

# RISK INFORMATION OF CORPORATE GOVERNANCE

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**ABSTRACT** 

The disclosure of risk-related information is of great importance in today's highly

uncertain environment. Furthermore, it is evident that there is a need for both

relevant and high-quality information. It has become clear that this information is

essential for both the making of important decisions as well as the ability to

create accurate forecasts.

Studies that have been performed on the disclosure of risk information that has

been Spanish companies' show that a high percentage of the analysed

companies are reporting on some sort of risk, additionally we can clearly see

that the reported risks are pre-dominantly non-financial risks. The results that we

have obtained with this study have shown that the variables of corporate

governance and the variables of control that we have analysed are not

significantly related to the disclosure of risk information. Furthermore, the three

evaluated hypotheses show that the variables related to corporate governance,

such as board size, board independence, and the percentage of capital held by

the board do not significantly affect the disclosure of risks by the Spanish

companies that we have analysed in this study.

**KEYWORDS:** risk, risk disclosure, risk reporting

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#### Abbreviations:

**FAS:** Financial Accounting Standards

FASB: Financial Accounting Standards Board

**FRR**: Financial Reporting Release

**GAS**: German Accounting Standards

**GASC**: German Accounting Standards Committee

IASB: International Accounting Standards Board

IBEX 35: Índice Bursátil Español

ICAEW: Institute of Chartered Accountants in England and Wales

IFRS: International Financial Reporting Standard

**OECD**: Organization for Economic Co-operation and Development

**SABI**: Sistema de Análisis de Balances Ibéricos

SCIIF: Sistema de Control Interno sobre la Información Financiera

**SEC**: Securities and Exchange Commission

## RISK INFORMATION OF CORPORATE GOVERNANCE.

#### 1. Introduction

The increased complexity of the contemporary business world has made evident that there is a need for the disclosure of relevant information by companies which would be useful for the users of this information.

Our study attempts to evaluate the relationship between the disclosure of information by companies and several variables of corporate governance as well as variables of control. The corporate governance variables that have been used in this study are the following: the size of the board, the independence of the board and the percentage of capital held by the council/board. The variables of control that have been evaluated are: the size of the company, debt, liquidity and the profitability of the company. The sample in this study consists of 24 non-financial companies that were listed on the Madrid Stock Exchange at December 31, 2014. The data of these companies has been obtained from corporate governance reports, which have been published on the website of the National Securities Market Commission from which we got information on the corporate governance variables and we have used the SABI database to get the data on the variables of control. In order to create the index for our research, we have used the methodology of Cabedo and Tirado (2009) in order to be able to quantify the level of disclosure by companies. The methodology that has been employed to evaluate the hypotheses is a regression analysis which is estimated by ordinary least squares. The results that we have obtained from our sample show that there is no significant relationship between the created index of risk disclosure and the variables that we have analysed.

The structure of our study is the following. We begin with this section which is the introduction. The second section addresses the concept of corporate governance. To elaborate on that, we will shortly present and discuss both the concept and the purpose of corporate governance. In the third section we will discuss the disclosure of corporate

governance risks, and we shall conduct a literature review on the literature of empirical nature that has been published on corporate governance and accounting information. In the third section of this study we will also introduce our three hypotheses, which we will test in this study. The fourth section is on the empirical analysis that we have conducted. In this section we will first demonstrate the sample that we have used and we will mention and explain the source of our obtained data, after that we will present the methodology that we have employed for testing the hypotheses and finally we shall present the results of our study. In the fifth section we will present the conclusions that we have reached and in the last section we will mention the limitations of this study and make recommendations for future research.

#### 2. Corporate Governance

#### 2.1. The concept and objective of Corporate Governance

The present environment is characterised by constantly occurring changes, these changes affect the business world dramatically. Changes such as: the increasing globalization, the increased uncertainty which creates the necessity to have high quality information, which would not only be useful, but in some cases this information, is absolutely necessary for its users to make proper decisions.

In this sub-chapter we will introduce and analyse the concept of corporate governance. Nowadays, there is an increasingly globalising world, which has caused profound changes both in societies as well as in the business world. According to the OECD "Corporate governance refers to the internal means by which corporations are managed and controlled. An adequate system of corporate governance assures that corporations effectively use their capital." (OECD, 1999)

One of the most important objectives of Corporate Governance is to avoid the manipulation of information because of a lack of ethics in the corporation; another important objective is that the organisational progress has to be in line with the proposed objectives.

The emergence of corporate governance has been evolved, perfected and is being applied better and better every time. At present, corporate governance refers to a set of norms and guidelines that coordinate the design, the integration and functioning of the governing bodies of the company. The three pillars of an organisation are referred to as the shareholders, the directors and the senior management. In this sense, corporate governance grants a framework that establishes the rights and responsibilities that serve to guide the interaction of governing bodies such as; the directing body, the executive board, the legal representatives, the administrative body, the fiscal reviser and the controlling bodies.

Good corporate governance provides incentives to protect the interests of the corporation, the shareholder and it monitors the creation of value and the effective use of assets as well as contributing to the transparency of information. Furthermore, it facilitates mechanisms that assure the existence and implementation of elements that create a good balance between the management of each governing body as well as the necessary control for this management. Corporate governance has the objective that made decisions in each instance are realised with an adequate amount of comprehension and understanding and which are in line with the best interest of the entity, its shareholders, the creditors, also it should respect the rights of the financial consumers and other important stakeholders.

After having defined corporate governance it is important to mention the actors that intervene inside the organisation and contribute to the proper functioning of corporate governance. Some of these actors are the shareholders which are the owners of the company and the creditors who have loaned funds to the company. However, we can argue that there are also other external agents that are either part of the company or have an interest in the company. For example, external agents such as banks, investment funds, etc. All these external agents benefit from good corporate governance. The latter actors that we have referred to are of great importance, given that they provide financial capital to the company.

#### 2.2. Corporate governance and the disclosure of risks

The national committee of the value market in their letter of 5/2013, published the 12<sup>th</sup> of June, has established the models for the annual reports of corporate governance

that are presented by publicly listed companies such as saving banks and other entities that issue securities and trade in official security markets.

In the following paragraphs we will explain the structure of publicly listed companies. In the first section of this chapter we will discuss in greater detail the structure of ownership in which we will present: social capital, information on the shareholders, members of the executive board, the existing relationships between the organisation and the controlling shareholders, details of the treasury and more.

In the second section we will elaborate on issues related to the general meeting. In this meeting, changes in the company norms and rules are presented in the corporation act. Changes such as: the adoption of resolutions, social accords, applicable norms as well as modifications of the organisations statutes and more.

The third section describes the administrative structure of the organisation discusses in greater detail the following themes: The executive board (more specifically, the executive proprietary directors, independent directors and other external directors), also this section will describe the form of representation of the board of major shareholders, the departments that have delegates, the corresponding remuneration, The requirements for making agreements, and many other matters. Furthermore, in this section we will discuss transactions with related parties as well as intra-group transactions and more specifically: the competent body, any significant transactions, transactions with related parties, etc.

The section management and control systems of risks that will follow in fourth section will explain the bodies that are responsible for developing and implementing the system risks of the company. Furthermore, the primary risks that could affect the organization when it is trying to realize its business objectives should be mentioned, also it should be mentioned whether the entity makes its calculations with a certain tolerance level towards risk, for example risks that have materialized during the execution of company activities and finally this section should explain the action plans and monitoring of the primary risks of the entity.

The fifth section refers to the internal systems of management and control of risks related to the issuing process of financial information (SCIIF) which describes the mechanisms that make up the systems of management and control of risks in relation to the issuing process of financial information of the entity.

Furthermore, this section will discuss the degree of follow-up of the recommendations of corporate governance as well as presenting other relevant information. Our study focuses solely on the section that discusses the analysis and evaluation of risk that we have mentioned and discussed earlier. We can observe a clear difference in the quantity and extensiveness of the information related to risk that is disclosed by companies. In the next paragraphs of this subchapter we will discuss the disclosure of risk information.

All existing accounting standards, perceive the lack of risk information to a lesser or greater extent relevant for decision-making by both internal and external agents. Given the uncertainty in the current environment, companies have been forced to adapt their structure to fit the demands of the current competitive framework. With the objective to meet all the demands of the current competitive framework, companies have started to realize changes in both the organization and its management. All these reforms have to be aligned with the reforms in the information system that is used to manage the company.

According to Lev and Zarowin (1999) these changes have led to the deterioration of the usefulness of information provided by the financial statements and its potential users for the making of decisions. As a result a clear demand of relevant information and a large desire for regulating institutions to improve the quality of financial information have emerged. As stated by Cabedo and Tirado (2007) in order to have financial statements that are adequate to make future predictions, it is necessary to add some sort of measurement of risks to these financial statements. This allows agents to obtain financial information that is closer to reality than information that is solely provided by the historical data of the financial statements of companies.

It should be mentioned that several bodies that have occupied themselves with the disclosure of risk information, but these bodies have worked from different perspectives. The International Accounting Standards Board (IASB) with the publications of the IFRS N°7 and the Financial Accounting Standards Board (FASB) with the publication of FAS N°133 have promoted risk reporting in a dispersed manner, located in the financial statements. On the other side the Financial Reporting Release N°48 (FRR N°48) published by the Securities and Exchange Commission (SEC) and German Accounting Standards Committee (GASC) with the publication of the GAS N°5 impose the presentation of risk information in a structured manner and presented in a specific location. These are the principal accounting standards on the disclosure of risk information that have tried to solve the lack of risk information at an international level.

As for Spain, there exists an obligation to present risk information that are derived from the use of financial instruments, referring directly to the obligation to inform on price risk, liquidity risk and cash flow risk. All of this is described in the: "Texto Refundido de la Ley de Sociedades de Anónimas". We would like to stress that all the previously mentioned risks that have been mentioned are financial risks.

### 2.3. Literature review on corporate governance and accounting information

For a long time, the lack of accounting information has been condemned by many authors, organisations and involved bodies.

When analysing some of the authors we can easily see that the lack of relevant information is existent and that this lack of information has been condemned by authors such as Salomon et al., (2000) and other authors. These authors have stressed the need to introduce new informative elements to the financial statement, to make these statements more useful and that they will serve their users with the making of decisions.

One of the primary lacks of information that has been condemned is the disclosure of information on risk. According to Schrand and Elliot (1989) the lack of this information is the foremost criticism to the accounting model. In the accounting reforms, more specifically the reform: "La situación actual de la contabilidad en España y las líneas básicas para abordar su reforma" mention this business risk indicators that could affect the company itself. With the adoption of the international accounting norms in the Spanish accounting system, the obligation to disclose financial risks that affect the company because it uses certain financial instruments has been adopted, more concretely this includes risks such as: credit risks, market risks and liquidity risks. All of the information that does not belong to before mentioned risk-typologies is presented voluntarily and is thus not obligatory for companies.

Given the increasing complexity of the actual environment, the need of a larger amount of disclosed information by companies has become evident, with the objective to generate entities with a greater transparency, improve the quality of information that is being disclosed and ultimately to reduce information asymmetries that could lead to conflicts. A trend declining utility of information by financial statements can be seen.

Both the quantity and the quality of information have decreased due to the voluntary nature of the disclosure of this information and the lower incentives for company to disclose risk information. But, the increasing demand for quality information that will serve agents to make proper decisions motivates regulators to try to improve the quality of this information.

These defects of accounting information have been criticised by many authors (FASB, 2001; Lev and Zarowin, 1999) who have proposed to include in the accounting information new elements with the objective to increase the utility of the provided information. These criticisms have contributed mainly to the greater importance of the disclosure of risk information that companies are facing. It is widely believed that the disclosure of information by companies, improves the management and effectiveness of assets. (ICAEW, 2011). This information helps investors to evaluate the quantity of information, the cash flows to determine the risk profile of the company, the market value, as well as the exactness of the estimation of the market value (Abraham and Cox, 2007; Beretta and Bozzolan, 2004; Helliar and Dunne, 2004). This allows, risk information to contribute to the management of changes (Abraham and Cox, 2007), reducing the cost of capital (ICAEW, 2011; Linsley and Shrives, 2006), and to communicate the future trajectory of the business model (Cabedo and Tirado, 2004).

There are many studies that show that companies do not offer sufficient information (Linsley and Shrives, 2005; ICAEW, 1998, 1999, 2002), characterised by the lack of coherence (Linsley and Lawrence, 2007), as well as brevity in the part that refers to risk (Abraham and Cox, 2007) and primarily focusing on financial risks and thereby neglecting other types of risks.

The disclosure of qualitative information is a necessity for both investors as well as regulators, because this would reduce the existing information asymmetries between the investors and managers of a corporation. The disclosure of actual risks is intensely related to aspects such as: the disclosure policy of the company which is affected by mechanisms/variables of corporate governance. There are studies that have reached the conclusion that the disclosure of information that is voluntary of nature, is linked to factors such as: The existence of independent members of the executive board of the company (Abraham and Cox, 2007), the size of the company (Beretta and Bozzolan, 2004; Linsley and Shrives, 2006; Rodriguez Domingues and Noguera Gamez, 2014); the leverage of the company, (Ahmed and Courtis, 1999) and other factors. Many authors have shown interested in the structure of ownership (Schadewitz and Blevins,

1998; Chen and Jaggi, 2000; Makhija and Patton, 2004; Huafang and Jianguo, 2007; Lakha, 2007).

The justification of disclosure is based on the information asymmetry that exists between investors and the executives of the company (Akerlof, 1970), the agency theory (Jesen and Meckling, 1976) and the costs related to disclosure (Ali, Ronen and Li, 1994). All these theories try to demonstrate that the disclosure of information reduces information asymmetries, which signalises the market with the best quality of information compared to other companies and reduces the agency costs.

Although the majority of the research on the disclosure of information is based on annual reports, there are studies that involve the quality of information that is disclosed along public announcements by companies (Amman and Kessler, 2004; Ryan and Taffler, 2004; Vega, 2006). These types of disclosures have not been recognised given the lack to measure the quality of the disclosed information, given its subjective character and the existing dependence of the medium. Laidro (2009) in his research on the relation between the concentration of ownership and the publication of advertisements, he has found a negative relationship between the quality of the ads and the concentration of ownership.

There are also many other control variables that have been considered relevant and whose impact on the disclosure of the information have been analyzed. Singvi and Desai (1971) have analyzed the variable company size and have reached the conclusion that there exists a positive relation between size and the disclosure of information. They explain that an increment in company size reduces the costs that generated by the information, the easiness of the access to the necessary financing and because it is less probable that a negative effect occurs due to the disclosure. Furthermore, Jensen and Meckling (1976) in their agency theory have proven the existence of a relationship between disclosure and external financing. In this sense, given that large companies use a larger amount of external sources of funding to finance themselves, their incentives to disclose should be larger (Leftwich et. al, 1981).

Referring to the same agency theory of (Jensen and Meckling, 1976) the companies with a high level of leverage also incur high supervision costs, with the objective to reduce their costs, companies disclose more information, this means that there exists a positive relation between the level of leverage of the company and the disclosure of information. Several authors whose studies were based on annual reports have

reached to the same conclusion (Ismail and Chandler, 2005; Barako, Hancock and Izan, 2006).

Another important variable of control for the analysis of disclosure is liquidity. Low levels of liquidity of a company generally imply bad management and could result into bankruptcy (Altman, 1968). On the one hand you could say that companies with elevated liquidity levels disclose more information without the fear that this disclosure will have any negative effects. However, on the other hand, companies with a low level of liquidity would have an incentive to disclose more information, with the objective to explain their temporary situation.

Profitability also deserves special attention as one of the analysed variables. According to Akerlof (1970) a company that is highly profitable would like to increase its disclosure of information, to show its wellbeing. Likewise, authors such as Ross (1977) confirm that a higher profitability results into a greater amount of disclosure and consequently leads to a reduction in the existing information asymmetries between investors and the managers of company.

#### 3. Hypotheses

In this chapter we will introduce and shortly discuss the hypotheses that will be tested later on in this study. These hypotheses will allow us to reach formulate conclusions. In this study we will test whether the disclosure of risk information by the company is related with the determined corporate characteristic, which are respectively the size of the board, the amount of independent members of the board and the percentage of capital owned by the board.

To continue, we will introduce three hypotheses about the possible relationships between the disclosure of risk-related information published by companies in the corporate governance report and the variables of corporate governance.

#### SIZE:

According to Gandia and Perez (2005) good corporate governance generally recommends a higher number of board members justifying this increases effectiveness in the oversight and transparency of the company. Despite the fact that this improves the monitoring processes, we can also observe the opposite effect, it means that a high number of directors can have a negative impact on efficiency if we consider that it can either extend / hamper decision-making processes (Jensen, 1993).

The effectiveness of size of the board is a subject studied by many authors. On the one hand, the increase in the number of board directors can improve the quality of corporate decisions taken by the company. Rodriguez Dominguez et al (2011) affirm that the existence of a positive relationship between the size of the board and the information disclosure of the company. However there are also other authors who defend the position that an increase in the size of the board may reduce the effectiveness of monitoring the processes because of the rise in agency costs.

Andres et al, (2005) argue that there is a negative relationship between a lower efficiency of the board and the incentive to disclose information. So one could argue that board effectiveness, is of vital importance regarding the disclosure of information.

Taking into account the above mentioned, we would like to propose the following hypothesis:

#### Hypothesis 1:

There is a positive relationship between the size of the board and the disclosure of risk information by the company.

#### **BOARD INDEPENDENCE**

Now we would like to move on to describe the second hypothesis, but first we will need to discuss another important variable which is important for the analysis of disclosure of information is the independence of the board. Fame and Jensey (1983) support the view that an increase in the number of independent directors on the board could imply a more effective control as this will ensure the interests of minority shareholders to be taken into account.

Furthermore Lim et al. (2007) and Cheng and Courtenay (2006) have defended the existence of a positive relationship between the proportion of outside directors on the board and disclosure of financial risk. However, outside directors may not be sufficiently prepared to understand the activities of the company given that they are simultaneously present in several boards (Baysinger and Hoskisson, 1990).

Based on the previous arguments, we would like to propose the following hypothesis:

#### **Hypothesis 2:**

There is a positive relationship between board independence and disclosure of risk information by the company.

#### PERCENTAGE OF CAPITAL HELD BY THE BOARD

Now we would like to continue to discuss the next variable that has served as an important base for our third hypothesis; which is the percentage of capital held by the executive board. We can find studies that analyse the relationship between the proportion of capital held by the board and the disclosure of risk information by the company. The separation between the management and control is relevant to this discussion given that from the part of management we found a greater tendency to disclose information on a voluntary basis and ensure transparency (García-Meca and Sanchez, 2006).

Some authors argue for a positive relationship between the level of disclosure and the proportion of capital held by the council (Chau and Gray, 2002; Ho and Wong, 2001) argue that increasing the capital held by the board, would result in the increasing of information that is disclosed for making decisions.

However, Jensen and Meckling (1976) argue that increasing the percentage of capital held by the board, would the lower the incentives to disclose, because the board's interest is assimilated to the owners interest.

#### Hypothesis 3:

There is a negative relationship between the percentage of capital held by the board and disclosure.

#### 4. Empirical analysis

#### 4.1. Sample and data

All companies in the sample are Spanish companies listed on the Madrid Stock Exchange (IBEX 35). We have selected companies that non-financial companies in nature, from which we have been able to obtain data for the year 2014. In total you can observe a sample composed by 24 companies (see Appendix 1).

The necessary data on risk information of all the companies that are part of our sample has been obtained from the Corporate Governance Reports that are published on the official website of the National Securities Market Commission. To measure the degree of disclosure of information on risk we have used the methodology proposed by Cabedo and Tirado (2009).

Other corporate variables that serve for hypothesis testing have been obtained from the SABI database (company size, debt, liquidity and profitability) and the Reports of Corporate Governance (the size of board, the independence of the board and the capital held by the board). We must clarify that in order to estimate the size of companies; we have made use of the logarithm of the total assets. On the other hand it has been considered that the level of risk of the company will be measured by the debt to asset ratio (debt / Total Assets). In order to evaluate the profitability of the company we have used the ROA ratio (Total Profit / Total Assets).

It has been observed that the liquidity ratio of firms (current assets / current liabilities). Also, it has been considered that the size of the executive board, which is the number of directors who form the board (executive directors, proprietary directors, independent directors and other independent). Another variable related to the previous one is the percentage of capital held by the board. Percentage of outside directors that form part the board (here has been taken independent directors).

#### 4.2. Methodology

The Methodology that has been used to test the hypotheses that we have introduced in the previous section; is the regression analysis; the ordinary least squares method from here on referred to as the OLS-method. We have analysed the relationship between certain variables of corporate governance and corporate risk disclosure. When talking about the variables of corporate governance, we are referring to the previously mentioned variables: Size of the board, percentage of the capital held by the board, and the proportion of independent members that are part of the board. Furthermore, we will discuss the variables of control which are respectively; company size, liquidity, leverage and profitability. The objective is to find the existing relationship between these variables of corporate governance and the mentioned variables of control. We can confirm that the information of risk that is disclosed by companies is the outcome of a formula that is consisted of the variables related to corporate governance and the variables of control.

Risk disclosure = f (variables of corporate governance, variables of control)

Empirically, we obtain the following three models:

Model 1:

$$IR = \beta_0 + \beta_1 BSIZE_i + \beta_2 BSTOWN_i + \beta_3 \% EXT_i + \beta_4 CSIZE_i + \beta_5 LEV_i + \beta_6 LIQ_i + \beta_7 ROA_i + \varepsilon$$

Model 2:

$$IRF = \beta_0 + \beta_1 BSIZE_i + \beta_2 BSTOWN_i + \beta_3 \%EXT_i + \beta_4 CSIZE_i + \beta_5 LEV_i + \beta_6 LIQ_i + \beta_7 ROA_i + \varepsilon$$

#### Model 3:

$$IRNF = \beta_0 + \beta_1 BSIZE_i + \beta_2 BSTOWN_i + \beta_3 \%EXT_i + \beta_4 CSIZE_i + \beta_5 LEV_i + \beta_6 LIQ_i + \beta_7 ROA_i + \varepsilon$$

#### Where:

- *IRi* is the index of risk disclosure of company *i* (which includes *IRF e IRNF*)
- IRFi is the index of financial risk disclosure of company i
- IRNFi is the index of non-financial risk disclosure of company i

#### Variables of Corporate Governance:

- BSIZEi is the size of the board of company i, measured by the number of directors that are part of the board.
- *BSTOWNi* is the percentage of capital held by the board of company *i*.
- %EXTi is the percentage of independent directors that form part of the board of the company i.

#### Variables of control:

- CSIZEi is the size of the company measured by the logarithm of total assets of company i.
- LEVi is the ratio between Total Liabilities and Total Assets of company i.
- LIQi is the ratio between Current Liabilities and Current Assets of company i.
- ROAi is the profitability of company i, measured by the ratio of Total Profit on Total Assets.

#### 4.3. Measuring the degree of risk disclosure

To measure the degree of risk disclosure that companies disclose we have used the indexes that are proposed by Cabedo and Tirado (2009). These authors show that these indexes reflect the informative content of risk disclosure by companies.

These indexes are constructed by using a series of stages that are based on risk information that is provided by the company in its corporate governance reports. With this information provided by the corporate governance reports we will classify each risk that is disclosed by the company according to the risk typologies that will be presented in the next subchapter "Risk Classification". Through the extensive analysis of disclosed information, we classify each risk in one of the stages that correspond with the proposed methodology of Cabedo and Tirado (2009); which will be introduced down below. Each stage differs from another stage because of the degree of which risk information which has been disclosed by the company. Companies are not exclusively allocated to one stage; it is possible that a company can be found in multiple stages. The sum of the stages of each type of risk that is disclosed by the company constitutes the risk index.

As proposed by Cabedo and Tirado (2009) we have used the five following stages:

- **Stage 1:** The company mentions only the risks to which they are exposed to.
- **Stage 2:** The company makes a description of the risks and mentions how the company is affected by these risks.
- **Stage 3:** The company reports on the quantitative measurement of the impact of risk.
- **Stage 4:** The company reports on its risk management.
- **Stage 5:** The company reports on the types of instruments used to mitigate the risk.

In order to calculate the index "Risk Disclosure" of the entities, the disclosed risks of the companies have been allocated to each of the stages that have been defined for each type of risk for each company. After this allocation, for each company the risks that have been allocated to the above mentioned stages are summed up. This index shows the grade of risk disclosure of both financial and non-financial character for each entity, thus the formula will be the following:

$$IRi = IRFi + IRNFi$$

*IRi* represents the rate of disclosure of risks of company *i*, It is composed of *IRFi*, which is the index of disclosure of financial risk of company *i*, and by *IRNFi*, which is the index of risk disclosure of non-financial information of company *i*.

In order to calculate *IRi*, firstly we have to calculate the index of disclosure of financial risks, *IRFi*, and the index of disclosure of non-financial risks, *IRNFi*. For its calculation we have proceeded as follows; firstly we will discuss the financial risk which is depicted down below and after that we will depict and explain the non-financial risk.

$$IRFi = \sum_{j=1}^{m} \sum_{rf=1}^{k_{rf}} E_{i,j}^{rf}$$

Where rf is the type of financial risk;  $E_{i,j}^{rf}$  is the value of stage j of the financial risk rf for the company i,  $E_{i,j}^{rf}$  will take the value 1 if company i is at this stage and 0 when the company is not at this stage. Finally, m is the number of stages.

Now we will depict and explain the non-financial risk:

$$IRNFi = \sum_{j=1}^{m} \sum_{rNf=1}^{k_{rNf}} \sum_{h=1}^{n} f_{i,h} E_{i,j}^{rNf}$$

Where rNf is a type of non-financial risk;  $E_{i,j}^{rNf}$  is the value of stage j of non-financial risk rNf for the company i;  $E_{i,j}^{rNf}$  will take the value 1 if company i is at this stage and 0 if is not;  $f_{i,h}$  represents the risk factors, if a category of non-financial risk do not present

more of a risk factor;  $f_{i,h}$  will take the value 1 for each of n factors that exist for each kind of non-financial risk.

We have used this methodology to calculate the index of risk disclosure for each of the companies. Now we will move on the next sub-chapter which is that of risk classification.

#### 4.4. Classification of risks

We have supported the risk classification in the following business risks scheme which has been formulated by Arthur Andersen and has been employed by the ICAEW (1997) and has been suggested by them as a framework for disclosure of business risks. This model has been applied by authors such as Shrives Linsley (2006) and Kajuter (2001) in order to analyse the degree of disclosure of business risks.

The model that we have discussed consists of six categories of risk which are the following: financial risk, operations risk, empowerment risk, information processing/technology risk, integrity risk and strategic risk. Now a brief explanation for each type of risk will follow.

**Financial risk:** is derived from changes in cash flows of the company for not dealing with the financial contracted obligations or the changes in the interest rate, the commodity price or the currency price.

**Operations risk**: is that affects the competitiveness of the company (reduction of competitive advantages) and value creation for shareholders. It is related to the product market in which the companies operate and it includes factors such as technological innovation, product design, and marketing.

**Empowerment risk**: are all those risk factors that influence the internal strength of the company, in terms of its management, external communication and its ability to adapt to new environments.

**Information processing/technologic risk:** is the risk that is caused by inadequate information processing technology systems.

**Integrity risk:** is the risk derived of the unethical actions of employees and the management team of the company which influences the reputation of the company and could thus cause an reduction in funding.

**Strategic risk:** the risk associated with the plans and strategies for future business activities, including plans to enter into new lines of business, expanding existing services through mergers and acquisitions, improvement of the company's infrastructure, also it is related to the changes in the industry where the company is active as well as the political environment in which the company operates.

#### 4.5. Results

After having analysed the data and after having studied and discussed the methodology, we will present the results of the investigation that we have realized in this study. In table 1 we present a summary on the degree of disclosure of risk information of the companies that we have extracted from the corporate governance reports. All the data has been quantified according to the quantification methods of risk that we have presented earlier in our studies.

We can observe that all companies disclose risk information to some extent; however the extent to which they disclose information differs greatly per company. If we differentiate between the typologies of risk that we have used to differentiate between financial and non-financial risks, we can note the following: A totality of approximately 87.5% of the companies that make up our sample, have disclosed information that is related to financial risks, which means that approximately 12.5% of the companies have not disclosed information related to financial risks. Regarding non-financial risks, it can be said that all companies disclose information related to non-financial risks.

It is important to mention that when we discuss non-financial risks, that we refer to the following types of risks: Business risks, Risk of empowerment, risk of information-processing and technology, integrity risk and strategic risks.

**Table 1: Risk Disclosure** 

	Financi	al Risks	Non Fi	nancial sks
	Nº	%	Nº	%
Companies that do not disclose information	3	12	0	0
Companies that disclose information	21	88	24	100
Stages	Nº	%	Nº	%
1	81	100	189	100
2	19	23	40	21
3	0	0	0	0
4	11	14	23	12
5	8	10	7	4

Stage 1: The Company only mentions the risk they are exposed for.

Stage 2: The Company makes a description of the risk and how it affects it.

Stage 3: The Company reports about the quantitative measurement of the impact of risk.

Stage 4: The Company reports about risk management.

Stage 5: The Company reports about types of instruments used to mitigate the impact of risk

Source: Created by myself

When going into further detail in financial risk, we can observe that 23% of the companies offer information related to financial risks that affect the functioning of the company. On the other hand, 14% of the companies offer information on how they manage the described risks and 10% of the companies, discloses information on the instruments that the company uses to mitigate the risks which they have described. It is important to stress that none of the companies that we have analysed disclosed any information on the quantification of the mentioned risks.

When analysing more profoundly the non-financial risks, we can contemplate that 21% of the companies disclose information on how non-financial risks affect their company. The percentage of companies that disclose on the management of described risks is slightly lower than that mentioned of the financial risks; in this case it is approximately 12%. A mere 4% of the companies mention the instruments that they have applied to reduce the effect of these non-financial risks, again none of the companies have presented information on the quantification of the mentioned risks.

In Table 2, which is presented below, we can observe the data that we have obtained on the indexes that we have mentioned in the previous section, Methodology.

Table 2: Index of risk information disclosure

IR	IRF	IRNF		
378	119	259		
	31%	69%		

IR is the index of risk disclosure of company (which includes IRF e IRNF)

IRF is the index of financial risk disclosure of company

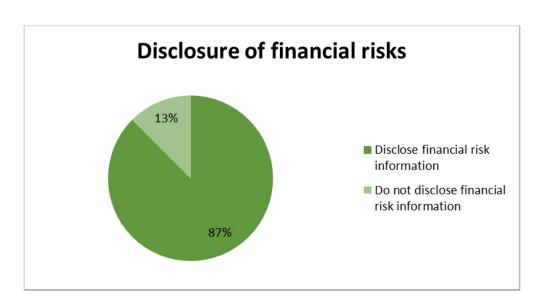
IRNF is the index of non-financial risk disclosure of company

Source: Created by myself

When analysing the breakdown of the index in greater detail which can be seen in the table down below, we can demonstrate that companies disclose more non-financial information (69%) compared to financial information (31%).

On the one hand if we look at figure 1 in which we present the percentage of companies that disclose information on financial risks, we can observe that 87% of the companies disclose information and 13% do not disclose information on financial risks.

Figure 1: Financial risk disclosure.



Source: Created by myself

On the other hand if we contemplate on how companies are divided in the disclosure of non-financial risks which we can see in figure 2, we can observe that 100% of the companies in our sample have disclosed information on non-financial risks.

Disclosure of non financial risks

0%

Disclose non financial risk information

Do not disclose non financial risk information

Figure 2: Non-financial risk disclosure.

Source: Created by myself

When analysing more profoundly the financial risks, as you can see in table 3, we can observe that companies present more information on liquidity risks, followed by the interest rate risk and the currency exchange risk. On the other hand the risks on which companies disclose the least include risks such as, commodity risk and credit-risk. Furthermore, we can notice that the majority of the companies disclose information on the risks in stage 1 and 2, which is simply mentioning and shortly describing the risks. None of the companies of the sample measure the impact of the risk in a quantified way (Stage 3), however the risks on which companies inform the management and instruments utilized to mitigate the risks (Stage 4 and 5) is the credit-risk followed by the liquidity risk.

Table 3: Financial risk disclosure

		est rate Exchange rate risk		Commodity risk		Credit risk		Liquidity risk		Other financial risk		
	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%	Nº	%
Do not disclose risk information	11	46	11	46	14	58	14	58	10	42	13	54
Disclose risk information	13	54	13	54	10	42	10	42	14	58	11	46
	STAGES											
1	13	100	13	100	10	100	20	100	14	100	11	100
2	4	31	4	31	2	20	5	25	3	21	1	7
3	0	0	0	0	0	0	0	0	0	0	0	0
4	3	23	1	8	1	10	3	15	3	21	0	0
5	1	8	1	8	1	10	3	15	2	14	0	0

Stage 1: The Company only mentions the risk they are exposed for.

Stage 2: The Company makes a description of the risk and how it affects it.

Stage 3: The Company reports about the quantitative measurement of the impact of risk.

Stage 4: The Company reports about risk management.

Stage 5: The Company reports about types of instruments used to mitigate the impact of risk

Source: Created by myself

On the other hand if we analyse the breakdown of the non-financial risks, which are presented in table 4, which can be seen below, we can observe the following. The majority of the companies disclose information on strategic risks, while the fewest mentioned risk by companies is the risk related to processing information. When breaking it down per stage, we can observe that the same holds for financial risks, the majority of the companies tend to describe the risks that affect them. Again we can observe that companies do not quantify the risks (Stage 3). The majority of the entities disclose information on the management of strategic risks (stage 4). Lastly, we can observe that disclosed information related to the management of risk (Stage 4) is predominantly on strategic risks.

Table 4: Non-financial risk disclosure

	Operation risk		Operation risk Empowerment risk p		Information processing/tecno logic risk		Integrity risk		Strategic risk	
	Nō	%	Nº	%	Nō	%	Nο	%	Nº	%
Do not disclose risk information	4	17	6	25	12	50	8	33	1	4
Disclose risk information	20	83	18	75	12	50	16	67	23	96
		STAGES								
1	20	100	18	100	12	100	16	100	20	100
2	5	25	5	28	2	17	5	31	9	45
3	0	0	0	0	0	0	0	0	0	0
4	3	15	3	17	0	0	2	13	8	40
5	2	10	0	0	0	0	2	13	2	10

Stage 1: The Company only mentions the risk they are exposed for.

Stage 2: The Company makes a description of the risk and how it affects it.

Stage 3: The Company reports about the quantitative measurement of the impact of risk.

Stage 4: The Company reports about risk management.

Stage 5: The Company reports about types of instruments used to mitigate the impact of risk

Source: Created by myself

Observing the descriptive statistics that are calculated with the help of the proposed indexes and which are presented in table 5, we can see the existing relationship between the proposed indexes and the chosen variables.

Table 5: Estimation of the models

	Dependent variables									
	IF	₹	IR	F	IRNF					
	Coefficients	t Stat	Coefficients	t Stat	Coefficients	t Stat				
Intercept	-11,219	-0,340	-6,646	-0,422	-4,573	-0,229				
BSIZE	0,284	0,289	0,080	0,171	0,204	0,343				
BSTOWN	0,096	0,847	0,015	0,278	0,081	1,180				
% EXT	0,059	0,363	0,023	0,298	0,036	0,364				
CSIZE	1,682	0,378	0,887	0,418	0,794	0,295				
LEV	8,020	0,620	3,027	0,490	4,993	0,638				
LIQ	-1,831	-0,384	-0,062	-0,027	-1,769	-0,612				
ROA	98,836	1,693	23,633	0,847	75,203	2,128				

**BSIZE** is the size of the board of company, measured by the number of directors that are part of the board;

BSTOWN is the percentage of capital held by the board of company; %EXT is the percentage of

independent directors that form part of the board of the company; CSIZE is the size of the company measured by the logarithm of total assets of company; LEV is the ratio between Total Liabilities and Total

Assets of company; LIQ is the ratio between Current Liabilities and Current Assets of company; ROA is

the profitability of company *i*, measured by the ratio of Total Profit on Total Assets.

IR is the index of risk disclosure of company (which includes IRF e IRNF)

IRF is the index of financial risk disclosure of company

IRNF is the index of non-financial risk disclosure of company

Source: Created by myself

After analysing the obtained results on the existing relationship between the disclosure

of risks and several corporate governance variables as well as several variables of

control, we have obtained the following results. We can observe that only the variable

Return on Assets (ROA) is significant with respect to the index of the disclosure of non-

financial risks (IRNF). All the other variables do not present any significant relationship

with the indexes.

5. Conclusion

Given the increased complexity and uncertainty of the current environment, a need of

relevant and useful information for the users of this information exists in order to make

proper decisions.

Firstly, we would like to remember you the objective of the study that we have realized.

The objective of the study was to evaluate the existing relationship between the

disclosure of information by companies and several variables of corporate governance,

as well as several variables of control. The variables of corporate governance that we

have used were: The size of the executive board, the independence of the board and

the percentage of capital that is owned by the board. The variables of control that we

have investigated were: the size, leverage, liquidity and profitability of the companies.

To achieve our goal we have taken a simple that is composed of 24 companies that are non-financial of nature that are listed on the Madrid Stock Exchange on December 31, 2014. The data of the companies has been obtained from corporate governance reports that have been published on the page of the "Comisión Nacional de Mercado de Valores" for the variables of corporate governance and the database of the SABI for the variables of control.

We have used the methodology proposed by Cabedo and Tirado (2009) for the quantification of the degree of disclosure. The methodology that has been used to test the hypotheses that we have introduced is a regression analysis that is estimated by the least squares method.

After having realized the statistical analyses which were performed by applying the indexes with the published data of the companies that are non-financial by nature which were listed on the Madrid Stock-Exchange, we have reached to the conclusion that the companies in our sample disclose more on non-financial risks that on financial-risks. When breaking down the non-financial risks we can observe that the companies pre-dominantly disclose information related to their strategic risks. On the other hand, the financial risk on which companies have disclosed the most is liquidity risk.

Regarding the analysed variables we can confirm that we observe non-significant results with the data of our taken sample. After having tested the hypotheses introduced in section 3. Hypothesis 1: There exist a positive relationship between the size of the board and the disclosure of information of risk by the company, hypothesis 2: There exists a positive relationship between the independence of the board and the disclosure of risk information by the company, hypothesis 3: A negative relationship exists between the percentage of capital that is owned by the board and the disclosure of risk information. We reject all three of the hypotheses given that we have not found any existing relationship between the taken variables and the used indexes. The results that we have obtained from the analysed sample do not reveal any existing relationship between any of the created indexes on the disclosure of risk information and the analysed variables.

#### 6. Limitations and recommendations for further studies

The study that we have realised has several limitations. The primary and most important limitation is the size of the sample that we have taken. We would like to remind you of the fact that our sample is composed of 24 observations (24 companies that are of non-financial nature and that listed on the Madrid Stock-Exchange, the data that we have analysed was only on 1 year, more concretely on 2014). This is an important limitation of our study, given that the reduced size of the sample could mean that this study is not very representative. In this sense with the objective of solving the mentioned problem, given that the number of Spanish companies of non-financial nature is limited (24 companies) we could recommend for future studies to increase the size of the sample by analysing the companies for several years. Furthermore the incorporation of an analysis for more years, will reduce the risk that we are analysing a period that is not sufficiently representative. A larger sample will be more representative and this will improve the empiric quality of the study.

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#### 8. Appendix

#### Appendix 1: List of companies that are in our sample.

- 1. ABERTIS IFRAESTRUCTURAS S.A.
- 2. ABENGOA, S.A.
- 3. ACS, ACTIVIDADES DE CONSTRUCCION Y SERVICIOS, S.A.
- 4. ACCIONA, S.A.
- 5. AMADEUS IT HOLDING, S.A.
- 6. DISTRIBUIDORA INTERNACIONAL DE ALIMENTACIÓN, S.A.
- 7. ENAGAS, S.A.
- 8. ENDESA, S.A.
- 9. FOMENTO DE CONSTRUCCIONES Y CONTRATAS, S.A.
- 10. FERROVIAL, S.A.
- 11. GAMESA CORPORACIÓN TECNOLÓGICA, S.A.
- 12. GAS NATURAL SDG, S.A.
- 13. GRIFOLS, S.A.
- 14. IBERDROLA, S.A.
- 15. INDUSTRIAS DE DISEÑO TEXTIL, S.A.
- 16. INDRA SISTEMAS, S.A.
- 17. JAZZTEL, PLC
- 18. MEDIASET ESPAÑA CORPORACIÓN, S.A.
- 19. OBRASCON HUARTE LAIN, S.A.
- 20. RED ELÉCTRICA CORPORACIÓN, S.A.
- 21. REPSOL, S.A.
- 22. SACYR, S.A.
- 23. TÉCNICAS REUNIDAS, S.A.
- 24. TELEFONICA, S.A.