/ Past / Good							
Qualitative/ Past / Neutral							
Qualitative/ Past / Bad							
Total %							

Figure 2. Risk disclosure matrix

After completing the grid refered to in Figure 2 for each of the entities included in the study, a summary table was elaborated with the name of entities and the number of disclosures that each contained for each type of risk, as well as the total disclosures per entity.

3.2.3 Techniques used

In order to analyze the hypotheses shown above, in this study, beyond descriptive statistical techniques (where each variable is assessed alone), a bivariate statistical technique is used (analysis that relates two variables within each analysis). For the hypotheses set, data from the same population need to be compared in distinct periods or analysis situations. For this purpose, the Wilcoxon test will be used.

Statistical analysis of the information was made using the software support Predictive Analytics Software (PASW). The significance level (or p-value) is the probability of results obtained beyond the region of possible outcomes. If the p-value is less than 5%, in accordance with the level of significance in this study, it appears that there are significant differences between the study variables.

The next chapter presents the discussion of results, taking into account the defined goals and the methodological lines previously presented.

4. Presentation and discussion of results

In this chapter, the goal is to analyze the results obtained based on the statistical tests with a view to validating (or not) the hypotheses developed in the previous part of this research.

4.1.1 Financial risk vs. non-financial risk (H1)

In the context of this hypothesis on the analysis of the nature of the risk, originally, a descriptive analysis was drafted of the number of sentences disclosed in the notes for each year under review. Then, a statistical characterization of the content analysis will be presented, applied to the risk the companies disclosed in the notes.

Thus, Table 2 presents, in a synthesized form, the characteristics of the information disclosed by the various entities in the study population. Based on the results obtained, we conclude that the degree of disclosure depends on the type / nature of the risk involved. Thus, it appears that the entities disclose more information on the financial risk than the non-financial risk. In the context of non-financial risk, in turn, there is great diversity in the amount of risk disclosed, because there are risk categories that are disclosed more than others. For non financial risk, it appears that the most disclosed risk is the operational risk, as opposed to the integrity risk, being disclosed in the years analyzed only once (representing only 0.11%).

Table 2
Statistical analysis: Characteristics of information disclosure

		Financial Risk	Operational Risk	Empowerment Risk	Information and Technological Risk	Integrity Risk	Strategic Risk
2011	Total	645	223	3	5	1	19
	%	72%	25%	0%	1%	0%	2%
	Mean	18	6	0	0	0	1
	Maximum	41	40	3	5	1	11
	Minimum	6	0	0	0	0	0
2012	Total	629	219	3	5	1	19
	%	72%	25%	0%	1%	0%	2%
	Mean	17	6	0	0	0	1
	Maximum	33	40	3	5	1	11
	Minimum	5	0	0	0	0	0

With regard to operational risk, it should be noted that this represents approximately 24%, with 223 and 219 disclosures during 2011 and 2012, respectively; whereas the financial risk recorded three times as much disclosures in 2011 and 2012.

Regarding the disclosures registered during the year 2011, it was concludes that, on average, the entities reported 18 financial risk phrases and 7 non-financial risk phrases for disclosure (in the notes). Also, the maximum of information disclosed by the entity for the financial risk was 41, and of non-financial risk around 60. Situations were identified by analyzing the minimum value of non-financial risk disclosure, contrary to the information disclosed relating to financial risk, which always registered disclosures by entities with a minimum of 6 phrases disclosed.

Analyzing the disclosures for the year 2012, it is concluded that, on average, 17 phrases related to financial risk information and only 7 phrases related to non-financial risk information were disclosed in the notes. Regarding the minimum number of information disclosed, this presents a value lower than for 2011, as only 5 phrases were disclosed regarding the financial risk and no disclosure for the other types of risk. When analyzing the maximum number of phrases disclosed, it is concluded that the financial risk information score is lower than in 2011, with only 33 sentences, and that the maximum number of frases on non-financial risk is maintained, with 60 disclosures identified for operational risk.

As in the previous hypotheses, a comparative analysis was drafted of the number of sentences disclosed in the notes per yea. It was identified that the year 2011 has the highest volume of information released, with an average of about 25 sentences per disclosure. The average number of sentences published in 2012 does not differ much and contains, in turn, about 24 sentences per disclosure and a total of 876 phrases disclosed.

The results of the comparative analysis are displayed in Table 3.

Table 3
Statistical analysis: Nature of information disclosed

	N	Mean	Standard Deviation	Minimum	Maximum
FR_2011	645	17.92	7.751	6	41
NFR_2011	251	6.97	10.761	0	51
TR_2011	896	24.89	15.131	6	77
FR_2012	629	17.47	6.922	5	33
NFR_2012	247	6.92	10.715	0	51
TR_2012	876	24.39	14.944	7	79

Also based on Table 3, it is noted that there is a large standard deviation between the quantity of information disclosed by the various entities, which demonstrates that some entities have very little data volume (about 7 phrases per disclosure), as opposed to other entities whose notes contain more than 70 phrases.

In order to identify the existence of statistically significant differences in the amount of information disclosed in each of the years under review, the Wilcoxon test was used. These results are presented in Table 4.

Table 4
Wilcoxon test: Amount of information disclosed

	2011	2012	FR	NFR	TR
	NFR_2011 - FR_2011	NFR_2012 - FR_2012	FR_2012 - FR_2011	NFR_2012 - NFR_2011	TR_2011 - TR_2012
z	-4.393[a]	-4.394[a]	-.339[a]	-.364[b]	-.064[b]
Asymp. Sig. (2-tailed)	.000	.000	.735	.716	.949

a. Based on positive ranks | b. Based on negative ranks | c. Wilcoxon Signed Ranks Test

The results presented in Table 4 demonstrate, taking into account the probability of significance (Asymp. Sig 2-tailed) defined for this study ($p < 0.05$) different findings.

Thus, on the one hand, the different types of risks disclosed in the same year (Non-Financial Risk (NFR)_2011 - Financial Risk (RF))_2011 and RNF_2012 - RF_2012) assume values that allow us to state that the differences are statistically significant (Asymp. Sig. (2-tailed) of 0.00). These results permit validating the H1 set, being inconsistent with international evidence identified earlier, namely by Beretta and Bozzolan (2004), Ereira (2007), Kongprajya (2010), Linsley and Shrives (2006), Liu (2006) and Serrasque-

iro (2011). Such inconsistency mainly derives, as mentioned, the use of different fonts when comparing this and previous studies, since it focuses distinctly on the analysis of the notes as an information source, where a larger number of disclosures related to financial aspects can be expected.

On the other hand, when comparing the same type of risk (FR and NFR) disclosed in different years (2012 vs. 2011), there were no significant differences. Indeed, it appears that the values of these differences (FR_2012 - FR_2011, NFR_2012 - NFR_2011 and (TR)_2011 - TR_2012) do not permit any assertions about statistical significance (Asymp Sig (2-tailed) of 0.735. of 0.716 and 0.949 respectively). Indeed, rather than an increase, even a slight reduction appears in the amount of information distributed for each of the types of risk under analysis. This effect probably stems from the "copy and paste" technique present in the companies' FR as referred to, inter alia, by Liu (2006).

4.1.2 Good *vs.* bad news (H2)

This hypothesis aims to analyze the disclosure of risk in order to identify whether the entities, during 2011-2012, reported a larger number of information considered "good" or "bad".

Initially, a comparative analysis of the quality of information disclosed in the notes was drawn up, considering its nature (if the information is good or bad), whose results are shown in Table 5. Based on its analysis, a larger volume of information disclosure can be identified in 2011, with 279 phrases in the notes. The number of phrases that disclosed information classified as "good" was 186, as opposed to 93 phrases with information deemed as "bad".

However, it is noted that there is a large standard deviation between the amount of phrases that various entities disclose about "good" information, demonstrating that some of them have a very small data volume, including entities that do not disclose a single sentence of this nature, as opposed to other entities with 23 sentences.

Table 5
Statistical analysis: Nature of information disclosed

		N	Mean	Standard Deviation	Minimum	Maximum
2011	Good FR	119	3.31	2.617	0	10
	Good	67	1.86	3.944	0	18
	Good TR	186	5.17	4.966	0	23
	Bad FR	17	.47	1.108	0	5
	Bad NFR	76	2.11	3.717	0	16
	Bad TR	93	2.58	4.292	0	21
2012	Good FR	109	3.03	2.443	0	10
	Good	61	1.69	3.853	0	18
	Good TR	170	4.72	5.108	0	24
	Bad FR	20	.56	1.107	0	5
	Bad NFR	78	2.19	4.348	0	22
	Bad TR	98	2.75	4.982	0	27

To identify the existence of statistically significant differences in the nature of the information disclosed in each of the years analyzed, the Wilcoxon test was applied. These results are displayed in Table 6.

Table 6
Wilcoxon test: Nature of the information disclosed

	2011			2012		
	Bad FR - Good FR	Bad NFR – Good NFR	Bad TR - Good TR	Bad FR - Good FR	Bad NFR - Good NFR	Bad TR - Good TR
z	-4.358[a]	-.027[a]	-3.233[a]	-4.315[a]	-.330b	-3.100[a]
Asymp. Sig. (2-tailed)	.000	.978	.001	.000	.742	.002

As regards the comparison of the nature of the information disclosed, the results identified in Table 6 are different. Taking into account the probability of significance (Asymp. Sig (2-tailed)) defined for this study ($p < 0.05$), it appears that there are no significant differences in only one of the situations. Indeed, it appears that the values of the differences between bad and good information, when it comes to NFR (Bad NFR - Good NFR), do not permit affirming that these differences are statistically significant (Asymp Sig (2-tailed), corresponding to 0.978 and 0.742 for 2011 and 2012, respectively). On the other hand, the results showing the differences in the nature of good and bad information in the disclosure of FR and TR (Bad FR - Good FR and Bad TR - Good TR) are statistically significant, given that the probability of significance (Asymp. Sig (2-tailed)) corresponds to 0.000 and 0.001, respectively, for the year 2011, and 0.000 and 0.002, respectively, for the year 2012.

The disclosure of the information differs according to its nature, with good information being published more than bad information. These results are in line with the evidence obtained by Ereira (2007), Linsley and Shrives (2006) and Oliveira et al. (2011a).

4.1.3 *Backward vs. forward* (H3)

This hypothesis intends to identify the trend for Portuguese listed companies to disclose the information in terms of the temporal context, that is, whether the information is future or past-oriented.

Similar to the previous hypotheses, initially, a comparative analysis was developed of the number of phrases disseminated in the notes per year. The results are displayed in Table 7.

Table 7
Statistical analysis: Temporal context of information disclosed

		N	Mean	Standard Deviation	Minimum	Maximum
2011	Past FR	635	17.639	7.616	6	40
	Past NFR	173	4.806	9.251	0	43
	Past TR	808	22.444	13.781	6	69
	Future FR	10	0.278	0.882	0	5
	Future NFR	78	2.167	3.13	0	14
	Future TR	88	2.444	3.707	0	19
2012	Past FR	617	17.14	6.681	5	30
	Past NFR	172	4.78	9.169	0	43
	Past TR	789	21.92	13.338	7	71
	Future FR	12	0.33	0.986	0	5
	Future NFR	75	2.08	3.945	0	22
	Future TR	87	2.42	4.662	0	71

It can be identified, based on Table 7, that, in 2011, the information the companies disclosed was largely focused on past events, with 808 disclosures, while the information disclosed on future impacts corresponded to only 88 disclosures. It should be highlighted, however, that there is a high standard deviation between the amount of information the different entities disclosed, which shows that some entities have a very small information volume (up to not having a single sentence for disclosure) as opposed to entities that have more than 69 phrases in the notes. It also appears that the variation in the information disclosed does not change significantly from one year to another. For 2012, there is the same reality, that is, there is a fairly significant difference between the disclosures of FR when referring to the past or the future. When analyzing the disclosures of NFR, this difference is not as pronounced as in the case of disclosures relating to FF, although greater disclosure of backward than forward information is also found.

Next, in line with the method outlined earlier, the Wilcoxon test was applied to check for statistically significant differences between the level of risk disclosure and the temporal orientation in the entities under study. In that context, Table 8 shows the results obtained.

Table 8
Wilcoxon Test: Temporal context of information disclosed

	2011			2012		
	Future FR - Past FR	Futurr NFR- Past NFR	Future TR - Past TR	Future FR - Past FR	Future NFR - Past NFR	Future TR - Past TR
z	-5.234[a]	-1.442[a]	-5.234[a]	-5.235[a]	-1.930[a]	-5.218[a]
Asymp. Sig. (2-tailed)	.000	.149	.000	.000	.054	.000

Given the probability of significance (Asymp. Sig (2-tailed)) defined for this study ($p < 0.05$), the results identified in Table 8 are contradictory in relation to the NFR. It is emphasized that, in 2012, in any of the scenarios, there are significant differences between the "Future" and "Past" information, depending on whether it concerns FR, NFR and TR. The scores of these differences allow us to affirm that there are statistically significant differences (Asymp. Sig. (2-tailed) of 0.000, 0.054 and 0.000, respectively). In the same sense, there is the result representing the difference between "Future" and "Past" information about FR and TR for 2011, in view of the score 0.000 for both cases (being therefore statistically significant at a significance level inferior to 0.05).

Based on the results, we can confirm that more information has been disclosed on matters related to the past than to the future and that these differences are statistically significant in the context of FR. These results are in line with studies by Beretta and Bozzolan (2004), Ereira (2007), Lajili and Zéghal (2005), Liu (2006) and Oliveira et al. (2011a, 2011b).

4.1.4 Qualitative vs. quantitative (H4)

This hypothesis is intended to verify if the information the different companies disclose tends to be mainly qualitative or quantitative. In that sense, a descriptive analysis was developed on the information disclosed qualitative or quantitatively. These results are presented in Table 9.

Table 9
Statistical analysis: Nature of information disclosed

		N	Mean	Standard Deviation	Minimum	Maximum
2011	Quantitative FR	85	2.361	2.031	0	7
	Quantitative NFR	121	3.361	4.865	0	21
	Quantitative TR	206	5.722	5.868	0	26
	Qualitative FR	560	15.556	7.149	6	39
	Qualitative NFR	130	3.611	9.415	0	44
	Qualitative TR	690	19.167	12.473	6	64
2012	Quantitative FR	81	2.250	1.991	0	7
	Quantitative NFR	110	3.083	4.094	0	17
	Quantitative TR	191	5.333	4.980	0	22
	Qualitative FR	548	15.222	6.419	5	32
	Qualitative NFR	137	3.833	9.425	0	44
	Qualitative TR	685	19.056	12.264	6	66

It appears from the table (Table 9) that the number of disclosures relating to quantitative NFR is superior to the disclosures relating to FR for both years being analyzed. The qualitative information disclosed is much larger when compared in terms of the nature of the information, i.e. information disclosed on FR is more than twice superior to the disclosure of NFR for both years. In addition, it can be concluded that the companies have different information disclosure needs since, in the present population, there are companies that do not disclose sentences, neither qualitative nor quantitatively, and other companies that disclose more than 60 sentences (a reality found in both years). To acknowledge the existence of statistically significant differences in the nature of the information disclosed, the Wilcoxon test was applied. These results are displayed in Table 10.

Table 10
Wilcoxon Test: Nature of information disclosed

	2011			2012		
	Qualit FR - Quantit FR	Qualit NFR - Quantit NFR	Qualit TR - Quantit TR	Qualit FR - Quantit FR	Qualit NFR - Quantit NFR	Qualit TR - Quantit TR
z	-5.236a	-1.855b	-4.851a	-4.315a	-.330b	-3.100a
Asymp. Sig. (2-tailed)	.000	.064	.000	.000	.742	.002

a. Based on positive ranks | b. Based on negative ranks | c. Wilcoxon Signed Ranks Test

Given the probability of significance (Asymp. Sig (2-tailed)) defined for this study ($p < 0.05$), the results in Table 10 show that there are statistically significant differences. In 2011, in any of the scenarios, there are significant differences between the information disclosed both qualitatively and quantitatively for the information concerning FR and TR (Qualit FR - Quant FR and Qualit TR - Quant TR) with an Asymp. Sig. (2-tailed) of 0.000 in both cases. In the same sense, there is the result representing the difference between the qualitative and quantitative information about NFR (Qualit NFR - Quant NFR) for 2011, given its coefficient of 0.064, being therefore statistically significant at a level of 0.10 only.

For the year 2012, there were no significant differences between the information disclosed in the qualitative and quantitative form about NFR. Indeed, it appears that the coefficients of these differences

between the information disclosed qualitative and quantitatively about NFR (Qualit NFR - Quant NFR) do not permit any assertions about the existence of statistically significant differences. However, there are statistically significant differences between qualitative and quantitative information regarding FR and TR (Qualit FR - Quant FR and Qualit TR - Quant TR), taking into account the associated probability of significance (Asymp. Sig. (2-tailed) of 0.000 and 0.002, respectively.

This analysis allows us to state that much more information was disclosed qualitative than quantitatively. The results are in line with the studies by Beretta and Bozzolan (2004), and Lajili Zéghal (2005), and Shrives Linsley (2006), Oliveira et al. (2011a) and Serrasqueiro (2011).

The last part of this article is intended to present the main conclusions from the various studies conducted and presented above, taking into account the various pre-defined assumptions, as well as the main limitations and identified future prospects.

5. Conclusions, limitations and future investigations

The final part of this article reveals the main conclusions, limitations and possible contributions to future research identified in the context of the disclosure of risk-related aspects, the theme proposed in this study.

5.1 Conclusions

In this chapter, the conclusions will be presented obtained based on the analysis of the characteristics of the information disclosed on risk-related aspects by the companies in the General PSI, throughout the years 2011 and 2012, particularly financial vs. non-financial risk (H1), good vs. bad news (H2), backward vs. forward information (H3) and, finally, qualitative vs. quantitative information (H4). The analyses related to the distinct characteristics of the information, referred to above, take into account the hypotheses defined in the Methods section.

The objective of H1 was to analyze the type of information disclosed during the period, that is, if the information disclosed was mainly related to financial risk or non-financial risk. Against this background, the results from the Wilcoxon correlation test supported HS, demonstrating, in line with the literature on the subject, that the entities disclose more information concerning matters related to financial risk as opposed to non-financial risk. This finding is in line with the greater relevance companies tend to attribute to financial aspects in the notes, focused on in this study, regarding which the information users tend to perceive a higher level of risk.

The results for H2, in turn, taking into account the results of the Wilcoxon test, permitted validating this hypothesis, suggesting that the "good" information has a higher degree of disclosure when compared to the "bad" information. Once again confirming the literature, this result demonstrates the emphasis generally attributed to information considered "good", which may indicate some degree of bias in the information the companies disclose.

The following hypothesis (H3) intended to analyze the information disclosed in a time perspective. The results obtained through the Wilcoxon analysis permitted supporting H3 with appropriate reliability, confirming a higher degree of backward than forward information. In fact, the results prove to be appropriate to the idea, generally advocated in the literature, according to which financial information is presented strongly concentrated on the confirmatory element, as opposed to the indicator predictive of a high level of conservatism of the information disclosed.

In turn, H4 was based on the nature of the information disclosed. The analyses permitted reasonable support for the hypothesis, and we can conclude that there was a higher level of information presented in a qualitative way, compared with its quantitative presentation form, a reality found for both years analyzed. In a way, that finding strengthens the ideas previously presented, associated on the one hand with a great-

er bias of risk information disclosed in the financial statements, insofar as it is presented in a less objective manner; and, on the other hand, with a higher level of conservatism, in that it presents a lesser degree of objectivity with respect to the level of risk that results from the evaluation the company itself performs. In both cases, what is discussed is the level of risk attributed to the entity, from the users' distinct viewpoints.

This study has some limitations, including the small number of entities that are included in the General PSI, not permitting the analysis of the possible influence of other factors, such as the business sector. Another aspect that can be seen as a limitation relates to the fact that the analysis uses solely two consecutive years of information.

As suggestions for future research, it could be interesting to verify the differences of disclosure between listed and non-listed companies, in order to understand the differences in the information disclosure behavior, as well as whether the listed / unlisted companies disclose only mandatory or voluntary information.

The existence of a longer study period than that used would, in turn, result in more consistent and robust indications for the hypotheses proposed in this study.

These research results are intended to contribute to the identification of the elements that constitute the base for the disclosure of risk-related information in the notes to the financial statements of the entities listed.

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