Proceedings of the Faculty of Economics in East Sarajevo
Year 2019, Issue 18, pp. 11-26
Received: 6th April 2019

UDC 336.146:005.334]:336.71(497.6)
DOI: 10.7251/ZREFIS1918011P
Original scientific paper

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RISK DISCLOSURES IN FINANCIAL STATEMENTS OF BANKS IN BOSNIA AND HERZEGOVINA

ОБЈАВЉИВАЊЕ ПОДАТАКА О РИЗИКУ У ФИНАНСИЈСКИМ ИЗВЈЕШТАЈИМА БАНАКА У БОСНИ И ХЕРЦЕГОВИНИ

Summary: *This study examines the practice of disclosing risk information in the financial statements of banks in Bosnia and Herzegovina. The research is carried out using the content analysis. The aim of the research is to determine the volume and characteristics of risk disclosures. The results of research show that banks in Bosnia and Herzegovina disclose less risk information than banks in developed countries, such as Canada and the UK. Most information is disclosed about credit risk. More quantitative than qualitative data is disclosed. The banks are focused on providing mandatory risk disclosures but they do not provide all mandatory disclosures. They primarily disclose past and time-neutral risk information. They are more likely to disclose positive and neutral news about risk exposure and risk management rather than negative news.*

Keywords: *risk; disclosure, financial statements, banks, Bosnia and Herzegovina*

JEL classification: *M41, M48, G20, G32*

Резиме: *У овом раду се испитује пракса објављивања информација о ризику у финансијским извјештајима банака у Босни и Херцеговини. Истраживање се врши помоћу анализе садржаја. Циљ истраживања је да се утврди обим и карактеристике објављивања информација о ризику. Резултати истраживања показују да банке у Босни и Херцеговини откривају мање информација о ризику од банака у развијеним земљама, попут Канаде и Велике Британије. Најчешће се објављују информације о кредитном ризику. Објављују се више квантитативни него квалитативни подаци. Банке углавном објављују обавезне информације о ризику, али не све информације. Оне превасходно објављују неутралне протекле податке који нису временски везани. Већа је вјероватноћа да ће прије објавити позитивне и неутралне новости о изложености ризику и управљању ризиком него негативне податке.*

Кључне ријечи: *ризик, објављивање, финансијски извјештаји, банке, Босна и Херцеговина*

ЈЕЛ класификација: *M41, M48, G20, G32*

1. INTRODUCTION

Financial scandals involving Enron, WorldCom, Parmalat, etc., resulting from irregularities in the financial statements, questioned the reliability of the financial statements and shattered the confidence of shareholders and other stakeholders in these reports. The global financial crisis 2007-2008 highlighted these problems. The main reason why the shareholders and other stakeholders questioned the reliability of the financial statements is because they could not estimate the real financial position of the companies based on the available information, which resulted in huge losses. First and foremost, they lacked information on the company's risk exposure and risk management. Different groups of stakeholders have demanded from standard setters to protect external stakeholders from material levels of information asymmetry (Elshandidy et al. 2018). It is insisted on increasing the volume and quality of disclosures in the financial statements in order to increase transparency. Standard setters responded to these requirements through an increase in the volume of disclosures, primarily related to risk.

Risk reporting involves delivering a wide range of information about the uncertainties that a company faces. This includes providing information on sources of risk, i.e. chances, opportunities, threats and dangers that affect or can affect performance in the future; the ways in which these risks are managed; as well as management forecasts related to the impact of each of the identified risks to the performance of a business entity.

Since the 1980s, professional accounting and banking organizations have pointed to the need for disclosing risk information and have encouraged companies to provide this information to external stakeholders (AICPA 1987, AICPA 1994, ICAEW 1997, Schrand and Elliott 1998, BCBS 1998, ICAEW 1999, ICAEW 2002, CICA 2002). Initial efforts to promote risk reporting process did not focus on the definition of the risk reporting form, but on highlighting the benefits of disclosing this information. Benefits for shareholders and investors are reflected in reducing information asymmetry, understanding the level of risk exposure of a company and the ways in which those risks are managed, more reliable assessment of existing company performance, more precisely predicting future earning capacity, more accurate assessment of the market company value and better risk diversification within the investment portfolio (Abraham and Cox 2007). Benefits for the company are reflected in the reduction on capital cost, due to the reduction of uncertainty, the gaining of external stakeholders' trust in the company and its management, and the improvement of financial reputation and long-term financial stability (Linsley, Shrives and Crumpton 2006). These disclosures contribute to the better functioning of financial markets by reducing imperfections and improving the efficiency of financial markets. Understanding the level of company exposure to risks by the shareholders leads to a better allocation of resources, a reduction in the volatility of market stock prices and an increase in the volume of operations in financial markets (Rajab and Handley-Schachler 2009).

This paper deals with the research of risk disclosures in the financial statements of banks in Bosnia and Herzegovina. The research includes all risk disclosures in the financial statements, both mandatory and voluntary. The aim of the research is to determine the volume and characteristics of the risk disclosures.

Most of the risk disclosures studies done so far has been concentrated on the practice of developed countries (Beretta and Bozzolan 2004, Linsley and Shrives 2005, Konishi and Ali 2007, Dobler, Lajili and Zéghal 2011, Oliveira, Rodrigues and Craig 2011a, Oliveira, Rodrigues and Craig 2011b, Domínguez and Gámez 2014, Maffei et al. 2014, Elshandidy, Fraser and Hussainey 2015, Papa 2016). A small number of studies was related to developing countries (Hossain and Reaz 2007, Amran, Bin and Hassan 2008, Ntim, Lindop and Thomas 2013, Adam 2013, Al-Maghzom, Hussainey and Aly 2016). Developed economies are efficient, they have established effective regulatory structures, developed corporate governance and developed financial reporting system. In contrast, developing markets are less efficient and suffer from lack of regulation, problems in the implementation of established regulations, and lack of transparency. Since the developing markets are significantly different and show greater variation in behaviour, any research on them is useful and contributes to the existing literature and to improvement of practice.

Researchers have more often opted for research on risk disclosures in non-financial companies (Beretta and Bozzolan 2004, Linsley and Shrives 2005, Dobler, Lajili and Zéghal 2011). The main activities of financial companies, primarily banks, involve risk taking and securing liquidity. Their primary task is risk management. It is assumed that they will divulge significantly different types of risk disclosures. Following the global financial crisis, risk disclosures in banks have been emphasized as an effective tool for avoiding banking crises (ICAEW 2011, FSB 2012). Therefore, their risk disclosures should be studied independently of those in non-financial companies.

The remainder of the paper is structured as follows. Section 2 gives an overview of the previous risk disclosures studies. Section 3 explains the research design. Section 4 presents the results of the research. The final section gives closing observations.

2. LITERATURE REVIEW

In the last few decades, a number of risk disclosures studies were carried out (Beretta and Bozzolan 2004, Kajüter 2004, Linsley and Shrives 2006, Linsley, Shrives and Crumpton 2006, Dobler, Lajili and Zéghal 2011, Oliveira, Rodrigues and Craig 2011a, Miihkinen 2012, Madrigal, Guzmán and Guzmán 2015, Khlif and Hussainey 2016). These studies were aimed at determining the volume and quality of risk disclosures (Beretta and Bozzolan 2004, Linsley and Shrives 2005, Dobler, Lajili and Zéghal 2011, Papa 2016), identification of factors affecting the volume and quality of risk disclosures (Abraham and Cox 2007, Rajab and Handley-Schachler 2009, Madrigal, Guzmán and Guzmán 2015, Khlif and Hussainey 2016) and examining the impact of risk disclosures on the individual performance of the companies (Linsmeier et al., 2002, Beltrán 2014). The subject of certain number of studies was the risk disclosures in the financial statements (Dicuonzo, Fusco and Dell'Atti 2017), while other studies included risk disclosures contained in other reports, such as management reports (Madrigal, Guzmán and Guzmán 2015), prospectuses (Deumes 2008) and so on. In some studies, only mandatory risk disclosures were explored (Maffei et al. 2014). In some other studies only voluntary risk disclosures were explored (Oliveira, Rodrigues and Craig 2011c). While the subject of some studies was total disclosures, both mandatory and voluntary (Lajili and Zéghal 2005). Despite the large number of studies, the issue of risk disclosures is still insufficiently explored because previous research has not led to clear conclusions.

In 2005, the International Accounting Standards Board adopted the International Financial Reporting Standard (IFRS) 7 - *Financial Instruments: Disclosures* within which the minimum requirements are defined regarding the disclosure of information on the risks arising from financial instruments to which the entity is exposed at the end of the reporting period. It was expected that the application of IFRS 7 would positively affect the volume and quality of risk reporting. Researchers have sought to empirically confirm such expectations. Bischof (2009) and Miihkinen (2012) found evidence that the application of IFRS 7 increased the volume and improved the quality of risk disclosures, while PwC (2008) and Oliveira, Rodrigues and Craig (2011a) found that the application of this standard did not significantly affect risk disclosures. Studies show that companies do not provide complete risk disclosures (Papa 2016), that they do not meet even the minimum disclosure requirements (Oliveira, Rodrigues and Craig 2011a), and that the volume of disclosures varies considerably among the companies (Abraham, Marston and Darby 2012).

When it comes to the characteristics of risk disclosures, almost all surveys show that companies are more likely to provide qualitative risk disclosures (Oliveira, Rodrigues and Craig 2011c, Anagnostopoulos and Skordoulis 2011, Dobler, Lajili and Zéghal 2011, Ntim, Lindop and Thomas 2013, Amran, Bin and Hassan 2008). Also, studies show that qualitative risk disclosures are often not aligned with quantitative risk disclosures. Qualitative disclosures do not explain quantitative disclosures and therefore are not sufficiently informative (Papa 2016). Only Maffei et al. (2014), on a sample of Italian banks, proved that financial companies provide greater quantitative disclosures. Quantification of risk information improves the credibility of the disclosures and makes them ex-post verifiable. Qualitative disclosures cannot compensate for the lack of quantitative, because it is very difficult, if not impossible, for external stakeholders to use this qualitative information to generate their own quantitative risk assessments.

Company managers are aware of the impact of information which are disclosed in the financial statements on the decisions of shareholders and investors, as well as the ability to manage company image through financial statements. In this regard, company managers are more likely to disclose good risk news (Ntim, Lindop and Thomas 2013, Abraham, Marston and Darby 2012), and neutral risk news (Anagnostopoulos and Skordoulis 2011, Maffei et al. 2014) in their reports. No studies have been found to show that bad news about risk exposure and risk management are prevalent in reports. Such news is present in company reports, but they have small share compared to the good and neutral news.

Professional accounting organizations insist that companies in their reports should disclose forward-looking risk information, since such information is much more useful for decision-making than those that relate to the present or past (AICPA 1994, ICAEW 1999, ICAEW 2002, ICAEW 2011). Studies show that both financial and non-financial companies dominantly disclose risk information relating to the present and the past (Oliveira, Rodrigues and Craig 2011c, Dobler, Lajili and Zéghal 2011, Abraham, Marston and Darby 2012, Ntim, Lindop and Thomas 2013) or time neutral risk information (Maffei et al., 2014, Adamu 2013, Dicuonzo, Fusco and Dell'Atti 2017). Only Anagnostopoulos and Skordoulis (2011) and Linsley and Shrives (2006) have come to the conclusion that companies are more likely to disclose forward-looking risk information. The authors of these studies leave the possibility that the obtained results are the consequence of a different definition of risk and a different classification of information according to their time orientation.

External stakeholders need information that is relevant, understandable, reliable, comprehensive, timely and comparable. Previous studies show that, in addition to the fact that the quality and past-oriented risk information dominate in company financial statements, risk disclosures are incomprehensible, mutually incomparable and too general to be useful for decision making (Papa 2016, Oliveira, Rodrigues and Craig 2011b, Rajab and Handley-Schachler 2009, Amran, Bin and Hassan 2008). A significant part of disclosures relates generally to the causes of the risks to which the company is exposed, the risk management policies, the internal control system, and so forth. Little attention is paid to possible consequences of the identified risks (Rajab and Handley-Schachler 2009).

This research has been defined based on the previous research. According to available information, it is the first research of risk disclosures in reports of banks in Bosnia and Herzegovina. We did not know what we could expect in terms of volume and quality of disclosures. Therefore, instead of the hypothesis, we defined research questions. In the research we proceeded from the following research questions. What is the volume of the risk disclosures? Do banks fulfill the minimum requirements for disclosing risk information defined in IFRS 7? Do banks, in addition to mandatory disclosures, voluntarily disclose additional information? What types of risks are most disclosed? Are they more likely to disclose quantitative or qualitative risk information? What are the characteristics of the disclosed information?

3. RESEARCH DESIGN

The research was conducted on audited financial statements of all banks in Bosnia and Herzegovina for 2017. The banking sector of Bosnia and Herzegovina consists of 23 banks, out of which 16 banks are in majority foreign ownership, and 7 banks are in majority domestic ownership. Among domestic banks, 1 bank is with majority state equity, while other banks are in majority private ownership. The number of employees in the banking sector at the end of 2017 amounted to 9,572, while the number of branches through which the banks performed their business amounted to 826.

In the year covered by research, the Bosnian and Herzegovina's banking sector operated successfully. In 2017, 21 banks made a profit, while 2 banks made a loss. The net profit of the banking sector amounted to BAM 336.2 million, which is by 62.9% more than in 2016. The two largest banks on the market accounted for 48% of the total net profit. Total assets of the banking sector at the end of 2017 amounted to BAM 27.3 billion. Most of the assets were loans amounting to BAM 18 billion. The banking market in Bosnia and Herzegovina is characterized by a high degree of concentration with a very large share, almost 50%, in the total assets and loans of the three key banking groups. Total equity of banks amounted to BAM 3.8 billion, with the shareholders' equity amounting to BAM 1.9 billion. In the shareholders' equity structure, 82% refers to foreign shareholders' equity, 16% to domestic private shareholders' equity, and 2% to domestic state shareholders' equity. Total deposits at the end of 2017 amounted to BAM 21.2 billion.

The research was carried out using the content analysis. Content analysis is an approach to analyzing documents and texts in order to quantify their content. Quantification is carried out within predefined categories and in a systematic and replicable manner. This research method implies the use of a set of procedures to make valid inferences from text. The inferences are about the sender(s) of messages, the message itself, or the audience of the message (Smith 2003, 147). This method is suitable for researching a large amount of qualitative data. Content analysis is often used in accounting research, especially when disclosures are investigated (Linsley and Shrives 2006, Dobler et al. 2011, Maffei et al. 2014, Elshandidy, Fraser and Hussainey 2015).

The use of the content analysis requires the researcher to define: research questions, the document to be analyzed, the unit of analysis, the categories in which the units of analysis will be classified and the way in which the analysis will be conducted (Weber 1990). The research questions from which research was initiated are listed in Part 2. The subject of the analysis is the financial statements of banks in Bosnia and Herzegovina for 2017. A unit of analysis is a sentence. The categories in which the units of analysis are classified are defined by the type of risk - credit risk, market risk (within that currency risk and interest rate risk), liquidity risk, operational risk, country risk and reputation risk; by type of disclosures – mandatory disclosures and voluntary disclosures, and by type of data - quantitative data and qualitative data. Additionally, within each type of risk, disclosures are further classified according to the type of disclosures required by IFRS 7. The method of conducting the research is manual.

Word, sentence, passage or page can be used as a unit of analysis. The extent of disclosures is most accurately measured by using the words but words can be interpreted and classified into individual categories only in the context of sentences. In research studies of this type prevails the attitude that the use of sentence as a unit of analysis provides complete, reliable and meaningful data for further analysis (Milne and Adler 1999). For example, Lajili and Zeghal (2005) counted the words and sentences, while Abraham and Cox (2007), Rajab and Handley-Schachler (2009) and Maffei et al. (2014) used sentences to measure risk disclosures amount. We use a sentence as unit of analysis. We are aware of the disadvantages of this method, which relate, above all, to the fact that writing style can affect the results.

The use of the content analysis required the author to read all the banks’ financial statements and to identify sentences that provide risk information. Sentences were coded as risk disclosures if it was considered that the reader was better informed about risks that have already had an impact upon the bank, or may in the future have an impact upon the bank, or if the reader is better informed about risk management within the bank. It was not necessary for the word “risk” to appear in any sentence in order to be characterized as risk disclosure. The analysis also includes tables containing quantitative and qualitative risk information with one row in the table being treated as one sentence and classified accordingly.

4. RESULTS

The results of the empirical research are presented in this section. First, the results related to overall risk disclosures are presented. Subsequently, a more detailed analysis of disclosures by individual types of risks is presented.

Banks, on average, disclose 348.48 sentences containing risk information. The volume of disclosures ranges from 107 to 488 sentences (see Table 1). The standard deviation, as well as the minimum and the maximum value, indicate a large variation in the volume of disclosures among the banks covered by the research.

Table 1: Disclosure structure by types of risks

	Number of banks that disclose risk information	Arithmetic mean	Standard deviation	Minimum value	Maximum value
Generally about risk management	23	8.35	8.71	2	30
Credit risk	23	191.52	69.47	49	305
Market risk	23	91.48	39.06	32	159
Liquidity risk	23	51.78	24.88	21	128
Operational risk	12	4.43	5.82	0	20
Country risk	2	0.57	1.88	0	5
Reputation risk	2	0.35	1.27	0	6
Total	23	348.48	122.88	107	488

Source: Author's calculations

In the financial statements of banks operating in Bosnia and Herzegovina, disclosures of 6 types of risks can be found: credit risk, market risk, liquidity risk, operational risk, country risk and reputation risk. IFRS 7 defines minimum requirements for the disclosure of information on credit risk, market risk and liquidity risk (IASB, 2016). This standard allows reporting entities to inform on other types of risks to which they are exposed, but does not define any disclosure requirements for those risks. Bearing this in mind, it is not surprising that all banks disclose information on credit, market and liquidity risk, while only 12 banks disclose information on operational risk, and 2 banks disclose information on country risk and reputation risk. Observed by type of risk, banks disclose the most information on credit risk. On average, the disclosure volume about credit risk is higher than the volume of disclosures of all other types of risks.

Table 2 shows the disclosure structure by type of data (quantitative and qualitative data) and type of disclosures (mandatory and voluntary disclosures). Banks disclose more quantitative risk data than qualitative ones. Observed by risk types, banks disclose more quantitative than qualitative data on credit risk, market risk and liquidity risk, while only qualitative data are disclosed about operational risk, country risk and reputation risk.

Table 2: Disclosure structure by type of data and type of disclosures

	Quantitative data	Qualitative data	Mandatory disclosures	Voluntary disclosures
Generally about risk management	0.00	8.35	8.35	0.00
Credit risk	113.57	77.96	174.04	17.48
Market risk	60.74	30.74	91.48	0.00
Liquidity risk	37.52	14.26	48.30	3.48
Operational risk	0.00	4.43	0.00	4.43
Country risk	0.00	0.57	0.00	0.57
Reputation risk	0.00	0.35	0.00	0.35
Total	211.83	136.65	322.17	26.31

Source: Author's calculations

Banks predominantly disclose information that they are required to provide under IFRS 7. The volume of voluntary disclosures is extremely modest. Observed by type of risk, some banks have decided to disclose a certain amount of information on operational risk, country risk and reputation risk, although this is not required by IFRS. Also, in the context of credit risk and liquidity risk, some banks, in addition to mandatory disclosures, voluntarily provide additional information. When the market risk is in question, all banks have opted to provide only mandatory disclosures.

In order to determine whether banks meet all the minimum requirements for disclosing risk information and what the characteristics of these disclosures are, we will analyze in detail the structure of disclosures within each type of risk.

4.1. Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. According to IFRS 7 (IASB 2016), banks are required to provide the following risk disclosures in the financial statements. For each type of risk, including credit risk, reporting entity is required to disclose the exposures to risk and how they arise; its objectives, policies and processes for managing the risk, the methods used to measure the risk; changes in exposure, risk management and risk measurement from the previous period; summary quantitative data about its exposure to risk at the end of the reporting period and concentrations of risk.

When credit risk is concerned, additional disclosures were required. In accordance with the provisions of IFRS 7 that were in force for 2017, reporting entity was required to disclose the amount that best represents its maximum exposure to credit risk at the end of the reporting period without taking account of any collateral held or other credit enhancements, a description of collateral held as security and other credit enhancements, information about the credit quality of financial assets that are neither past due nor impaired, an analysis of the age of financial assets that are past due as at the end of the reporting period but not impaired, and an analysis of financial assets that are individually determined to be impaired as at the end of the reporting period, including the factors the entity considered in determining that they are impaired.

Table 3 shows the results of the analysis of credit risk disclosures. The total disclosures on credit risk are classified according to the disclosure categories required by IFRS 7. We see that on average the banks disclose the most information on the method of measuring credit risk, credit risk concentration and financial assets that are individually determined to be impaired as at the end of the reporting period. There is a large variability in the extent of disclosures by individual categories. We can notice that all banks do not meet minimum requirements for disclosing credit risk information. Although, in certain circumstances, some disclosures are not required.

Table 3: Credit risk disclosures

	Number of banks that disclose risk information	Arithmetic mean	Standard deviation	Minimum value	Maximum value
The way in which credit risk arises	23	5.04	6.18	1	25
Objectives, policies and processes for managing the credit risk	23	22.91	20.42	2	69
Credit risk measurement	23	28.48	19.55	3	81
Changes in credit risk exposure, management and measurement	6	1.00	1.87	0	7
Maximum exposure to credit risk at the end of the reporting period without taking account of any collateral held or	22	19.70	9.72	0	56

	Number of banks that disclose risk information	Arithmetic mean	Standard deviation	Minimum value	Maximum value
other credit enhancements					
Collateral held as security and other credit enhancements	22	17.30	10.70	0	32
Credit quality of financial assets that are neither past due nor impaired	15	11.00	11.31	0	41
Analysis of the age of financial assets that are past due as at the end of the reporting period but not impaired	16	13.70	11.48	0	33
Analysis of financial assets that are individually determined to be impaired as at the end of the reporting period, including the factors the entity considered in determining that they are impaired	23	26.57	20.54	1	83
Concentration of credit risk	23	28.35	12.56	9	56
Other	22	17.48	10.21	0	53

Source: Author's calculations

Although all banks disclose information on the way in which credit risk arises, as well as credit risk management and measurement, it is interesting to note that these disclosures in some banks are very modest. For example, 35 percent of banks disclose maximum three sentences on objectives, policies and processes for managing the credit risk. This outcome should be taken into account in the context of the fact that IASCF (2010) in its *Guidance on implementing IFRS 7 Financial Instruments: Disclosures*, regarding the objectives, policies and processes for managing the credit risk, recommends disclosing information on entity policies and processes for acceptance, measurement, monitoring and risk control; information on entity policies for hedging or mitigation of risks; information on the entity's processes for monitoring the continuing effectiveness of such hedges or mitigating devices; information on policies and procedures for avoiding excessive concentration of risk, etc. Obviously, these banks disclose an insufficient amount of information on how they manage credit risk.

Reporting entities are required to disclose all changes in credit risk exposures, management and measurement that occurred from the previous period. The fact that most banks do not disclose this information cannot be treated as a lack of mandatory disclosures. Probably there were no changes in these banks, but we cannot be sure of that.

Banks that disclose information on maximum exposure to credit risk present this information in different ways, which is why they are not mutually comparable. Some banks present the maximum exposure to credit risk based on the gross book value of on- and off-balance sheet items, some banks based on net book value, while other banks based both on the gross and net book balance sheet and off-balance sheet items value.

When collaterals are concerned, reporting entities are required to disclose a description of collateral held as security and other credit enhancements; their book value; financial effects in respect of the amount that best represents the maximum exposure to credit risk; and their policies for disposing of such assets or for using them in its operations, in the event that the assets cannot be converted into cash immediately. Most banks disclose some of the requested information where 61 percent of banks disclose description of collateral and other credit enhancements. Also, 61 percent of banks disclose the collateral book value. Only 17 percent of banks disclose their policies for the disposal of collaterals or for their use in business, in the case when collaterals cannot be converted into cash immediately.

Among banks that do not disclose information on book value of all collateral they own, some banks disclose information on the collateral value that are related to financial assets which were individually determined to be impaired at the end of the period. This information is presented within analysis of this type of financial assets required by IFRS 7. It is difficult to believe that banks do not have collateral at all or have no collaterals that relate to financial assets that are not impaired. It is more likely that they have failed to disclose information on the book value of all collateral.

Only a few banks disclose their policies for the disposal of collateral or for using them in their business, in the event that assets cannot be converted immediately into cash. Starting from the economic environment in which banks operate, it is again difficult to believe that banks do not have problems with the conversion of collateral into cash and, consequently, do not have defined procedures for their disposal or use in their own business.

Among the banks that disclose information on the credit quality of financial assets that are neither past due nor impaired, some banks disclose only the total amount of these financial assets, some banks give their structure according to the internal credit grading system, while other banks disclose the structure of these financial assets by the nature of the counterparty.

Analysis of the age of financial assets that are past due as at the end of the reporting period but not impaired requires that all past due but not impaired assets are classified according to the delay periods. IFRS 7 does not define the time intervals in which these assets should be classified. Thus, the banks define different time intervals and the data presented in this analysis are not mutually comparable.

All banks disclose some information on the subject of the analysis of financial assets that are individually determined to be impaired as at the end of the reporting period, including the factors the they considered in determining that these assets are impaired. The *IFRS 7 Implementation Guide* (IASCF 2010) states that analysis of impaired financial assets might include the carrying amount, before deducting any impairment loss, the amount of any related impairment loss, and the nature and fair value of collateral available and other credit enhancements obtained. All mentioned information is disclosed by 35 percent of banks, while other banks disclose only some of this information.

When credit risk concentration is concerned, all banks disclose information on concentration of credit risk arising from industry sectors. Some banks also disclose information on credit risk concentrations arising from geographical distribution, credit rating and a limited number of individual counterparties or groups of closely related counterparties. Bearing in mind the size of the arithmetic mean shown in Table 3, we can notice that banks are paying considerable attention to this disclosure category.

In addition to mandatory credit risk disclosures explicitly required by IFRS 7, most banks disclose some additional information. This information relates to: restructured receivables; collection of delayed and impaired receivables; contractual amounts of off-balance sheet financial liabilities that banks have committed to extend as loans to customers; analysis of the age of all past due financial assets, whether they are impaired or not, and the assumptions and results of a credit risk assessment based on a stress test, i.e. the worst possible case scenario. Table 3 shows that the volume of these disclosures is modest in relation to the volume of mandatory disclosures about credit risk.

For most banks' financial statements, credit risk disclosures are not located in one part but are disseminated throughout the entire financial statements. Banks dominantly disclose past and time-neutral information on credit risk exposure. Within the qualitative credit risk information, most banks do not give comments on the disclosed quantitative information nor the assessment of the level of credit risk exposure. Only a few banks state that there is no significant credit risk exposure to any third party or parties that have similar characteristics. This indicates that banks are more likely to disclose positive news for them.

4.2. Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices This type of risk includes: interest rate risk, currency risk and other price risk. Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in commodity prices or stock prices. When the market risk is in question, in addition to mandatory disclosures relating to all types of risks, IFRS 7 requires the disclosure of a sensitivity analysis for each type of market risk which the entity is exposed to at the end of the reporting period (IASB, 2016). Such analysis should show how profit or loss and equity would have been affected by changes in the relevant risk variable which were reasonably possible at that date.

Table 4 shows the results of the market risk disclosure analysis. Banks in Bosnia and Herzegovina are exposed to the interest rate risk and the currency risk. From the data presented in Table 4, it can be seen that a significant number of banks do not meet the minimum requirements for disclosing information about this type of risk. There is a large variability in the volume of disclosures by individual disclosure categories. On average, banks reveal the most information about exposure to currency risk and interest rate risk.

Table 4: Market risk disclosures

	Number of banks that disclose risk information	Arithmetic mean	Standard deviation	Minimum value	Maximum value
Generally about market risk					
The way in which the market risk arises	23	1.74	0.67	1	3
Exposure to market risk	4	1.91	4.44	0	14
Objectives, policies and processes for managing the market risk	22	2.61	2.48	0	9
Market risk measurement	5	1.26	2.71	0	11
Changes in market risk exposure, management and measurement	7	0.30	0.46	0	1
Interest rate risk					
The way in which the interest rate risk arises	23	3.00	2.27	1	9
Objectives, policies and processes for managing the interest rate risk	16	3.04	4.04	0	16
Interest rate risk measurement	5	1.65	3.86	0	17
Exposure to interest rate risk	17	18.91	19.42	0	54
Sensitivity analysis for interest rate risk	20	8.83	7.34	0	23
Currency risk					
The way in which the currency risk arises	21	2.96	1.83	0	7
Objectives, policies and processes for managing the currency risk	18	3.30	3.52	0	17
Currency risk measurement	3	0.83	2.79	0	13
Exposure to currency risk	23	34.13	13.05	12	60
Sensitivity analysis for currency risk	19	7.00	5.49	0	25

Source: Author's calculations

It is interesting that more than 50% of banks do not disclose information on how they measure market risk. Most banks provide extremely scant information about objectives, policies and processes for managing the market risk. This information is insufficient to understand the way they manage market risk. Therefore, it can be concluded that they only formally, but not substantially, report on market risk management.

Some banks which do not disclose the sensitivity analysis for currency risk give reasons for omission this kind of analysis. These reasons refer to the fact that the largest net open foreign currency position of the bank is in euros. Due to the currency board, as a model of the Central bank of Bosnia and Herzegovina, banks in Bosnia and Herzegovina are not exposed to changes in the euro exchange rate. Oscillations of other currencies do not have a major impact on the bank's exposure to currency risk, since the open foreign currency position is reduced to a minimum.

When exposure to interest rate risk is concerned, we have found that only one bank does not disclose information about it. However, this number is actually higher. Namely, 30 percent of banks present a unified presentation of exposure of liquidity risk and interest rate risk. In this presentation, the financial assets and liabilities are classified in time intervals according to the payment deadline. Such a way of classifying financial assets and liabilities allows an adequate presentation of liquidity risk exposure, but not interest rate risk exposure. The presentation of exposure to interest rate risk requires that financial assets and liabilities are classified into time intervals in which interest rates may change. In the case of fixed interest rates assets, the interest rate can only be changed by re-placing these financial assets after their collection. This means that the payment deadline and the moment of interest rate change are the same. In the case of assets and liabilities with a variable interest rate, the possibility of changing the interest rate is agreed within periods shorter than maturity. This means that the moment of interest rate change and maturity date do not match. It follows that assets and liabilities with a variable interest rate cannot be classified at the same time intervals for the purposes of displaying exposure to liquidity risk and exposure to the interest rate risk.

Among banks that present a unified presentation of exposure of liquidity risk and interest rate risk there is only one bank that has only assets and liabilities with a fixed interest rate. This circumstance gives it the opportunity to disclose information on liquidity risk exposure and interest rate risk exposure through a unique presentation, as maturity and interest rate changes overlap. The financial statements of other banks show that they have assets and liabilities with both fixed and variable interest rates. In that case, the exposure to the interest rate risk cannot be seen from the presentation of financial assets and liabilities classified within the time intervals according to maturity dates.

Among the banks that provide separate presentation of interest rate risk exposure, some banks disclose only the amounts of interest and non-interest bearing assets and liabilities, while most banks classify interest-bearing assets and liabilities according to the deadlines for changing the interest rate.

All banks that disclose the sensitivity analysis for currency risk and interest rate risk also disclose the assumptions they used in preparing these analyses. From the disclosed information, it can be seen that banks are starting from different assumptions. Therefore, these analyses are not mutually comparable.

Financial statements contain qualitative disclosures that are unclear. Such qualitative disclosures make it difficult to understand quantitative information. In some financial statements, qualitative and quantitative disclosures are contradictory. For example, in a qualitative part of the disclosures which is related to the interest rate risk exposure, it is stated that the bank has the assets and liabilities only with a fixed interest rate, whereas from the quantitative presentation it can be seen that the bank has assets and liabilities with a fixed and variable interest rate. Most banks do not provide explanations of disclosed quantitative information nor an assessment of the level of exposure to market risk. Only 5 banks indicate that they were not significantly exposed to currency risk, while two banks indicate significant exposure for certain currencies. When it comes to exposure to the interest rate risk, 1 bank states that the sensitivity of revenue and expenditure to changes in interest rates was not significant, while 1 bank draws the attention to the user that there is a risk that the refinancing of the loan will become more expensive if the passive interest rates increase. Regarding the market risk, the banks do not disclose additional information in relation to mandatory disclosures.

4.3. Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. When this type of risk is concerned, in addition to mandatory disclosures related to all types of risks, IFRS 7 requires the disclosure of a maturity analysis for financial liabilities. It is also required to disclose a description of how reporting entity manages the liquidity risk (IASB 2016).

Table 5: Liquidity risk disclosures

	Number of banks that disclose risk information	Arithmetic mean	Standard deviation	Minimum value	Maximum value
The way in which the liquidity risk arises	16	3.13	4.38	0	20
The objectives, policies and process for managing the liquidity risk	23	6.00	5.31	1	23
Liquidity risk measurement	9	2.13	4.02	0	14
Analysis of financial liabilities by remaining contractual maturities	13	8.04	7.19	0	17
Analysis of the maturity of assets and liabilities	15	28.17	24.90	0	54
Analysis of financial assets by remaining contractual maturities	8	4.30	5.93	0	13

Source: Author's calculations

Solely on the subject of objectives, policies and process for managing the liquidity risk, all banks disclose at least some information. Although, more than a third of banks disclose an extremely modest amount of information on this topic. More than half of banks does not disclose information on the method of measuring liquidity risk.

IFRS 7 requires the disclosure of a quantitative analysis of the maturity of financial liabilities. This analysis should show the remaining contractual maturities for financial liabilities. The amounts disclosed in this analysis should relate to undiscounted cash flows. These amounts are different from the amounts included in the statement of financial position because the amount in that report is based on discounted cash flows. Such an analysis is disclosed by 56 percent of banks. We cannot say that other banks do not provide information on the maturity of financial liabilities. They are disclosed in a slightly different form.

IFRS 7 requires from reporting entities to describe how they manage the liquidity risk associated with items disclosed in quantitative analyzes. In this regard, the IFRS 7 Application guidance, which is an integral part of that standard, states that reporting entities need to disclose an analysis of the maturity of financial assets held for liquidity risk management, if that information is required by users of financial statements to assess the nature and degree of liquidity risk. Starting from this, some banks, in addition to a separate analysis of the maturity of financial liabilities, disclose a separate analysis of the maturity of financial assets, based on undiscounted cash flows, while some other banks disclose a unified analysis of the maturity of assets and liabilities with the determination of maturity mismatch. Some banks disclose both a separate and a unified analysis of the maturity of assets and liabilities. Separate analysis is based on undiscounted values, and a unified analysis is based on discounted values. Most banks that provide only a unified analysis of the maturity of assets and liabilities do not indicate whether the analysis is based on discounted or undiscounted cash flows.

Most banks do not include off-balance sheet cash flows in the quantitative analysis of liquidity risk exposure, although they can significantly influence the exposure to this risk.

Some banks classify financial assets and liabilities that do not have a defined maturity date according to the earliest possible maturity, as required by standard. Others banks classify this assets and liabilities according to estimates of the dynamics of their collection and payment. Most banks do not provide information on how they classify financial assets and liabilities. Almost none of the banks does not give comments on the presented quantitative information on liquidity risk exposure. In fact, only 1 bank states that there is a maturity mismatch over a period of one year, i.e. that financial liabilities are greater than the financial assets, but that management believes that during this period the liquidity of the bank will not be compromised. The reasons for such an attitude are also stated.

4.4. Other risks

A certain number of banks explains in their financial statements that, in addition to credit risk, market risk and liquidity risk, they are also exposed to other types of risks. For some of these risks, banks voluntarily disclose information. The structure of these disclosures is shown in Table 6.

Table 6: Disclosures on operational risk, reputation risk and country risk

	Number of banks that disclose risk information	Arithmetic mean	Standard deviation	Minimum value	Maximum value
Operational risk					
The way in which operational risk arises	8	0.83	1.34	0	5
The objectives, policies and processes for managing the operational risk	12	3.35	4.38	0	17
Operational risk measurement	3	0.26	0.85	0	4
Country risk					
The way in which country risk arises	2	0.26	0.90	0	4
The objectives, policies and processes for managing the country risk management	2	0.22	0.72	0	3
Country risk measurement	1	0.09	0.41	0	2
Reputation risk					
The way in which reputation risk arises	2	0.13	0.45	0	2
The objectives, policies and processes for managing the reputation risk	2	0.22	0.83	0	4

Source: Author's calculations

These three types of risk are non-financial risks. Operational risk is the risk of possible adverse effects on the company's financial result and capital caused by omissions (unintentional and intentional) in employees' work, inadequate internal procedures and processes, inadequate management of information and other systems, as well as by unforeseeable external events. It is an inevitable consequence in business. The country risk arises from the occurrence of unfavourable and unpredictable changes in policies and regulations affecting the operating conditions of the markets in which the company operates and which may have a negative impact on its financial result or equity. Reputation risk refers to the possibility of losses due to the negative impact on the market positioning of the company.

Banks disclose only qualitative information on these types of risks. First of all, they disclose information on how they manage these risks and how these risks arise. A few banks disclose information on how they measure operational risk and country risk, while no bank discloses information on how it measures reputation risk.

5. CONCLUSION

This study deals with the research of the volume and characteristics of risk disclosures in the banks' financial statements. The results show that banks in Bosnia and Herzegovina, on average, disclose 348.48 sentences about the risks they are exposed to, which is considerably less than, for example, in Canada and the UK (Linsley, Shrives and Crumpton 2006). High variability is present in risk disclosures among different banks. Abraham, Marston and Darby (2012) came up with the same results regarding the variability in the volume of disclosures. Risk disclosures are not located in one part of the notes to the financial statements. They are disseminated through the entire report, making it difficult to read and understand this information. This was also indicated by Oliveira, Rodrigues and Craig (2011b) and Papa (2016). Banks mostly disclose credit risk information. Maffei et al. (2014) came to the same result. The fact that banks are most likely to disclose this kind of information is due to the fact that IFRS 7 requires more information on credit than on other risks, and that banks provide, above all, mandatory disclosures.

The volume of voluntary disclosure is extremely modest. Banks are focused on providing mandatory disclosures. Most banks view risk disclosures as an obligation imposed by professional regulations. They do not recognize the benefits that not only the external stakeholders, but also the bank itself have from these disclosures. Although attention is focused on mandatory disclosures, most banks do not meet the minimum disclosure requirements. They often only formally report on some issues, providing information that is insufficient to understand risk exposure and how it is managed.

The financial statements have more quantitative than qualitative risk disclosures. Such results are in agreement with the results obtained by Maffei et al. (2014) and contrary to the results of Oliveira, Rodrigues and Craig (2011c) and Anagnostopoulos and Skordoulis (2011). It is considered that the fact that the financial statements have more qualitative than quantitative information is negative. Researchers believe that quantitative information improves the disclosure credibility and that qualitative information cannot replace the lack of quantitative information. Such considerations could lead to the conclusion that the quality of risk disclosures in financial statement of banks in Bosnia and Herzegovina is satisfactory. However, following the disclosure requirements contained in IFRS 7, banks provide the required quantitative disclosures. They fail to provide explanations of quantitative disclosures as well as an assessment of the risk exposure level. In addition, qualitative disclosures are often incomplete, insufficiently informative and incomprehensible, while quantitative disclosures are often mutually incomparable. All this diminishes the quality of the risk disclosures. Such a situation is not only in financial statements of banks in Bosnia and Herzegovina. Other authors came to the same conclusions (Papa 2016; Oliveira et al. Craig 2011b).

Looking at the structure of risk disclosures, we can notice that banks primarily disclose time-neutral and past risk information. Forward looking risk disclosures is scarce. These results are in agreement with the results obtained by Maffei et al. (2014) and Oliveira, Rodrigues and Craig (2011c), and contradictory to the results obtained by Anagnostopoulos and Skordoulis (2011). Such a disclosure structure is the result of the nature of the disclosure requirements contained in IFRS 7 and the fact that banks dominantly provide mandatory disclosures.

Banks rarely give a clear assessment of the level of risk exposure. Among the banks that provide such an assessment, there are more those who draw users' attention that they are not significantly exposed to a certain risk, than those who warn the users of the problem of high-risk exposure. This shows that banks are more likely to communicate positive news, and to pass over negative ones. Neutral news is nevertheless the most widely reported in the financial statements. Maffei et al. (2014) and Anagnostopoulos and Skordoulis (2011) came to the same results.

This study has some shortcomings. The first shortcoming arises from the research method used. The identification of sentences relating to risk and their classification into individual categories can be subjective. The research results can be affected by the writing style. Another weakness is that the research includes only risk disclosures in the financial statements. Risk information may be available to external stakeholders through other sources such as: management reports, prospectuses, press releases, etc.

Further research could go in different directions. It could be carried out as longitudinal studies, which would include a larger number of reporting periods, and which would aim at determining the trend in volume of risk disclosures over the time. It would also be interesting to conduct a comparative study involving other Southeast European countries. Research could also be aimed at identifying factors that influence the volume and quality of risk disclosures. It would be important to investigate to what extent users of financial statements rely on risk disclosures when making decisions and to what extent they are satisfied with the quality of these disclosures.

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