

# Determinants of Risks Disclosure in Non-Financial Companies: Evidence From the Portuguese Capital Market

Kátia Lemos and Filipa Pacheco

Research Center on Accounting and Taxation, Management School, Polytechnic Institute of Cávado and Ave, Barcelos, Portugal

[klemos@ipca.pt](mailto:klemos@ipca.pt)

[filipamariapacheco96@gmail.com](mailto:filipamariapacheco96@gmail.com)

**Abstract:** The present study aims to determine the level of disclosure about financial risks in Portuguese non-financial companies and to identify the determinants of the level of disclosure. To carry out this study, the research methodology used was the content analysis of the reports and accounts, for the period 2017, of 40 non-financial companies listed on Euronext Lisbon, using a disclosure index for financial risks, created based on the requirements contained in the International Financial Reporting Standard No. 7 - Financial Instruments: Disclosures. After the content analysis, to identify the determining factors of disclosure level, a linear regression model was built to relate certain characteristics of the companies with the disclosure level presented. It was possible to conclude that the companies under study have an average disclosure level of about 50% of the requirements contained in IFRS 7 and that the size of companies and the concentration of capital significantly and positively influence the level of disclosure about financial risks. Indebtedness was also a determinant factor, but with a negative sign, being an uncommon result in relation to most other studies.

**Keywords:** Financial risks, Disclosure level, Disclosure index, Non-financial companies

---

## 1. Introduction

The events that marked the most recent international financial crisis have highlighted the importance of financial information transparency, especially regarding the risks incurred by companies and the strategies adopted to mitigate and manage those risks. Therefore, companies sought solutions to improve their financial reports and one of those solutions is the disclosure of information to shareholders (Salehi et al., 2017), who need reliable and complete information to make their decisions. Disclosure about risks and the strategies adopted in their management helps investors to assess companies' risks and predict their market value (Abdullah et al., 2017), reducing information asymmetries and increasing market liquidity (Elshandidy & Neri, 2015).

The main objective of this study is to identify the determinants of financial risks disclosure in Portuguese non-financial companies. Assuming that risks are useful to users of the company's management reports and accounts, as evidenced in several studies (Beretta & Bozzolan, 2004; Linsley & Shrivs, 2006; Hassan, 2009; Abraham & Cox, 2007 and Amran et al., 2009) it is intended to analyze the level of disclosure about companies' risks and subsequently to identify the determining factors associated with this level of disclosure. For this, a content analysis was carried out on the reports and accounts, for the period 2017, of non-financial companies listed on Euronext Lisbon. To measure the level of disclosure by the companies under study, a disclosure index for financial risks was created, based on the requirements contained in International Financial Reporting Standard (IFRS) 7 - Financial Instruments: Disclosures.

Regarding the determinants of the level of disclosure, based on the postulates of Agency, Signaling, Stakeholders and Legitimacy Theories, we sought to verify whether certain characteristics of the companies have any influence on the level of disclosure about financial risks. Thus, also considering the results obtained by other authors, in previous studies, the influence of certain factors was analyzed, having resorted to the construction of a linear regression model to relate certain characteristics of the companies with the level of disclosure presented.

The results of this paper may contribute to the accounting regulatory bodies, regarding potential enforcement mechanisms, in case of non-compliance with accounting standards, especially those related to financial risks disclosure.

To carry out the defined objectives, after this introduction, this paper is divided into 4 sections. In section 2 below, a brief literature review is carried out and the research hypotheses are defined. Section 3 presents the research design, by defining the sample and describing the collection and treatment of the data. In section 4 the results obtained are presented and discussed and, finally, in section 5, the main conclusions, limitations of the study and suggestions for future research are presented.

## 2. Literature Review and Hypotheses Development

Taking into account the importance of risks disclosure to the various stakeholders, several authors have investigated the disclosure of information about risks (Beretta & Bozzolan, 2004; Adam-Muller & Erkens, 2020; Shivaani & Agarwal, 2020) seeking to identify the factors that determine the level of disclosure (Linsley & Shrivess, 2006; Abraham & Cox, 2007; Deumes & Knechel, 2008; Hassan, 2009; Amran et al., 2009; Dobler et al., 2011; Oliveira et al., 2011; Elzahar & Hussainey, 2012; Campbell et al., 2014; Madrigal et al., 2015; Malafronte et al., 2016; Ashfaq et al., 2016; Habtoor et al., 2017; Serrasqueiro & Mineiro, 2018; Neifar & Jarboui, 2018; Allini et al., 2020; Abbas et al., 2021; Azevedo et al., 2022). Most studies conclude that the predominant information is qualitative, generic, vague, referring to past events and inadequate to the needs of stakeholders and had identified, as determining factors of the level of disclosure, some characteristics associated with the analyzed companies, such as the size of the company, the level of profitability, the level of indebtedness, among others.

### 2.1 Size of the Company

There are several studies (Beretta & Bozzolan, 2004; Linsley & Shrivess, 2006; Amran et al., 2009; Abraham & Cox, 2007; Dobler et al., 2011; Madrigal et al., 2015; Habtoor et al., 2017; Serrasqueiro & Mineiro, 2018; Neifar & Jarboui, 2018; Azevedo et al., 2022; Mbithi et al., 2022) that prove that there is a relationship between the disclosure about risks and the size of the company.

According to Amran et al. (2009), as the company grows, the number of stakeholders involved also increases. With this increase, the importance and obligation of disclosure becomes greater for the company, as it needs to satisfy the needs of a larger group of people.

The theory of legitimacy also emerges as an explanation for this relationship between the size and disclosure. According to the theories, larger companies usually perform several types of activities, which generate more impact on society (Kongpraiya, 2010). More specifically, the legitimacy theory states that larger companies are also more exposed in society, which means that they must comply more rigorously with disclosure requirements. In this sense, hypothesis H1 was defined in the following terms:

*H1: There is a positive relationship between the size of the company and the level of financial risks disclosure.*

### 2.2 Auditor Quality

According to Chalmers and Godfrey (2004), high profile auditing companies are more likely to require high levels of disclosure to maintain their reputation and avoid reputation costs.

Based on the previous premises, the empirical studies by Oliveira et al. (2011), Campbell et al. (2014), Zango et al. (2016), Habtoor et al. (2017), Neifar and Jarboui (2018) as well as Dey et al. (2018) revealed a positive association between risks disclosure and the type of audit firm. On the other hand, the study by Deumes and Knechel (2008) shows a non-association between the auditor and the level of disclosure. That said, hypothesis H2 was defined in the following terms:

*H2: There is a positive relationship between the size of the audit firm (BIG4) and the level of financial risks disclosure.*

### 2.3 Profitability

According to Höring and Gründl (2011), low profitability increases the company's perceived risk level in the market and increases public pressure on the entity to provide more information about risks. Elshandidy et al. (2013) also refer that high-profit companies have relatively greater incentives to signal their quality of performance and their ability to manage risks successfully.

Based on the agency's theory, Elzahar and Hussainey (2012) state that managers of companies with high profitability would tend to provide more risk information in the reports, to justify their current performance to shareholders. Based on the theory of legitimacy, we can also say that, for the most profitable companies to maintain their reputation, they will consequently tend to disclose more information, since the non-disclosure can jeopardize their legitimacy.

The empirical evidence on the relationship between profitability and risks disclosure is unclear. However, the studies of Campbell et al. (2014), Elzahar and Hussainey (2012) and Höring and Gründl (2011) find the existence of a negative relationship between profitability and risks disclosure. That said, hypothesis H3 was defined in the following terms:

*H3: There is a negative relationship between the entity's profitability and the level of financial risks disclosure.*

## **2.4 Indebtedness**

According to the agency's theory, there is a positive relationship between a company's indebtedness and the level of disclosure because the most indebted companies are under pressure from creditors and, to satisfy their needs, they must disclose more information and, in more detail (Jensen & Meckling, 1976).

From a complementary point of view, stakeholder theory and signaling theory also assume that indebted companies are more motivated to provide more risk disclosure to guarantee creditors and stakeholders and signal their ability to manage assets, different risks faced by the company and comply with its obligations (Amran et al., 2009; Habtoor et al., 2017; Foster, 1986; Oliveira et al., 2011).

Based on empirical evidence from studies such as de Oliveira et al. (2011), Deumes and Knechel (2008), Höring and Gründl (2011) and Mbithi et al. (2022), of the existence of a positive association between the level of indebtedness and the level disclosure, the research hypothesis H4 is defined as follows:

*H4: There is a positive relationship between indebtedness and the level of financial risks disclosure.*

## **2.5 Capital Concentration**

Concentration of capital in a company can affect the level of disclosure, since the more concentrated is the capital, the less likely shareholders are to want to disclose more information. An entity with a more concentrated capital structure, based on agency theory, tends to have less agency costs than an entity whose administrative structure involves people outside the company, due to the separation of ownership and control (Jensen & Meckling, 1976; Deumes & Knechel, 2008). Barako et al. (2006) affirm that a more diffuse capital structure implies a lack of monitoring capacity on the part of shareholders, who may not be a formidable force to influence the company's reporting practices, thus expecting more incentives and higher levels of disclosure.

Despite this, the empirical results of the relationship between capital concentration and the disclosure on risks are quite dispersed. Although, since Abraham and Cox (2007) and Neifar and Jarboui (2018) demonstrated a positive relationship between these two variables, the H5 hypothesis was defined in the following terms:

*H5: There is a positive relationship between the concentration of capital and the level of financial risks disclosure.*

## **2.6 Independent Directors**

According to Abraham and Cox (2007), as the annual report is prepared by the board of directors, a company board with a greater number of non-executive directors is in a stronger position to meet the preferences of shareholders in terms of responsibility and transparency. In contrast, according to the same authors, independent non-executive directors are, at least in theory, independent from management and a key indicator of the quality of corporate governance. Thus, following the perspective of Abraham and Cox (2007), independent directors can influence the level of disclosure, since they will tend to reduce information asymmetries between managers and shareholders. Oliveira et al. (2011) also add that independent directors have incentives to require the disclosure of more information to balance the levels of risk with their personal reputation.

According to Lopes and Rodrigues (2007), more disclosure can be expected from companies with a higher proportion of independent directors, and less disclosure if the board of directors has a high proportion of non-independent directors, since they have access to privileged information. Thus, based on the conclusions of the studies by Abraham and Cox (2007), Deumes and Knechel (2008), Ashfaq et al. (2016) Neifar and Jarboui (2018), and Mbithi et al. (2022) hypothesis H6 was defined in the following terms:

*H6: There is a positive relationship between the percentage of independent directors on the Board of Directors and the level of financial risks disclosure.*

## **2.7 Notoriety**

For the authors Darus and Taylor (2009), based on the signaling theory, companies with more quality will use the opportunities they have to, through disclosure, provide signals to the market to reveal their type of quality. In addition to accounting standards obliging companies to disclose about risks, companies themselves end up doing so to maintain their legitimacy in the market.

Like Lemos (2011), who obtained empirical evidence of a positive association between the level of disclosure about derivative instruments and the notoriety of Portuguese companies, the integration in the index of the 20 largest companies of Euronext Lisbon (PSI 20) is used as an indicator of companies' notoriety, and the following research hypothesis 7 is defined:

*H7: There is a positive relationship between companies with notoriety and the level of financial risks disclosure.*

## **2.8 Risk Management Committee**

According to Al-Hadi et al. (2016), risk management committees benefit companies, improving risk management supervision by the board and anticipating events and trends that could be unavoidable. In addition, risk management committees can devote more time and effort to integrating and managing the various risks across the organization.

Abbas et al. (2021) state that once the organization establishes a Risk Management Committee, Enterprise Risk Management's transparency would become much more detailed.

Abdullah et al. (2017) and Al-Hadi et al. (2016) obtained empirical evidence that companies that have a risk management committee tend to disclose more information about risks and Hasan et al. (2023) proved that risk committee size is positively associated with risk disclosure. That said, hypothesis H8 was defined in the following terms:

*H8: There is a positive relationship between the existence of a risk management committee in companies and the level of financial risks disclosure.*

## **3. Research design**

### **3.1 Sample Selection, Collection, and Processing of Data**

Since the main objective of this work is to identify the determining factors for the disclosure of information on risks in non-financial companies, the sample used consists of non-financial companies listed on Euronext Lisbon.

Thus, from the list of companies listed on Euronext Lisbon, with a total of 47 companies, 7 companies were excluded, as they are sports limited companies, or financial entities, or entities whose management reports and accounts were not available. That said, 40 companies remain in the sample of this study.

In analyzing the information disclosed, the content analysis technique was used, coding the information collected into a risk disclosure index, whose sum of the items disclosed over the total of items considered results in the risk disclosure index for each company. The source for obtaining the information was the management reports and accounts of each of the companies for the period of 2017.

#### *3.1.1 Dependent variable*

Since what we intend to analyze is the level of disclosure about risks, specifically financial risks, a disclosure index was built, considering the information disclosure requirements contained in IFRS 7.

This index consists of 30 items of disclosure and can be divided into 6 main categories:

1. Accounting policies
2. Specific information on risk disclosure
3. Hedging
4. Credit risk
5. Liquidity risk
6. Market risk

The use of these type of indices as a tool to measure the level of disclosure is something that already exists in the literature, such as for example in the studies carried out by Lopes and Rodrigues (2007), Lemos (2011), Barako et al. (2006), Höring and Gründl (2011), Madrigal et al. (2015), Malafronte et al. (2016), Ashfaq et al. (2016), Neifar and Jarboui (2018), and Adam-Muller & Erkens (2020).

Subsequently, all the management reports and accounts of the companies that make up the sample were collected, and their analysis was carried out. When checking each of the items that make up the disclosure index, each of them was given a weight of 0 or 1, where 0 means that the item is not disclosed and 1 means that the item is disclosed. Thus, after verifying each of the items for each of the companies' reports, the value of the risk

disclosure index per company is obtained through the quotient between the sum of the total items disclosed by the company in question and the total of items that constitute the disclosure index. The higher the value of the index, the higher the level of disclosure presented by the company.

### 3.1.2 Independent variables

The independent variables used in this study are based on the research hypotheses previously formulated and represent the determinants that we believe influence the level of disclosure about companies' risks, as shown in Table 1, below.

**Table 1: Independent variables and expected association**

Variable	Determination form	Expected signal	Hypothesis
<b>Size</b>	Total assets logarithm	+	H1
<b>Auditor quality (BIG 4)</b>	Dummy: 0 - not belonging to the Big 4 1 - belonging to the Big 4	+	H2
<b>Profitability (ROA)</b>	Net income / total net assets x 100	-	H3
<b>Indebtedness (IND)</b>	Total liabilities / Equity x 100	+	H4
<b>Capital concentration (CC)</b>	% of the three largest shareholders	+	H5
<b>Independent Directors (ID)</b>	% of independent directors on the board of directors	+	H6
<b>Notoriety (PSI 20)</b>	Dummy: 0 - the shares of the companies do not include the PSI 20 1 - the shares of the companies are included in the PSI 20	+	H7
<b>Risk management committee (RMC)</b>	Dummy: 0 - the company does not have a risk management committee 1 - the company has a risk management committee	+	H8

### 3.1.3 Regression model

To identify the determinants of the level of disclosure about financial risks, a multiple linear regression model was built, which relates the disclosure index with the characteristics of the companies to be studied, which is presented in table 2 below.

**Table 2: Multiple linear regression model**

$$FRDI = \alpha_0 + \beta_1 SIZE + \beta_2 BIG4 + \beta_3 ROA + \beta_4 IND + \beta_5 CC + \beta_6 ID + \beta_7 PSI20 + \beta_7 RMC + \epsilon_i$$

## 4. Empirical Results and Discussions

This section aims to analyze the association between the hypotheses previously formulated and the dependent variable (financial risks disclosure index- FRDI).

The multiple linear regression model was then estimated. It is important to mention that, due to the lack of information regarding some independent variables, one company was excluded from the sample and, therefore, the multiple linear regression model was estimated for only 39 companies. The method used in this multiple linear regression model was Enter and the results obtained are those shown in table 3, below:

Table 3: Results of the multiple linear regression model

Coefficients						
Model		Nonstandard coefficients		Standardized coefficients	t	Sig.
		B	Standard Error	Beta		
1	(Constant)	-1,225	,437		-2,802	,009
	SIZE	,180	,053	,633	3,389	,002
	BIG4	-,004	,083	-,007	-,054	,958
	ROA	,001	,001	,107	,800	,430
	IND	-,004	,002	-,222	-1,841	,076
	CC	,004	,002	,297	2,323	,027
	ID	,001	,001	,090	,696	,492
	PSI20	,024	,081	,049	,295	,770
	RMG	-,009	,079	-,015	-,113	,911
Model	R	R square	Adjusted square R	Standard error of estimate		
1	,795	,632	,534	,16872		

As can be seen through the analysis of table 3, for a significance level of 5%, the only variables that explain the level of disclosure about financial risks are size and capital concentration (CC). However, for a significance level of 10%, the indebtedness variable (IND) is also explanatory of disclosure index. The remaining variables such as the quality of the auditor, profitability, the percentage of independent directors on the board of directors, the PSI20 and the existence of a risk management committee do not have any relationship with the level of disclosure of financial risks of the companies in the sample.

In this segment, since the variables size and capital concentration show a positive sign, as expected, and prove to be explanatory, hypotheses H1 and H5 can be validated.

As previously mentioned, for a significance level of 10%, the indebtedness also proves to be explanatory of the level of disclosure, but despite this, in the formulation of the research hypotheses, a positive sign was predicted. However, the model presented above, despite proving that this variable influences the level of disclosure about financial risks, estimates a negative sign for this relationship, consequently making the hypotheses H4 unable to be validated.

In short, we were able to verify that the value of the disclosure index on financial risks increases as the size of the company and the concentration of capital also increase and the indebtedness decreases.

Finally, looking at the value R<sup>2</sup>, we can conclude that the estimated model explains 63.2% of the level of disclosure about financial risks of the sample companies.

The results obtained are in line with the results obtained by Beretta and Bozzolan (2004), Linsley and Shrivs (2006), Amran et al. (2009), Abraham and Cox (2007), Dobler et al. (2011), Madrigal et al. (2015), Habtoor et al. (2017) Serrasqueiro and Mineiro (2018), Neifar and Jarboui (2018), and Mbithi et al. (2022), who also proved the existence of a positive association between the size of the company and the level of disclosure presented. There are also several theories that try to explain this relationship, such as the legitimacy theory that states that larger companies are more exposed to society and, consequently, become “obliged” to comply with the disclosure requirements.

As previously mentioned, and based on the agency's theory, there is a positive relationship between indebtedness and the level of disclosure because the most indebted companies are under more pressure from creditors and, to be able to respond to them, they must disclose more information. This thesis also goes against

the theory of stakeholders and the theory of signaling that state that, to guarantee creditors and stakeholders and signal their ability to manage different risks, companies disclose more information. Thus, based on studies such as that by Deumes and Knechel (2008) and Höring and Gründl (2011) it was expected to find a positive relationship between indebtedness and the level of disclosure of risk information. Despite this, the results of this study point to a significant negative relationship between indebtedness and disclosure level. This result can be justified by the fact that entities with a lower level of risk may be more susceptible to disclosing information about risks, despite not being so pressured to do so.

Regarding the concentration of capital, several authors state that the greater the concentration of capital, the less likely the company is to disclose information. An entity whose capital structure is more concentrated and with shareholders with an active role in monitoring the company consequently makes the information also more concentrated in that restricted group of people, so there is not so much need to disclose it. Despite this, it was concluded that there is a positive relationship between the concentration of capital and the disclosure about risks. This result is in line with the results obtained by Abraham and Cox (2007) and Neifar and Jarboui (2018) and with the view of Jensen and Meckling (1976) who suggest that when the participation of the largest shareholder is quite high, and the other external investors realize that he behaves to maximize the company's value, conflicts of interest may occur between them. That said, external investors will impose less contractual restrictions on the company and, consequently, agency costs will reduce. With low agency costs, there will no longer be a need for the majority shareholder to retain information. Thus, there are incentives to keep disclosure levels consistent with maximizing the company's value (Jensen & Meckling, 1976; Oliveira et al., 2011).

## **5. Conclusion**

The objectives of this study were to measure the level of disclosure about financial risks and to identify the determining factors of this level of disclosure in Portuguese non-financial companies. To this end, in a first stage, a content analysis was carried out on the management reports and accounts of the companies, through a disclosure index, created based on the disclosure requirements contained in the International Financial Reporting Standard No. 7 - Financial Instruments: Disclosures. In a second phase of the study, through a linear regression model, this disclosure index was related to a set of independent variables related to certain characteristics of the companies.

It was concluded that the disclosure index increases as the size of the company and the concentration of capital also increase and that indebtedness decreases. About indebtedness, a positive relationship was expected between this variable and the level of disclosure. Despite this, through this study it was concluded that indebtedness negatively influences the level of disclosure. That is, the lower the debt of a company, the greater the level of disclosure presented.

Regarding the other variables, they did not show any statistically significant association with the level of disclosure.

This study contributes to the identification of the determinants of risk disclosure in non-financial entities. Identifying the drivers of risk disclosure can help regulators to define risk disclosure requirements and improve accounting standards.

Although, this study has some limitations that must also be addressed. The first is related to the fact that the sample used is small, and the results obtained cannot be extrapolated to all non-financial companies in Portugal, since it is limited to a pre-defined list of listed companies. In addition, the analyzed period is limited to just one economic year, which makes it impossible to carry out a longitudinal analysis of the levels of disclosure presented over time by the companies under study.

Since the standards regarding the disclosure of risk information are constantly reviewed and evolving, it is suggested for future research, the analysis of disclosure and verification of the degree of compliance with future mandatory requirements, such as those provided for in IFRS 9, currently in force, and make a comparison of the results, to understand if the level of disclosure continues to evolve positively.

Considering the current context, it will also be interesting to see how companies have introduced information in their reports and accounts related to the risks associated with Covid 19 and its impacts.

Finally, it is also suggested to extend this study to unlisted companies, also covering small and medium-sized companies that are the most representative of the business fabric in Portugal.

Despite the limitations presented, this article contributes to the international literature in several ways. There is little evidence available regarding the risk reporting practices of Portuguese companies, so this study aimed to broaden the scope of current understanding of risk reporting practices and their determinants in this country. The results obtained can be extended to other countries and contribute to the perception of financial risk disclosure practices in non-financial entities and their determining factors, being especially useful for regulators and policy makers, in order to improve risk disclosure and improve transparency.

## Acknowledgment

This work is financed by national funds through the FCT - Foundation for Science and Technology, I.P., under project UIDP/04043/2020.

## References

- Abbas, D., Ismail, T., Taqi, M., & Yazid, H. (2021). Determinants of enterprise risk management disclosures: evidence from insurance industry. *Accounting*, 7, 1331-1338.
- Abdullah, M., Shukor, Z. A., & Rahmat, M. M. (2017). The influences of risk management committee and audit committee towards voluntary risk management disclosure. *Jurnal Pengurusan*, 50.
- Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39, 227-248.
- Adam-Muller, A., & Erkens, M. (2020). Risk disclosure noncompliance. *Journal of Accounting Public Policy*, 39, 106739.
- Al-Hadi, A., Hasan, M. M., & Habib, A. (2016). Risk committee, firm life cycle, and market risk disclosures. *Corporate Governance: An International Review*, 24(2), 145-170.
- Al-Hadi, A., Hasan, M., Taylor, G., Hossain, M., & Richardson, G. (2017). Market risk disclosures and investment efficiency: international evidence from the Golf Cooperation Council financial firms. *Journal of International Financial Management & Accounting*, 28(3), 349-393.
- Allini, A., Ferri, L., Maffei, M., & Zampella, A. (2020). Determinants of financial instruments risk disclosure: an empirical analysis in the banking sector. *Corporate Ownership & Control*, 7(2), 20-31.
- Amran, A., Bin, A. M. R., & Hassan, B. C. H. M. (2009). Risk reporting: An exploratory study on risk management disclosure in Malaysian annual reports. *Managerial Auditing Journal*, 24(1), 39-57.
- Ashfaq, K., Zhang, R., Munaim, A., & Razzaq, N. (2016). An investigation into the determinants of risk disclosure in banks: evidence from financial sector of Pakistan. *International Journal of Economics and Financial Issues*, 6(3), 1049-1058.
- Azevedo, G., Oliveira, J. Sousa, L., & Borges, M. (2022). The determinants of risk reporting during the period of adoption of Bael II Accord: evidence from de Portuguese commercial banks. *Asian Review of Accounting*, 30(2), 177-206.
- Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Corporate disclosure by kenyan companies. *Corporate Governance*, 14(2), 107-125.
- Beretta, S., & Bozzolan, S. (2004). A framework for the analysis of firm risk communication. *The International Journal of Accounting* 39, 265-288.
- Birt, J. L., Bilson, C. M., Smith, T., & Whaley, R. E. (2006). Ownership, competition and financial disclosure. *Australian Journal of Management*, 31(2), 235-263.
- Campbell, J. L., Chen, H., Lu, H., Dhaliwal, D. S., & Steele, L. B. (2014). The information content of mandatory risk factor disclosures in corporate filings. *Review of Accounting Studies*, 19(1), 396-455.
- Chalmers, K., & Godfrey, J. (2004). Reputation costs: the impetus for voluntary derivative financial instruments reporting. *Accounting, Organizations and Society*, 29, 95-125.
- Darus, F., & Taylor, D. (2009). Influences of proprietary and political costs on voluntary disclosure relating to financial instruments before and after mandatory requirements. *Corporate Ownership and Control*, 6(4), 391-406. <https://doi.org/10.22495/cocv6i4c3p5>
- Deumes, R., & Knechel, W. R. (2008). Economic incentives for voluntary reporting on internal risk management and control systems. *Auditing*, 27(1), 35-66.
- Dey, R., Hossain, S., & Rezae, Z. (2018). Financial risk disclosure and financial attributes among publicly traded manufacturing companies: evidence from Bangladesh. *Journal of Risk and Financial Management*, 11(50), 1-16.
- Dobler, M., Lajili, K., & Zéghal, D. (2011). Attributes of corporate risk disclosure: an international investigation in the manufacturing sector. *Journal of International Accounting Research*, 10(2), 1-22.
- Elshandidy, T., & Neri, L. (2015). Corporate governance, risk disclosure practices, and market liquidity: comparative evidence from the UK and Italy. *Corporate Governance: An International Review*, 23(4), 331-356.
- Elshandidy, Tamer, Fraser, I., & Hussainey, K. (2013). Aggregated, voluntary and mandatory risk disclosure incentives: Evidence from UK FTSE all share companies \*. *International Review of Financial Analysis*, 30(January 2016), 320-333.
- Elzahar, H., & Hussainey, K. (2012). Determinants of narrative risk disclosures in UK interim reports. *Journal of Risk Finance*, 3(2), 133-147.
- Habtoor, O. S., Ahmad, N., Mohamad, N. R., & Haat, M. H. C. (2017). Linking corporate risk disclosure practices with firm-specific characteristics in Saudi Arabia. *Gadjar Mada International Journal of Business*, 19(3), 247-267.
- Hasan, A., Sufi. U., & Hussainey, K. (2023). Risk committee characteristics and risk disclosure in banks: evidence from an emerging economy. *Journal of Applied Accounting Research*, <https://doi.org/10.1108/JAAR-09-2022-0236>.

- Hassan, M. K. (2009). UAE corporations-specific characteristics and level of risk disclosure. *Managerial Auditing Journal*, 24(7), 668–687.
- Höring, D., & Gründl, H. (2011). Investigating risk disclosure practices in the European insurance industry. *The Geneva Papers*, 36(2002), 380–413.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kongpraiya, C. (2010). The study of corporate risk disclosure in the case of Thai listed companies. *MA Risk Management - University of Nottingham*.
- Lemos, K. (2011). *Factores determinantes da divulgação de informação sobre instrumentos derivados. Evidência empírica em Portugal*. Universidad de Santiago de Compostela - Faculdade de Ciências Económicas y Empresariales.
- Li, Y., He, J., & Xiao, M. (2019). Risk disclosure in annual reports and corporate investment efficiency. *International Review of Economics and Finance*, 63, 138-151.
- Linsley, P. M., & Shrivs, P. J. (2006). Risk reporting: A study of risk disclosures in the annual reports of UK companies. *British Accounting Review*, 38(4), 387–404.
- Lopes, P. T., & Rodrigues, L. L. (2007). Accounting for financial instruments : An analysis of the determinants of disclosure in the Portuguese. *The International Journal of Accounting*, (July 2014), 25–56.
- Madrigal, M., Guzmán, B., & Guzmán, C. (2015). Determinants of corporate risk disclosure in large Spanish companies: a snapshot. *Contaduría y Administración*, 60, 757- 775.
- Malafronte, I., Porzio, C., & Starita, M. (2016). The nature and determinants of disclosure practices in the insurance industry: evidence from European insurers. *International Review of Financial Analysis*, 45, 367- 382.
- Mbithi, E., Moloji, T., & Wangombe, D. (2022). An empirical examination of board-related and firm-specific drivers on risk disclosure by listed firms in Kenya: a mixed-methods approach. *Corporate Governance*, 23(2), 298-322.
- Neifar, S., & Jarboui, A. (2018). Corporate governance and operational risk voluntary disclosure: evidence from Islamic banks. *Research in International Business and Finance*, 46, 43-54.
- Oliveira, J., Rodrigues, L. L., & Craig, R. (2011). Risk-related disclosures by non-finance companies: Portuguese practices and disclosure characteristics. *Managerial Auditing Journal*, 26(9), 817–839.  
<https://doi.org/10.1108/02686901111171466>
- Salehi, M., Moradi, M., & Paiydarmanesh, N. (2017). The effect of corporate governance and audit quality on disclosure quality: evidence from Tehran stock exchange. *Periodica Polytechnica Social and Management Sciences*, 25, 32–48.
- Serrasqueiro, R., & Mineiro, T. (2018). Corporate risk reporting: analysis of risk disclosures in the interim reports of public Portuguese non-financial companies. *Contaduría y Administración*, 63(2), Especial, 1-23.
- Shivaani, M., & Agarwal, N. (2020). Does competitive position of a firm affect the quality of risk disclosure?. *Pacific-Basin Finance Journal*, 61, 101317.
- Zango, A., Kamardin, H., & Ishak, R. (2016). Audit quality, board gender and financial risk disclosure. *International Journal of Economics and Financial Issues*, 6(4), 55–61.