

DETERMINANTS OF FINANCIAL INSTRUMENTS RISK DISCLOSURE: AN EMPIRICAL ANALYSIS IN THE BANKING SECTOR

Alessandra Allini^{*}, Luca Ferri^{*}, Marco Maffei^{*},
Annamaria Zampella^{**}

^{*} Department of Economics, Management, Institutions, University of Naples "Federico II", Italy

^{**} *Corresponding author*, Department of Economics, Management, Institutions, University of Naples "Federico II", Italy

Contact details: Department of Economics, Management, Institutions, University of Naples "Federico II", Via Cinthia, 80126 Napoli (NA), Italy



Abstract

How to cite this paper: 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*, 17(2), 20-31.
<http://doi.org/10.22495/cocv17i2art2>

Copyright © 2020 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).
<https://creativecommons.org/licenses/by/4.0/>

ISSN Online: 1810-3057

ISSN Print: 1727-9232

Received: 29.10.2019

Accepted: 03.01.2020

JEL Classification: M41

DOI: 10.22495/cocv17i2art2

This study investigates the effects of firm and country factors, considered as determinants of the financial instruments risk disclosure (FIRD) proxied by IFRS 7 in the European banking system. We select 582 banks-year observations based on the largest five European economies (France, Germany, Italy, Spain and the UK) as provided by the International Monetary Fund (IMF). Our analysis covers a period of 8 years (2007-2014) and adopts an OLS model. Results show that both firm (the type of auditor, board size and profitability) and country factors (financing environment, regulatory environment, and organizational status) affect FIRD. Limitations for this paper could relate to country selection, as well as on the breadth of the sample. Nevertheless, these aspects could unveil possible areas of future inquiry. The contribution of the study is twofold. It enriches the literature about firm and country determinants on financial instruments risk disclosure, as combined rather than single-standing variables. Yet, it draws the attention of banks' management and investors on what the crucial factors to reach an optimal level of FIRD are and gain the confidence of capital markets, reducing information asymmetries. This is the first empirical investigation on the determinants of FIRD, using IFRS 7, in the European banking sector that adopts firm and country factors in a combined effort.

Keywords: Determinants, Risk Disclosure, IFRS 7, Banks

Authors' individual contribution: Conceptualization - A.Z.; Methodology - L.F., A.Z.; Writing - A.A., L.F., M.M., A.Z.; Investigation - L.F., A.Z.; Supervision - A.A., M.M.

1. INTRODUCTION

The aim of this study is to investigate firm and country factors affecting Financial Instruments Risk Disclosure (FIRD) in the European banking sector on the basis of the mandatory information requested by the International Financial Reporting Standard no. 7 (IFRS 7).

IFRS 7 attempts to enhance transparency in the banking system (Bischof, 2009), on the ground that an increase in financial risk disclosure is likely to reduce instability (Oliveira, Lima Rodrigues, & Craig, 2011) and enhance performance through

information disclosure (Wakaisuka-Isingoma, 2018). However, scholars (i.e. Coluccia, Fontana, Graziano, Rossi, & Solimene, 2017; Anandarajan, Francis, Hasan, & John, 2011; Linsley & Lawrence, 2007; Linsley & Shrivies, 2006), practitioners and regulation bodies (i.e. ICAEW, 2011; KPMG, 2009, 2008; Ernst & Young, 2008; PWC, 2008) warn that banks often failed in disclosing clearly the magnitude of risk of financial instruments, and the underlying economics of financial investments (i.e. Maffei, Aria, Fiondella, Spanò, & Zagaria, 2014; Paaple & Speklè, 2012; Magnan & Markarian, 2011; Beretta & Bozzolan, 2004; Cabedo & Tirado, 2004).

Literature examines firm and/or country factors that may affect risk disclosure, mainly focusing on emerging markets (e.g. Agyei-Mensah, 2017a; 2017b; Tahat, Dunne, Fifield, & Power, 2016; El-Masry, Abdelfattah, & Elbahar, 2016). Glaum, Schmidt, Street, and Vogel (2013) are one of the few that consider whether both firm and country factors affect the disclosure level required by IFRSs. What the factors that may stimulate managers to provide transparent FIRD are still remains questionable. With this in mind, and following Barakat and Hussainey (2013) call for research on the direct and joint effects of bank governance and regulation on the level of bank management's compliance with IFRS 7, this paper aims to explore the combo effect of firm (i.e. audit committee, CEO duality, and board size) and country factors (i.e. financing environment, regulatory environment, and organizational status) on banks' financial risk disclosure.

Based on a sample of 582 observations¹ of banks from 2007 (first-time adoption of IFRS 7) to 2014, an OLS multiple regression model is developed.

Our results show that the presence of a Big Four audit firm, board size, and country factors exert a positive effect on FIRD in the European banking sector.

This study's contribution is twofold. First, it enriches the theoretical debate on FIRD showing the existence of a positive effect of firm (i.e. best auditing practices and board size) and country factors on risk disclosure transparency. Second, it equips bank managers interested in identifying what are the main governance features to be strengthened in order to achieve greater transparency and gain the confidence of investors, reducing information asymmetries (e.g. Healy & Palepu, 2001; Miller & Skinner, 2015; El-Bannany, 2018).

The paper is organized as follows: Section 2 reviews the literature; Section 3 explains the research design; Section 4 discusses the results; Section 5 draws some conclusions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

With a view of complementing extant literature, this paper considers both the firms and country dynamics that could affect the FIRD. As for the firm factors, the paper relies upon the agency theory (Jensen & Meckling, 1976; Watts & Zimmerman, 1983) while for country factors the study uses the international accounting development and classification by Choi, Frost, and Meek (2002).

2.1. Audit committee

Agency theory sees auditing as a way of reducing agency costs and enforcing financial reporting (Mokhtar & Mellett, 2013; Glaum et al., 2013; Lopes & Rodrigues, 2007). It is well-argued that Big Four companies² provide audits of a higher quality level (e.g., Glaum et al., 2013; Francis & Wang, 2008; Boone, Khurana, & Raman, 2010). In detail, Big Four demand more risk disclosure in order to avoid/mitigate their reputational risk (Chalmers &

Godfrey, 2004), thus prompting their clients' adherence to any recommended risk disclosure regime. Empirical evidence on the Big Four role is countervailing. Archambault and Archambault (2003) document an increase in risk disclosure compliance. Mangena and Pike (2005) find that Big Four give rise to more effective monitoring. Barakat and Hussainey (2013), focusing on banks, call for more research on the positive role of Big Four.

We argue that the Big Four auditor can foster European banks' effective reporting strategies resulting in transparent financial risk information. Thus, we hypothesize that:

H1: There is a positive relation between the level of FIRD disclosed by European banks and the presence of a Big Four auditor.

2.2. CEO duality

Duality can lead to dominant personality phenomena (Forker, 1992) associated with reduced disclosure and poor monitoring. Duality can compromise the board's effectiveness, due to CEOs controlling board meetings, selecting agenda items, and even board members (Haniffa & Cooke, 2002). A dominant personality may be detrimental to the interest of shareholders and stakeholders (Forker, 1992), and increases the risk of disclosure manipulation. Duality also neglects the firm independence due to the excessive concentration of power (Blackburn, 1994; Daily & Schwenk, 1996) that hinders effective strategic decision-making, and transparent disclosure. Gul and Leung (2004) find that firms characterized by CEO duality disclose significantly less information than others. Benzing and Börner (2015), and Elshandidy, Fraser, and Hussainey (2013) argue that firms should separate CEO responsibilities and roles from those of the board chair to ensure more independence and a positive effect on the risk disclosure. Likewise, the European Banking Authority (EBA), in the Directive 2013/36/EU, strongly recommends separation (EBA, 2018).

Hence, we conjecture the following hypothesis:

H2: There is a negative relation between the level of FIRD disclosed by European banks and the presence of CEO duality.

2.3. Board size

Agency theory predicts that larger boards include a wide range of expertise which results in greater effectiveness in the monitoring role, communication, and decision-making (e.g., Jensen, 1993; Elzahar & Hussainey, 2012; Gaur, Bathula, & Singh, 2015). The duty to protect investors' interest is connected with the board's role to ensure transparent disclosure of financial risk information, (e.g., Elzahar & Hussainey, 2012; Lopes & Rodrigues, 2007). Accordingly, the board of directors is responsible for the risk management process (i.e. Ntim, Lindop, & Thomas, 2013). Many studies document a positive impact of the board of directors on risk reporting practices (Mokhtar & Mellett, 2013; Ntim et al., 2013; Elshandidy et al., 2013).

In the banking sector, the Basel Committee on Banking Supervision (2006) in its consultative document, "Enhancing Corporate Governance of Banking Industry", places the board as an essential

¹ The panel is unbalanced. More details are presented in the Research design.

² Deloitte, Ernst&Young, KPMG, Pricewaterhousecoopers

part of bank regulatory reforms. The second pillar (SReP – Supervisory Review Process) of Basel III identifies the role of the board of directors as an integral part of risk management. Based on the aforementioned discussion, we formulate the following hypothesis:

H3: There is a positive relation between the level of FIRD disclosed by European banks and the size of the board.

2.4. Financing environment

Many studies tested and confirm the effect of environmental variables on disclosure practices in multi-country studies (e.g. Dong & Stettler, 2011; Archambault & Archambault, 2003; Jaggi & Low, 2000).

According to Anandarajan et al. (2011) and Nobes (1998), we argue that the financial environment influences resource allocation and growth by reducing information and transaction costs. This variable considers the belonging to a market-oriented or bank-oriented system (Ali & Hwang, 2000; Lopes & Rodrigues, 2007). This distinction is important because, the financial system is the key to weighting the degree of market pressure exerted on those who are responsible for disclosure in financial reports (Nobes, 1998; Hooi & Boolaky, 2015).

In market-oriented countries, listed firms have greater disclosure requirements, being subject to the interest of multiple stakeholders who rely on disclosure for security valuation and monitoring purposes (Lopes & Rodrigues, 2007; Dong & Stettler, 2011). Instead, in banks-oriented countries, stakeholders require less public financial information because they have a close relationship with their banks (Ali & Hwang, 2000; Guenther & Young, 2000; Anandarajan et al., 2011) and therefore the pressure for information disclosure in these latter countries is relatively weaker (Dong & Stettler, 2011).

Hence, we formulate the following hypothesis:

H4: There is a positive relation between the level of FIRD disclosed by European banks and the belonging to a market-oriented country.

2.5. Regulatory environment

The regulatory environment is an indicator of banking efficiency as well as a measure of independence from government control and interference in the financial sector (Chortareas, Girardone, & Ventouri, 2013).

Beyer, Cohen, Lys, and Walther (2010), signal the importance of the regulatory environment to understand disclosure practices, as increased banking freedom may promote greater transparency. Anandarajan et al. (2011) investigate the effect of the regulatory environment in the banking sector confirming that it promotes the informative environment in general. However, there is a lack of evidence on whether financial risk disclosure is associated with the regulatory environments due to countries' discrepancies.

According to Chortareas et al. (2013), limited financial freedom may encourage financial institutions to create opaque new instruments and miscalculate risk that, consequently, could have a

negative effect on the correlated disclosure. The above discussion suggests that more freedom could enhance bank managers' willingness to provide greater financial risk information; hence, we test the following hypothesis:

H5: There is a positive relation between the level of FIRD disclosed by European banks and financial freedom.

2.6. Organizational status

According to Woods, Dowd, and Humphrey (2008), multinational banks are usually multiple listing and are likely to display more homogenized and advanced reporting practices than non-multinational ones. They have relationships with several potential investors who require high-quality information (Choi & Mueller, 1992). Therefore, multinational banks face a variety of accounting and reporting requirements besides those of their respective home countries (Meek, Roberts, & Gray, 1995), so they pay greater attention to disclosures because they are under greater scrutiny by potential investors (Anandarajan et al., 2011).

The majority of studies on disclosure determinants find a positive relation between cross-listing and the level of financial risk disclosure (Mangena & Pike, 2005; Lopes & Rodrigues, 2007; Ntim et al., 2013; Glaum et al., 2013). Conversely, Elzahar and Hussainey (2012), investigating UK interim reports, do not find an association between cross-listing status and financial risk disclosure. Given that cross-listed banks should provide additional financial risk information in order to make their securities more attractive for investors, managers need to send good signals about their performance and risks. This expectation is tested on the following hypothesis:

H6: There is a positive relation between the level of FIRD disclosed by European banks and the organizational status.

We control the model including the economic environment, profitability, leverage, and bank size.

GDP is the most comprehensive measure of a country's economic activity. Similar to prior studies, we include the economic environment to control for countrywide economic that is likely to affect the bank financial reporting (Guenther & Young, 2000; Anandarajan et al., 2011; Duru, Hasan, Song, & Zhao, 2018).

With regard to profitability, the agency theory claims that managers of companies with better performance (ROE) tend to disclose more risk information, in order to justify their performance to the shareholders (Alharthi, 2017; Maffei et al., 2014; Elzahar & Hussainey, 2012), to avoid any undervaluation of their shares (Giner, 1997), or to increase investors' confidence. Many studies confirm the positive relation between profitability and financial risk disclosure (e.g. Wallace & Naser, 1995; Miihkinen, 2012), while other studies reveal mixed results (i.e. Helbok & Wagner, 2006; Linsley & Shrivs, 2006). We suppose that profitable banks are more inclined to disclose FIRD and therefore wish to signal their superior risk management abilities to the market.

Regarding leverage, the existing empirical evidence is inconclusive. On the one hand, literature finds a positive relation between leverage and

financial risk disclosure (Deumes & Knechel, 2008; Hassan, 2009; Marshall & Weetman, 2007; Taylor et al., 2010) while others document insignificant association (Wallace & Naser, 1995; Abraham & Cox, 2007; Linsley & Shrivess, 2006; Rajab & Handley-Schachler, 2009; Elshandidy et al., 2013). We use the debt-equity ratio as a proxy for leverage in this study.

Lastly, bank size is also used as a control variable because larger banks have a higher ability to absorb disclosure costs, whereas smaller banks may not be able to bear such costs. Empirically, findings are mixed. While some scholars (e.g. Beretta & Bozzolan, 2004; Hassan, 2009) find a non-significant association between firm size and financial risk disclosure. We use the log of total assets as a proxy for bank size.

3. RESEARCH DESIGN

3.1. Sample composition

Similar to Jones, Melis, Gaia, and Aresu (2018), we selected all commercial and investments banks based on the largest five European economies (France, Germany, Italy, Spain, and the UK) by Gross Domestic Product (GDP) listed from 2007 to 2014 as provided by the International Monetary Fund (IMF).

The sample selection procedure is provided in Table 1³. Italy and France are better represented because they represent respectively the 27% and 28% of the whole sample, while the less representative is Spain (10%). Germany and the UK have almost the same final number of observations (17%).

Table 1. Sample composition

Years	Countries											
	France		Germany		Italy		Spain		UK		Tot	
	n	%	n	%	n	%	n	%	n	%	n	%
2007	20	0,13	11	0,11	20	0,12	6	0,10	9	0,09	66	0,11
2008	20	0,13	12	0,12	20	0,12	7	0,12	12	0,12	71	0,12
2009	20	0,13	12	0,12	20	0,12	7	0,12	12	0,12	71	0,12
2010	20	0,13	13	0,13	20	0,12	7	0,12	12	0,12	72	0,12
2011	20	0,13	13	0,13	20	0,12	8	0,14	12	0,12	73	0,13
2012	20	0,13	13	0,13	21	0,13	8	0,14	14	0,14	76	0,13
2013	20	0,13	13	0,13	21	0,13	8	0,14	14	0,14	76	0,13
2014	20	0,13	13	0,13	22	0,13	8	0,14	14	0,14	77	0,13
Tot	160	0,27	100	0,17	164	0,28	59	0,10	99	0,17	582	1,00

3.2. Measurement of variables

The financial disclosure index has been built following the requirements provided by IFRS 7. It is based on the qualitative and quantitative type of information on credit, market (i.e. price risk, interest risk, and exchange risk) and liquidity risk (paragraphs 7:36-7:37-7:38-7:39-7:40 of IFRS 7)⁴.

Manual content analysis has been adopted to build a FIRD index from banks' annual reports. In order to make a reliable index, multiple coders have been involved in order to minimize the discrepancies in the check of IFRS 7 items. This is

consistent with previous IFRS disclosure studies (Milne & Adler, 1999; Street & Bryant, 2000; Glaum & Street, 2003).

To analyze the collected data, a Total Financial Disclosure Index (TFDI) was employed following the approach by Cooke (1992) and Hossain and Reaz (2007). This index is obtained by dividing the total number of required disclosures provided by a single bank as follows⁵:

$$TFDI_{ij} = (\sum x_i)/n \quad (1)$$

where:

$x_{ij} = 1$ if i item is disclosed by firm j 0 otherwise;

n = number of items included in the disclosure index.

Given that IFRS 7 provide qualitative and quantitative information, we developed the qualitative financial disclosure index (QLFDI) and the quantitative financial disclosure index (QTFDI) to give more details on FIRD.

Hence, the indexes explain the total number of items disclosed by the bank j under IFRS 7 divided by the total number items of the checklist, so that:

$0 \leq TFDI \leq 1$ (the maximum score is represented by 24 items);

$0 \leq QLFDI \leq 1$ (the maximum score is represented by 9 items);

$0 \leq QTFDI \leq 1$ (the maximum score is represented by 15 items);

This index is calculated by considering just the existence of the items, giving the same weight, the same importance to each disclosed information. (Owusu-Ansah, 2000; Owusu-Ansah & Yeoh, 2005; Lopes & Rodrigues, 2007). Several prior studies have argued that the result of the equal weighting procedure tends to be similar to those of other weighting systems (Prencipe, 2004; Amoako & Asante, 2013).

Table 2 shows the medium score according to IFRS 7 for each country in the observed period. Precisely, the UK and Spain register the higher score (respectively 85% and 83%) according to IFRS 7, while the other countries slightly lower.

Splitting the TFDI in QLFDI and QTFDI, the level of qualitative information is similar for Italy and Germany (57% and 59%, respectively), while the UK and Spain are similar in terms of qualitative disclosure (85% and 80%, respectively). With regard to quantitative information, the level of disclosure for French banks is the lowest (54%) in the sample, while the UK and Spain have a better score (86% and 85%).

Table 3 resumes the labels and the meaning of the variables adopted in this study.

³ More precisely, we have investigated 20 listed banks in France, 13 in Germany, 22 in Italy, 8 in Spain and 14 in UK. As you note in Table 1, the sample is unbalanced in the period under investigation, indeed in some countries the number of banks increases over time probably due to the origination of new entities or due to extraordinary operations such as the demerger.

⁴ See Appendix for details

⁵ As mentioned, adopting the content analysis technique, we have analysed the notes of banks' financial reporting about financial risks and we have compared this content with the items listed in IFRS 7 (see the Appendix). Every time we found information requested by the accounting standard, we assigned an equal score of 1. Otherwise, when in the notes to the financial reporting we did not find any information as required by IFRS 7, we assigned 0. Subsequently, for each bank, we have summed the total of the items found for a single year and divided it by the total information required by IFRS 7.

Table 2. Financial instruments risk disclosure - mean scores for countries and years

Years	Countries														
	France			Germany			Italy			Spain			UK		
	TFDI	QLTFDI	QNTFDI	TFDI	QLTFDI	QNTFDI	TFDI	QLTFDI	QNTFDI	TFDI	QLTFDI	QNTFDI	TFDI	QLTFDI	QNTFDI
2007	0,58	0,76	0,48	0,67	0,65	0,68	0,61	0,56	0,64	0,82	0,76	0,86	0,86	0,85	0,86
2008	0,59	0,78	0,47	0,67	0,64	0,69	0,61	0,56	0,65	0,82	0,78	0,84	0,85	0,84	0,86
2009	0,63	0,75	0,55	0,62	0,55	0,66	0,61	0,56	0,65	0,82	0,78	0,84	0,85	0,84	0,86
2010	0,63	0,77	0,54	0,61	0,55	0,65	0,56	0,53	0,58	0,82	0,78	0,85	0,85	0,85	0,86
2011	0,60	0,72	0,52	0,62	0,55	0,66	0,58	0,54	0,60	0,83	0,79	0,86	0,86	0,86	0,86
2012	0,63	0,75	0,55	0,63	0,58	0,67	0,6	0,57	0,62	0,85	0,82	0,87	0,85	0,83	0,86
2013	0,68	0,80	0,60	0,65	0,60	0,68	0,62	0,60	0,63	0,85	0,82	0,87	0,85	0,83	0,86
2014	0,67	0,78	0,60	0,66	0,62	0,69	0,64	0,61	0,66	0,84	0,83	0,84	0,85	0,83	0,86
Tot	0,63	0,76	0,54	0,64	0,59	0,67	0,60	0,57	0,63	0,83	0,80	0,85	0,85	0,84	0,86

Table 3. Meaning of variables

Variable	Label	Measurement
Audit committee	AUDIT	1 if the financial report is revised by a Big 4; 0 otherwise.
CEO duality	CEO	1 if the CEO holds the chairman position in the same time; 0 otherwise
Board size	BOARD	number of people that form the Board of Directors
Financing environment	FIN_ENV	1 if the bank is located in a market oriented country; 0 if it is located in a bank oriented country
Regulatory environment	REGUL_ENV	the score varies from 0 to 100 where 100 represents the minimal government interference and 0 the maximal interference
Organizational status	ORGAN	1 if the bank is multinational; 0 otherwise
Economic environment	ECON_ENV	variations in GDP
Profitability	ROE	net income on book value of equity
Leverage	LEV	long term debt on book value of equity
Bank size	SIZE	logarithm of total assets

4. RESULTS

4.1. Descriptive results

Table 4 provides descriptive statistics for the observed variables. Focusing on the total financial disclosure index, the level of compliance is medium-high (68%). Moreover, banks are more compliant with the qualitative index than the quantitative one, indeed the maximum score of the former is 1.00 indicating full compliance.

Focusing on the bank characteristics, Table 4 shows that 80% of the European banks' financial report is revised by a Big Four, while in 42% of cases there is CEO duality. On average, almost 16 peoples are part of the Board of Directors. Lastly, ROE is 2.29, while leverage is 3.51.

Considering the country factors, the majority of banks in the sample are located in a bank-oriented system (66%). 34% of European banks is a multinational bank.

With regard to the regulatory environment, the mean score of 68.38 indicates a quite low level of government interference in the financial system.

Model 1

$$TFDI = \alpha + \beta_1 Audit + \beta_2 Ceo + \beta_3 Board + \beta_4 ROE + \beta_5 Lev + \beta_6 Fin_Env + \beta_7 Regul_Env + \beta_8 Organ + \beta_9 Econ_Env + \beta_{10} Size + \varepsilon \quad (2)$$

Pearson correlation (untabed) confirms that there are no multicollinearity problems, but we perform also the Variance Inflation Factor (VIF) (see paragraph 4.3) to provide robustness to the absence of multicollinearity.

4.2. Regression results and discussions

The OLS output is displayed in Table 5. AUDIT is positive and statistically significant (p-value < 0.01% in Model 1), which means that when the annual

report is revised by a Big Four, banks are more likely to give more information about FIRD under IFRS 7.

Lastly, the economic environment indicates a very low mean of variation in GDP probably because this investigation includes the year of the financial crisis during which some negative minimums were recorded (see a minimum score of almost -6%).

Table 4. Descriptive statistics

	Min	Max	Mean	Std.Dev.
TFDI	0.00	0.92	0.68	0.21
QLFDI	0.00	1.00	0.69	0.27
QTFDI	0.00	0.87	0.67	0.21
AUDIT	0.00	1.00	0.80	0.40
CEO	0.00	1.00	0.42	0.49
BOARD	3.00	82.00	16.63	12.57
FIN_ENV	0.00	1.00	0.34	0.47
REGUL_ENV	50.00	90.00	68.38	9.42
ORGAN_ENV	0.00	1.00	0.36	0.48
ROE	0.00	29.86	2.29	4.45
LEV	-1.00	35.36	3.51	674
ECON_ENV	-0.06	0.03	0.002	1.99
SIZE	1.48	7.77	6.57	0.66

To provide results, we develop an OLS model based on the following equation:

report is revised by a Big Four, banks are more likely to give more information about FIRD under IFRS 7.

Big Four audit firms provide uniformly high audit quality globally (Glaum et al., 2013; Glaum & Street, 2003) and, as claimed by Lopes and Rodrigues (2007), banks audited by international auditing companies are closer to the IAS/IFRS requirements. Based on this result, we can accept our *H1* hypothesis.

We reject *H2* hypothesis because we do not find any relation between FIRD and CEO duality.

Furthermore, Board size has a positive influence on the level of FIRD because the greater the board size, the greater the skills resulting in more effectiveness monitoring role (e.g. Elzahar & Hussainey, 2012; Lopes & Rodrigues, 2007).

We can accept our *H3* hypothesis.

Looking at country factors, we can accept hypotheses *H4*, *H5* and *H6* (p-value < 1%) as financing environment, regulatory environment and organizational status have a positive effect on FIRD. Indeed, if the bank belongs to a market-oriented country (financing environment), the level of FIRD is higher than those in bank-oriented because in this type of system investors strongly rely on financial accounting disclosures to obtain information to be used in security valuation and monitoring management. Instead, in banks-oriented countries, stakeholders require less public financial information because they have a close relationship to their banks which leads credit intermediaries to do not provide enough information (Ali & Hwang, 2000; Guenther & Young, 2000; Anandarajan et al., 2011).

The regulatory environment indicates government interference (financial freedom) and our findings show a positive relation with FIRD. This is consistent with Bischof and Daske (2013) and Anandarajan et al. (2011) who argue that the disclosure increase is larger in countries where the banking regulator has more supervisory powers and

resources, and is less involved in the general oversight of securities markets.

The organizational status shows that the degree of disclosure is higher in cross-listed banks (Lopes & Rodrigues, 2007; Abraham & Cox, 2007; Hossain & Reaz, 2007). This result is consistent with the literature (Glaum & Street, 2003; Street & Bryant, 2000) that emphasize that cross-listed banks are under greater scrutiny by potential new investors and hence more transparency is needed.

With regard to control variables, only ROE has a positive effect on FIRD (p-value < 1%). In line with Maffei et al. (2014), Berger and Bouwman (2013), Ntim et al. (2013), Tsalavoutas (2011) we find a positive relation between FIRD and profitability.

4.3. Robustness

In order to provide additional analysis, we split the model into two subsamples to verify the effect of financial crisis on the observed variables because the period under investigation in this study includes the years when the effects of the crisis were stronger (Iatridis, 2010; Mallin, 2002; Ntim et al., 2013; Malafrente, Porzio, & Starita, 2016). Hence, we consider a crisis period from 2007 to 2010 and a post-crisis period from 2011 to 2014 and develop the following models:

Model 2

$$TFDI_{crisis} = \alpha + \beta_1 Audit + \beta_2 Ceo + \beta_3 Board + \beta_4 ROE + \beta_5 Lev + \beta_6 Fin_Env + \beta_7 Regul_Env + \beta_8 Organ + \beta_9 Econ_Env + \beta_{10} Size + \varepsilon \quad (3)$$

Model 3

$$TFDI = \alpha + \beta_1 Audit + \beta_2 Ceo + \beta_3 Board + \beta_4 ROE + \beta_5 Lev + \beta_6 Fin_Env + \beta_7 Regul_Env + \beta_8 Organ + \beta_9 Econ_Env + \beta_{10} Size + \varepsilon \quad (4)$$

Results are consistent with those of Model 1. Indeed, also, in this case, auditors play an important role in confirming that, in the crisis period, it seems that they try to hide risk information to condition unfavorably investors (Sikka, 2009).

The results of BOARD are consistent in Model 1 and 2, but in the post-crisis, it loses its significance. A possible explanation could be that investors have lost confidence in the efficient and effective management of the bank's board of directors. Indeed, the last financial crisis has revealed the weaknesses of the European banking system and related disclosure (Woods et al., 2008; Gebardht et al., 2011) exacerbating some accounting lacks,

including failure to account for uncertainty and inadequate communication of the impact of risk-taking (Magnan & Markarian, 2011).

All country factors (financing environment, regulatory environment and organizational status) maintain their statistical significance (p-value 1%), in both Models 2 and 3.

Lastly, looking at control variables, ROE is statistically significant with p-value 1% in Model 3, but with p-value 10% in Model 2. This relation is weaker in the crisis period maybe because banks bid more for deposits during a financial crisis, which could lower profitability (Acharya & Mora, 2012)

Table 5. Regression results

	<i>Model 1 Total sample</i>	<i>VIF</i>	<i>Model 2 Crisis sample</i>	<i>VIF</i>	<i>Model 3 Post crisis sample</i>	<i>VIF</i>
Costant	0.12 (1.41)		0.14 (1.20)		-0.05 (-0.31)	
Audit	0.10 (4.34)***	1.26	0.09 (2.79)**	1.25	0.10 (3.25)***	1.30
Ceo	0.01 (0.54)	1.91	0.03 (1.01)	1.89	-0.00 (-0.09)	1.98
Board	0.00 (2.88)**	1.09	0.00 (2.25)*	1.10	0.00 (1.82)	1.10
Fin_Env	0.10 (4.65)***	1.09	0.11 (3.58)***	1.11	0.10 (2.85)**	1.15
Regul_Env	0.00 (5.86)***	1.57	0.00 (3.96)***	1.50	0.01 (4.61)***	1.53
Organ	0.11 (6.30)***	1.59	0.11 (4.62)***	1.55	0.10 (4.04)***	1.56
Econ_Env	0.00 (0.47)	1.06	0.00 (0.63)	1.08	-0.01 (-0.86)	1.12
ROE	0.01 (3.60)***	1.19	0.00 (2.23)*	1.17	0.01 (3.05)***	1.18
Lev	0.00 (0.33)	1.44	0.00 (0.06)	1.42	0.00 (0.29)	1.43
Size	-0.01 (-1.84)	1.09	-0.00 (-0.95)	1.08	-0.01 (-1.27)	1.06
Obs.	524		253		271	
Adj R2	0.31		0.31		0.31	
F test	24.88***		12.36***		13.04***	
Mean VIF	1.33		1.31		1.34	

Note: * indicates a significance level at 5%; ** 1%; *** 0.1%; Student t-values in parentheses

5. CONCLUSION

This paper investigates the effect of country (financing environment, regulatory environment and organizational status) and firm factors (the presence of a Big Four audit firms, CEO duality and the board size) on FIRD required by IFRS 7 in the European banking sector.

Our results show that both country and firm factors, with the exception of the CEO duality, have a positive effect on FIRD. More specifically, our findings show that the presence of Big Four audit firms and board size have a positive impact on bank FIRD. In addition, all country factors, especially the market-oriented system, the greater financial freedom and the cross-listing status, lead banks to provide more FIRD in the European setting. Furthermore, our findings suggest that country factors represent the reasons why different accounting behaviors exist under IFRS despite the attempts at harmonization made over the years, so regulators should to improve and align accounting practices among European countries.

This paper has both theoretical and practical implications.

With reference to theoretical implications, this study contribution is twofold. Firstly, it contributes to extant literature providing an overview of the effects of both firm and country factors on the risk items disclosed, filling the gap in the literature about FIRD determinants in Europe. Indeed, the main literature review has focused on corporate governance factors that affect risk disclosure, neglecting the combined effect with country factors. In addition, this study attempts to go beyond the determinants of risk disclosure in general, focusing

on the risk associated with the use of financial instruments that have been strongly criticized during the financial crisis because they have accentuated the financial market turbulence. Secondly, the findings provide useful information to banks' management and investors to identify what are the main governance factors to be strengthened in order to achieve greater bank transparency and gain the confidence of capital markets, reducing information asymmetries.

Despite the relevance of this research, this paper has some limitations. From a strictly methodological point of view, the study has a focus restricted only to the banking sector of the main five European countries, and does not consider banks belonging to other European (or non-European) countries. In addition, this study does not consider firms belonging to other sectors that hold financial instruments. From a theoretical point of view, however, this study adopts the agency theory, but other studies (i.e. Oliveira et al., 2011) implement a research framework meeting agency theory, legitimacy theory and resources-based perspectives with the aim to ameliorate the incompleteness of prior research studies. Also, Elzahar and Hussainey (2012) adopt both agency and signaling theories are used together to explain the determinants of risk disclosure to convey the double purpose to reduce symmetric information problem and to send specific signals to current and potential users.

For these reasons, future research can investigate the determinants of FIRD in additional countries and/or in different industrial sectors, using the interpretative lens of different theoretical frameworks, possibly combined together.

REFERENCES

1. Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, 39(3), 227-248. <https://doi.org/10.1016/j.bar.2007.06.002>
2. Acharya, V. V., & Mora, N. (2012). *Are banks passive liquidity backstops? Deposit rates and flows during the 2007-2009 crisis* (National Bureau of Economic Research; Working Paper No. 17838). Retrieved from <https://www.nber.org/papers/w17838.pdf>
3. Agyei-Mensah, B. K. (2017). Does the corruption perception level of a country affect listed firms' IFRS 7 risk disclosure compliance? *Corporate Governance: The International Journal of Business in Society*, 17(4), 727-747. <https://doi.org/10.1108/CG-10-2016-0195>
4. Agyei-Mensah, B. K. (2017). The relationship between corporate governance mechanisms and IFRS 7 compliance: Evidence from an emerging market. *Corporate Governance: The International Journal of Business in Society*, 17(3), 446-465. <https://doi.org/10.1108/CG-06-2016-0129>
5. Alharthi, M. (2017). Indicators influencing performance and stability in GCC banking sector. *Corporate Ownership & Control*, 15(1-2), 408-420. <https://doi.org/10.22495/cocv15i1c2p10>
6. Ali, A., & Hwang, L. S. (2000). Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research*, 38(1), 1-21. <https://doi.org/10.2307/2672920>
7. Amoako, G. K., & Asante, S. (2012). Compliance with international financial reporting standard 7 (IFRS 7): A study of listed banks in Ghana. *Research Journal of Finance and Accounting*, 3(4), 66-73. Retrieved from <https://www.iiste.org/Journals/index.php/RJFA/article/view/1805/1849>
8. Anandarajan, A., Francis, B., Hasan, I., & John, K. (2011). Value relevance of banks: Global evidence. *Review of Quantitative Finance and Accounting*, 36(1), 33-55. <https://doi.org/10.1007/s11156-010-0170-7>
9. Archambault, J. J., & Archambault, M. E. (2003). A multinational test of determinants of corporate disclosure. *The International Journal of Accounting*, 38(2), 173-194. [https://doi.org/10.1016/S0020-7063\(03\)00021-9](https://doi.org/10.1016/S0020-7063(03)00021-9)
10. Barakat, A., & Hussainey, K. (2013). Bank governance, regulation, supervision, and risk reporting: Evidence from operational risk disclosures in European banks. *International Review of Financial Analysis*, 30, 254-273. <https://doi.org/10.1016/j.irfa.2013.07.002>
11. Basel Committee on Banking Supervision. (2006). *Enhancing corporate governance for banking organisations*. Retrieved from <https://www.bis.org/publ/bcbs122.pdf>
12. Benzing, J., & Börner, C. J. (2015). The link between CEO incentive structures, managerial power, and firm risk in the financial services industry: A comprehensive analysis of US banking and insurance firms. *Corporate Ownership & Control*, 12(3), 371-387. <https://doi.org/10.22495/cocv12i3c3p8>
13. Beretta, S., & Bozzolan, S. (2004). A framework for the analysis of firm risk communication. *The International Journal of Accounting*, 39(17), 265-288. <https://doi.org/10.1016/j.intacc.2004.06.006>
14. Berger, A. N., & Bouwman, C. H. (2013). How does capital affect bank performance during financial crises? *Journal of Financial Economics*, 109(1), 146-176. <https://doi.org/10.1016/j.jfineco.2013.02.008>
15. Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics*, 50(2-3), 296-343. <https://doi.org/10.1016/j.jacceco.2010.10.003>
16. Bischof, J., & Daske, H. (2013). Mandatory disclosure, voluntary disclosure, and stock market liquidity: Evidence from the EU bank stress tests. *Journal of Accounting Research*, 51(5), 997-1029. <https://doi.org/10.1111/1475-679X.12029>
17. Bischof, J. (2009). The effects of IFRS 7 adoption on bank disclosure in Europe. *Accounting in Europe*, 6(2), 167-194. <https://doi.org/10.1080/17449480903171988>
18. Blackburn, V. L. (1994). The effectiveness of corporate control in the US. *Corporate Governance: An International Review*, 2(4), 196-202. <https://doi.org/10.1111/j.1467-8683.1994.tb00078.x>
19. Boone, J. P., Khurana, I. K., & Raman, K. K. (2010). Do the Big 4 and the second-tier firms provide audits of similar quality? *Journal of Accounting and Public Policy*, 29(4), 330-352. <https://doi.org/10.1016/j.jaccpubpol.2010.06.007>
20. Cabedo, J. D., & Tirado, J. M. (2004, June). The disclosure of risk in financial statements. *In Accounting Forum, Taylor & Francis*, 28(2), 181-200. <https://doi.org/10.1016/j.accfor.2003.10.002>
21. Chalmers, K., & Godfrey, J. M. (2004). Reputation costs: The impetus for voluntary derivative financial instrument reporting. *Accounting, Organizations and Society*, 29(2), 95-125. [https://doi.org/10.1016/S0361-3682\(02\)00034-X](https://doi.org/10.1016/S0361-3682(02)00034-X)
22. Choi, F. D. S., & Mueller, G. G. (1992). *International Accounting* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
23. Choi, F., Frost, C., & Meek, G. (2002). *International Accounting* (4th ed.). Upper Saddle River, NJ: Prentice-Hall.
24. Chortareas, G. E., Girardone, C., & Ventouri, A. (2013). Financial freedom and bank efficiency: Evidence from the European Union. *Journal of Banking & Finance*, 37(4), 1223-1231. <https://doi.org/10.1016/j.jbankfin.2012.11.015>
25. Coluccia, D., Fontana, S., Graziano, E. A., Rossi, M., & Solimene, S. (2017). Does risk culture affect banks' volatility? The case of the G-SIBs. *Corporate Ownership & Control*, 15(1), 33-43. <https://doi.org/10.22495/cocv15i1art3>
26. Cooke, T. E. (1992). The impact of size, stock market listing and industry type on disclosure in the annual reports of Japanese listed corporations. *Accounting and Business Research*, 22(87), 229-237. <https://doi.org/10.1080/00014788.1992.9729440>
27. Daily, C. M., & Schwenk, C. (1996). Chief executive officers, top management teams, and boards of directors: Congruent or countervailing forces? *Journal of Management*, 22(2), 185-208. <https://doi.org/10.1177/014920639602200201>
28. Deumes, R., & Knechel, W. R. (2008). Economic incentives for voluntary reporting on internal risk management and control systems. *Auditing: A Journal of Practice & Theory*, 27(1), 35-66. <https://doi.org/10.2308/aud.2008.27.1.35>
29. Dong, M., & Stettler, A. (2011). Estimating firm-level and country-level effects in cross-sectional analyses: An application of hierarchical modeling in corporate disclosure studies. *The International Journal of Accounting*, 46(3), 271-303. <https://doi.org/10.1016/j.intacc.2011.07.002>

30. Duru, A., Hasan, I., Song, L., & Zhao, Y. (2018). Bank accounting regulations, enforcement mechanisms, and financial statement informativeness: Cross-country evidence. *Accounting and Business Research*. <https://doi.org/10.1080/00014788.2017.1415801>
31. El-Bannany, M. (2018). Financial reporting quality for banks in Egypt and the UAE. *Corporate Ownership & Control*, 15(2), 116-131. <https://doi.org/10.22495/cocv15i2art10>
32. El-Masry, A. A., Abdelfattah, T., & Elbahar, E. (2016). Corporate governance and risk management in GCC banks. *Corporate Ownership & Control*, 13(3), 8-16. <https://doi.org/10.22495/cocv13i3p1>
33. Elshandidy, T., Fraser, L., & Hussainey, K. (2013). Aggregated, voluntary, and mandatory risk disclosure incentives: Evidence from UK FTSE all-share companies. *International Review of Financial Analysis*, 30, 320-333. <https://doi.org/10.1016/j.irfa.2013.07.010>
34. Elzahar, H., & Hussainey, K. (2012). Determinants of narrative risk disclosures in UK interim reports. *The Journal of Risk Finance*, 13(2), 133-147. <https://doi.org/10.1108/15265941211203189>
35. Ernst & Young. (2008). *IFRS 7 in the Banking Industry*. London, England: Ernst & Young.
36. European Banking Authority. (2018). *Guidelines on internal control*. Retrieved from https://eba.europa.eu/documents/10180/2164689/Guidelines+on+Internal+Governance+%28EBA-GL-2017-11%29_EN.pdf
37. Forker, J. J. (1992). Corporate governance and disclosure quality. *Accounting and Business Research*, 22(86), 111-124. <https://doi.org/10.1080/00014788.1992.9729426>
38. Francis, J. R., & Wang, D. (2008). The joint effect of investor protection and Big 4 audits on earnings quality around the world. *Contemporary Accounting Research*, 25(1), 157-191. <https://doi.org/10.1506/car.25.1.6>
39. Gaur, S. S., Bathula, H., & Singh, D. (2015). Ownership concentration, board characteristics and firm performance: A contingency framework. *Management Decision*, 53(5), 911-931. <https://doi.org/10.1108/MD-08-2014-0519>
40. Gebhardt, G. U., & Novotny-Farkas, Z. (2011). Mandatory IFRS adoption and accounting quality of European banks. *Journal of Business Finance & Accounting*, 38(3-4), 289-333. <https://doi.org/10.1111/j.1468-5957.2011.02242.x>
41. Giner, B. (1997). The influence of company characteristics and accounting regulation on information disclosed by Spanish firms. *European Accounting Review*, 6(1), 45-68. <https://doi.org/10.1080/096381897336863>
42. Glaum, M., & Street, D. L. (2003). Compliance with the disclosure requirements of Germany's new market: IAS versus US GAAP. *Journal of International Financial Management & Accounting*, 14(1), 64-100. <https://doi.org/10.1111/1467-646X.00090>
43. Glaum, M., Schmidt, P., Street, D. L., & Vogel, S. (2013). Compliance with IFRS 3-and IAS 36-required disclosures across 17 European countries: Company-and country-level determinants. *Accounting and Business Research*, 43(3), 163-204. <https://doi.org/10.1080/00014788.2012.711131>
44. Guenther, D. A., & Young, D. (2000). The association between financial accounting measures and real economic activity: A multinational study. *Journal of Accounting and Economics*, 29(1), 53-72. [https://doi.org/10.1016/S0165-4101\(00\)00013-6](https://doi.org/10.1016/S0165-4101(00)00013-6)
45. Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosure. *Journal of Accounting and Public Policy*, 23(5), 351-379. <https://doi.org/10.1016/j.jaccpubpol.2004.07.001>
46. Haniffa, R. M., & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), 317-349. <https://doi.org/10.1111/1467-6281.00112>
47. Hassan, M. (2009). UAE corporations-specific characteristics and level of risk disclosure. *Managerial Auditing Journal*, 24(7), 668-687. <https://doi.org/10.1108/02686900910975378>
48. Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440. [https://doi.org/10.1016/S0165-4101\(01\)00018-0](https://doi.org/10.1016/S0165-4101(01)00018-0)
49. Helbok, G., & Wagner, C. (2006). Determinants of operational risk reporting in the banking industry. <https://doi.org/10.21314/JOR.2006.140>
50. Hooi, G., & Boolaky, P. (2015). Bank disclosure practices: Impact of users' perspective of financial governance. *Corporate Ownership & Control*, 13(1-2), 324-337. <https://doi.org/10.22495/cocv13i1c2p10>
51. Hossain, M., & Reaz, M. (2007). The determinants and characteristics of voluntary disclosure by Indian banking companies. *Corporate Social Responsibility and Environmental Management*, 14(5), 274-288. <https://doi.org/10.1002/csr.154>
52. Iatridis, G. (2010). International Financial Reporting Standards and the quality of financial statement information. *International Review of Financial Analysis*, 19(3), 193-204. <https://doi.org/10.1016/j.irfa.2010.02.004>
53. Institute of Chartered Accountants in England and Wales (ICAEW). (2011). *Reporting business risks: Meeting expectations. Information for Better Markets Initiative*. Retrieved from <https://www.icaew.com/-/media/corporate/files/technical/financial-reporting/information-for-better-markets/ifbm-reports/rbr-final.ashx>
54. Jaggi, B., & Low, P. Y. (2000). Impact of culture, market forces, and legal system on financial disclosures. *The International Journal of Accounting*, 35(4), 495-519. [https://doi.org/10.1016/S0020-7063\(00\)00076-5](https://doi.org/10.1016/S0020-7063(00)00076-5)
55. Jensen, M., (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, 48, 831-880. <https://doi.org/10.1111/j.1540-6261.1993.tb04022.x>
56. 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. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
57. Jones, M., Melis, A., Gaia, S., & Aresu, S. (2018). Does graphical reporting improve risk disclosure? Evidence from European banks. *Journal of Applied Accounting Research*, 19(1), 161-180. <https://doi.org/10.1108/JAAR-07-2016-0068>
58. KPMG. (2008). *Focus on Transparency: Trends in the presentation of financial statements and disclosure of information by European Banks*. London, England: KPMG.
59. Linsley, P. M., & Shrives, P. J. (2006). Risk reporting: A study of risk disclosures in the annual reports of UK companies. *The British Accounting Review*, 38(4), 387-404. <https://doi.org/10.1016/j.bar.2006.05.002>

60. Linsley, P. M., & Lawrence, M. J. (2007). Risk reporting by the largest UK companies: Readability and lack of obfuscation. *Accounting, Auditing & Accountability Journal*, 20(4), 620-627. <https://doi.org/10.1108/09513570710762601>
61. Lopes, P. T., & Rodrigues, L. L. (2007). Accounting for financial instruments: An analysis of the determinants of disclosure in the Portuguese stock exchange. *The International Journal of Accounting*, 42(1), 25-56. <https://doi.org/10.1016/j.intacc.2006.12.002>
62. Maffei, M., Aria, M., Fiondella, C., Spanò, R., & Zagaria, C. (2014). (Un) useful risk disclosure: Explanations from the Italian banks. *Managerial Auditing Journal*, 29(7), 621-648. <https://doi.org/10.1108/MAJ-11-2013-0964>
63. Magnan, M., & Markarian, G. (2011). Accounting, governance and the crisis: Is risk the missing link? *European Accounting Review*, 20(2), 215-231. <https://doi.org/10.1080/09638180.2011.580943>
64. Malafronte, I., Porzio, C., & Starita, M. G. (2016). The nature and determinants of disclosure practices in the insurance industry: Evidence from European insurers. *International Review of Financial Analysis*, 45, 367-382. <https://doi.org/10.1016/j.irfa.2015.02.003>
65. Mallin, C. (2002). The relationship between corporate governance, transparency and financial disclosure. *Corporate Governance: An International Review*, 10(4), 253-255. <https://doi.org/10.1111/1467-8683.00289>
66. Mangena, M., & Pike, R. (2005). The effect of audit committee shareholding, financial expertise and size on interim financial disclosures. *Accounting and Business Research*, 35(4), 327-349. <https://doi.org/10.1080/00014788.2005.9729998>
67. Marshall, A., & Weetman, P. (2007). Modelling transparency in disclosure: The case of foreign exchange risk management. *Journal of Business Finance & Accounting*, 34(56), 705-739. <https://doi.org/10.1111/j.1468-5957.2007.02007.x>
68. Meek, G. K., Roberts, C. B., & Gray, S. J. (1995). Factors influencing voluntary annual report disclosures by US, UK and continental European multinational corporations. *Journal of International Business Studies*, 26(3), 555-572. <https://doi.org/10.1057/palgrave.jibs.8490186>
69. Miihkinen, A. (2012). What drives quality of firm risk disclosure? The impact of a national disclosure standard and reporting incentives under IFRS. *The International Journal of Accounting*, 47(4), 437-468. <https://doi.org/10.1016/j.intacc.2012.10.005>
70. Miller, G. S., & Skinner, D. J. (2015). The evolving disclosure landscape: How changes in technology, the media, and capital markets are affecting disclosure. *Journal of Accounting Research*, 53(2), 221-239. <https://doi.org/10.1111/1475-679X.12075>
71. Milne, M. J., & Adler, R. W. (1999). Exploring the reliability of social and environmental disclosures content analysis. *Accounting, Auditing & Accountability Journal*, 12(2), 237-256. <https://doi.org/10.1108/09513579910270138>
72. Mokhtar, E. S., & Mellett, H. (2013). Competition, corporate governance, ownership structure and risk reporting. *Managerial Auditing Journal*, 28(9), 838-865. <https://doi.org/10.1108/MAJ-11-2012-0776>
73. Nobes, C. (2006). The survival of international differences under IFRS: Towards a research agenda. *Accounting and business research*, 36(3), 233-245. <https://doi.org/10.1080/00014788.2006.9730023>
74. Nobes, C. (2008). Accounting classification in the IFRS era. *Australian Accounting Review*, 18(3), 191-198. <https://doi.org/10.1111/j.1835-2561.2008.0024.x>
75. Ntim, C. G., Lindop, S., & Thomas, D. A. (2013). Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre-and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, 30, 363-383. <https://doi.org/10.1016/j.irfa.2013.07.001>
76. Oliveira, J., Lima Rodrigues, 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>
77. Owusu-Ansah, S. (2000). Timeliness of corporate financial reporting in emerging capital markets: Empirical evidence from the Zimbabwe Stock Exchange. *Accounting and Business Research*, 30(3), 241-254. <https://doi.org/10.1080/00014788.2000.9728939>
78. Owusu-Ansah, S., & Yeoh, J. (2005). The effect of legislation on corporate disclosure practices. *Abacus*, 41(1), 92-109. <https://doi.org/10.1111/j.1467-6281.2005.00171.x>
79. Paaple, L., & Speklè, R. F. (2012). The adoption and design of enterprise risk management practices: An empirical study. *European Accounting Review*, 21(3), 533-564. <https://doi.org/10.1080/09638180.2012.661937>
80. Prencipe, A. (2004). Proprietary costs and determinants of voluntary segment disclosure: Evidence from Italian listed companies. *European Accounting Review*, 13(2), 319-340. <https://doi.org/10.1080/0963818042000204742>
81. PriceWaterhouseCoopers (PWC). (2008). *Accounting for change: Transparency in the midst of turmoil: A survey of banks' 2007 Annual Reports*. Retrieved from https://www.pwc.com/gx/en/banking-capital-markets/pdf/2008_global_banking_survey.pdf
82. Sikka, P. (2009). Financial crisis and the silence of the auditors. *Accounting, Organizations and Society*, 34(6-7), 868-873. <https://doi.org/10.1016/j.aos.2009.01.004>
83. Street, D. L., & Bryant, S. M. (2000). Disclosure level and compliance with IASs: A comparison of companies with and without US listings and filings. *The International Journal of Accounting*, 35(3), 305-329. [https://doi.org/10.1016/S0020-7063\(00\)00060-1](https://doi.org/10.1016/S0020-7063(00)00060-1)
84. Tahat, Y. A., Dunne, T., Fifield, S., & Power, D. M. (2016). The impact of IFRS 7 on the significance of financial instruments disclosure: Evidence from Jordan. *Accounting Research Journal*, 29(3), 241-273. <https://doi.org/10.1108/ARJ-08-2013-0055>
85. Taylor, G., Tower, G., & Neilson, J. (2010). Corporate communication of financial risk. *Accounting and Finance*, 50, 417-446. <https://doi.org/10.1111/j.1467-629X.2009.00326.x>
86. Tsalavoutas, I. (2011). Transition to IFRS and compliance with mandatory disclosure requirements: What is the signal? *Advances in Accounting*, 27(2), 390-405. <https://doi.org/10.1016/j.adiac.2011.08.006>
87. Wakaisuka-Isingoma, J. (2018). Corporate governance and performance of financial institutions. *Corporate Ownership & Control*, 16(1), 203-216. <https://doi.org/10.22495/cocv16i1c1art8>

88. Wallace, R. O., & Naser, K. (1995). Firm-specific determinants of the comprehensiveness of mandatory disclosure in the corporate annual reports of firms listed on the stock exchange of Hong Kong. *Journal of Accounting and Public Policy*, 14(4), 311-368. [https://doi.org/10.1016/0278-4254\(95\)00042-9](https://doi.org/10.1016/0278-4254(95)00042-9)
89. Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *The Journal of Law and Economics*, 26(3), 613-633. <https://doi.org/10.1086/467051>
90. Woods, M., Dowd, K., & Humphrey, C. (2008). The value of risk reporting: A critical analysis of value at risk disclosures in the banking sector. *International Journal of Financial Services Management*, 8(1), 45-64. <https://doi.org/10.1504/IJFSM.2008.016698>

APPENDIX

Types of risk item to be disclosed are provided below:

1. Qualitative information for credit risk
 - a. the exposures to risks and how they arise
 - b. its objectives, policies and processes for managing the risk and the methods used to measure the risk
 - c. any changes in (a) or (b) from the previous period
2. Quantitative information for credit risk
 - a. the amount that best represents its maximum exposure to credit risk at the end of the reporting period without considering any collateral held or other credit enhancements;
 - b. description of collateral held as security and other credit enhancements, and their financial effect in respect of the amount that best represents the maximum exposure to credit risk
 - c. information about the credit quality of financial assets that are neither past due nor impaired
 - d. an analysis of the age of financial assets that are past due as at the end of the reporting period but not impaired
 - e. an analysis of financial assets that are individually determined to be impaired as at the end of the reporting period
 - f. the nature and carrying amount of the assets
 - g. policies for disposing or for using assets in its operations when they are not readily convertible into cash
3. Qualitative information for market risk
 - a. the exposures to risks and how they arise
 - b. its objectives, policies and processes for managing the risk and the methods used to measure the risk
 - c. any changes in (a) or (b) from the previous period
4. Quantitative information for market risk
 - a. sensitivity analysis for each type of market risk to which the entity is exposed
 - b. methods and assumptions used in preparing the sensitivity analysis
 - c. changes from the previous period in the methods and assumptions used, and the reasons for such changes
 - d. an explanation of the method used in preparing such a sensitivity analysis, and of the main parameters and assumptions underlying the data provided
 - e. an explanation of the objective of the method used and of limitations that may result in the information not fully reflecting the fair value of the assets and liabilities involved
 - f. facts and the reasons to believe the sensitivity analyses are unrepresentative
5. Qualitative information for liquidity risk
 - a. the exposures to risks and how they arise
 - b. its objectives, policies and processes for managing the risk and the methods used to measure the risk
 - c. any changes in (a) or (b) from the previous period
6. Quantitative information for liquidity risk
 - a. a maturity analysis for non-derivative financial liabilities (including issued financial guarantee contracts) that shows the remaining contractual maturities
 - b. a maturity analysis for derivative financial liabilities
 - c. a description of how it manages the liquidity risk inherent in (a) and (b)

No potential conflict of interest