STUDIA UBB NEGOTIA, LVIII, 1, 2013, pp. 73 - 92
(RECOMMENDED CITATION)

RISK INFORMATION DISCLOSURE IN BANKING SYSTEM – AN OVERVIEW OF EMPIRICAL EVIDENCES

CRISTINA ALEXANDRINA ŞTEFĂNESCU[1]

ABSTRACT. Our paper approaches "risk information disclosure" concept from a different perspective – the researchers one - presenting an overview image of what has already been studied, analyzing and discussing the trends of research on this topic, which is important to all researchers interested on it. The main reason of focusing our research in this area was the continuously increasing importance given to corporate governance and transparency, as a consequence of the most recently corporate failures and accounting scandals, not only among regulatory authorities and at companies' level, but in academic environment, too, where we have assisted at an increasingly interest in measuring the level of transparency by developing disclosure indices in this respect. Thus, our paper provides a different approach, by focusing upon the trend of research studies on risk information disclosure in a particular economic field, the banking one, thus offering a qualitative analysis of prior empirical evidences.

JEL Classification: M41, G30

Keywords: corporate governance, banking system, risk, disclosure

1. Introduction

While corporate governance disclosure was a highly debated and an increasingly challenging topic for empirical studies worldwide, being mainly focused on companies, risk information disclosure applicable to banking environment proved to be less studied, thus, letting us the possibility to enrich the academic literature and to add value in this area of research.

[1] Faculty of Economics and Business Administration, Babeș-Bolyai University, Cluj-Napoca, cristina.palfi@econ.ubbcluj.ro

Studies upon risk disclosure practices have been conducted along time either by researchers or by regulatory authorities and other representative institutions for banking area, for the purposes of assessing the level of compliance achieved by banks for enhancing transparency and even more for ensuring market discipline in banking environment that proved to be very sensitive to turbulences in the latest decades.

Basel Committee on Banking Supervision, as authority that settles the regulatory framework for credit institutions, conducted three consecutive studies in the years 1999, 2000 and 2001, with the purpose of examining bank risk disclosures as a reaction of its initiative of ensuring discipline on financial system.

Thus, one year after settling the requirements for enhancing bank transparency, with the purpose of increasing discipline in the capital markets, by encouraging credit institutions to publicly disclose both quantitative and qualitative information that will allow all financial market participants to make informed decisions regarding banks' risk management practices and financial strength, Basel Committee comes to test the level of compliance achieved by banks in this respect. Through these surveys, Basel committee was actually trying to make an impression about the reality in terms of information disclosure, on which the New Basel Capital Accord was planned to be based, for introducing its 3rd pillar related to market discipline.

The three studies published called "Public disclosures by banks: results of disclosure survey" (BIS, 2001; 2002; 2003) gave possibility of making comparisons and assessing the degree of improvements, as the research methodology used remained the same. Prior similar studies conducted with similar purposes, were performed on more restricted risk disclosure, thus not allowing any comparative analyses. The methodology applied to a sample of more than 50 credit institutions, mainly consisted of a checklist comprising 104 questions grouped into 12 disclosure categories, which were attributed either "yes", "no" or "not applicable" answer. The results of these surveys, allowed Basel Committee concluding that a modest increase in the frequency of disclosures was identified from one period to another (from 57% in 1999, to 59% in 2000, respectively 63% in 2001).

A more complex study, comprising a sample of 180 countries was conducted by The World Bank in 2006, aiming to assign a Disclosure Index to each of these, yearly since 1994. The study was focuses mainly on assessing and diagnosing the banking sector transparency in Asia, Latin America and Europe. Based on the same approach of quantitatively measuring the level of disclosure using two checklist of disclosure items (the core set and the encouraged set) two disclosure indices were developed, their publication being aimed to raise public awareness regarding the inadequacy of accounting disclosures among banks in developing countries, contributing as well to the dialogue on corporate governance of banks. The core index comes to measure the level of disclosure related to six categories of information: loans, other earning assets, deposits, other funding, memo lines and incomes, whereas the index associated to the encouraged set of information comprises specific items related to credit risk, market risk and market discipline. An sub-index for each of these categories of information was calculated, being helpful for identifying the strength and weakness of a banking system's disclosure practices, and formulating policy responds accordingly.

Academic environment proved to be interested along time in measuring the level of risk information disclosure, too, several studies being conducted along time in this respect, the next sections of our paper being aimed to provide a comprehensive quantitative and qualitative analysis in this respect.

2. Research design and results

The objective of our paper is to provide an overview of international research focused on risk information disclosure in banking area, by identifying the main subjects of interest and research methodologies used. For achieving our goal, we selected a sample of papers, appreciated as the most relevant for academic research in our field of interest, by searching throughout the most well-known international databases,

The research methodology used for achieving our goal is therefore based on a literature review of a significant number of research papers published in various journals indexed in the most well-known international databases. Thus, our study comprises a qualitative analysis which reveals the evolution of the state of research in the area of risk disclosure issues over the time.

For performing the proposed analysis of empirical research on risk information disclosure measurement in order to offer the most accurate picture of the past and to highlight possible ideas for future studies, firstly we searched in the most well-known international databases (including Business Source Complete, Cambridge Journals Online, Osco Host EJS, Emerald, Informaworld, IngentaConnect, ISI Web of Knowledge, ISI Web of Science, Jstor, Proquest, ScienceDirect, Springer, Wiley Online Library) for those papers that report findings on measuring risks' disclosure by developing an index in this respect. Our search was based on different combinations of the words "disclosure", "transparency", "risk information", "market discipline" and "bank/banking" on papers' title, abstract and keywords. The searches yielded a total of 50 papers, from which we retained for our analysis just 14 papers that provide evidence on risk information disclosure measurement.

The criteria selected for the analysis are related to their topic (a), the research methodology used, the sample and the period on which their analysis was performed (b), the way of developing a measurement of disclosure (c) and the categories of risk information assessed (d).

(a) Even if all papers are actually dealing with risk information disclosure as a tool for enhancing transparency and ensuring market discipline, their research topic reveals a wide variety of specific goals that were planned to be achieved. Thus, there are studies aiming to analyze the level of risk information disclosure by reference to national or international regulations, especially to Basel Committee's provisions (Linsley and Shrives, 2005; Frolov, 2006; Demirguc-Kunt, et al., 2008; Di Beneditto and Da Silva, 2008) as well as the perceptions of bank supervisors, rating agencies or external auditors on several issues related to this topic (Ariffin, et al., 2009).

Other researchers proved to be more interested in possible consequences of transparency, thus analysis the relationship between the level of risk information disclosure and various issues like feature predictions (Liu, et al., 2004; Linsley, et al. 2006), equity capital level (Wu and Bowe, 2010; Nier and Baumann, 2006), volatility of a bank's stock price (Baumann and Nier, 2004; Poshakwale and Courtis, 2005) or corporate governance structure (Htay, et al., 2011). There are papers that did not limit just at measuring the quantity of risk information, but also provide analysis upon the quality of disclosures over time (Perignon and Smith, 2010), whereas other were linked disclosure with the latest financial turbulences, emphasizing post crisis disclosure measures taken by top world banks (Asonglu, 2010).

(b) When focusing our attention on methodologies used, samples established and data sets collected, we concluded that for achieving their goal, researchers made use of basic statistical tools like descriptive analysis, correlation and regression analysis, but also applied comprehensive methods like panel data analysis and generalized least square method for samples comprising cross-countries or time-series data. Studies using data collected for intervals of time between five and ten years have been conducted in countries such as USA (Perignon and Smith, 2010; Liu, et al., 2004), Brasilia (Di Beneditto and Da Silva, 2008), Malaysia (Htay, et al., 2011) and China (Wu and Bowe, 2010), but there are also studies comprising banks from all around the world (Nier and Baumann, 2006; Baumann and Nier, 2004 (uses a sample of 32 countries and data for 1993-2000); Demirguc-Kunt, et al., 2008 (uses a sample of 32 countries and data for 1999-2003)) or from certain regions like Europe, Australia and North America (Poshakwale and Courtis, 2005).

Prior research also provides information about risk disclosure from a single year analysis performed on banking systems from UK, Canada or Japan (Linsley, et al., 2006; Frolov, 2006) or on Islamic banks from 14 countries (Ariffin, et al., 2009)

(c) As regards the categories of risk information assessed, most studies looked after the disclosure of all types of risk that a bank might have to face up, but there were also analyses focused on a particular risk, especially market risk (Perignon and Smith, 2010; Liu, et al., 2004), credit (Frolov, 2006) and liquidity risk (Asonglu, 2010). For providing more comprehensive analyses, researchers often divided risk information measurement into sub-indices thus aiming to identify the strength and weakness of banks' disclosure practices on each type of risk (Baumann and Nier, 2004; Wu and Bowe, 2010; Nier and Baumann, 2006).

(d) The main source of information for developing the disclosure scores were banks annual reports or disclosure reports, but there are also analysis performed using information from BankScope database (Baumann and Nier, 2004; Wu and Bowe, 2010; Nier and Baumann, 2006) or provided by International Monetary Fund and World Bank (Demirguc-Kunt, et al., 2008). In case of assessing the disclosure level using annual reports, the way of measuring it was often based on searching for certain risk information and deciding if these were published or not, thus allocating a "yes", "no" or "not applicable" corresponding value to each of these, followed by the calculation of index by dividing the number of items discloses to the maxim score that can be achieved by each bank.

There are also studies that were based on a different type of content analysis, measuring disclosure by counting risk and risk management sentences in the annual reports, by searching for expressions related to risk (Linsley, et al., 2006; Asongu, 2010).

Scores developed for measuring risk disclosure were mainly un-weighted, basing on the premise that the information provided by these research papers addressed all interested uses and a weighted approach might bring benefits to a certain category. Anyway, despite subjective character of a weighted index, this approach was followed in an empirical study aimed to investigate the impact of corporate governance structure on risk information disclosure on Malaysian banking system (Htay, et al., 2011). Other researchers awarded bonus points if disclosures were prospective or were having quantitative nature (Poshakwale and Courtis, 2005).

The above analysis reveal a significant "enrichment" of risk disclosure related literature, due to a continuously increasing interest on this topic mainly because of the latest financial scandals that led to the collapse of many international recognized companies, corporate governance failures due to lack of transparency being often considered as their major cause. Also, developments in research methodology are obviously seen by far, thereby strengthening the importance given to empirical studies in the latest years.

Over the latest decades, there were various initiatives of increasing the transparency in financial system, by providing users with comprehensive details about risks that inherent in this economic environment. Thus, the first initiative of Basel Committee on Banking Supervision of enhancing transparency in banking system by increasing disclosure dated from 1998, was fairly quickly followed by the 2nd version of capital adequacy accord issued for the first time in 2004, whose 3rd pillar was aiming to institute market discipline in financial system by introducing a set of disclosure requirement.

These new regulatory requirements gave rise to a new and challenging topic of research in academic environment. Thus, many authors became interested in it and started to conduct empirical studies all over the world for answering various questions: "How improved banks in disclosing risk information as a consequence of the latest rules enforced?", "How are banks' disclosure practices influenced by various structures of corporate governance?", "How does market discipline influence prudential risk management decisions, banks' soundness and stability?"

The first studies that came to provide answers to these questions have been developed beginning with the year 2004 and continued to evolve along time, thus the most recently ones either being connected even with corporate governance issues or providing provide analyses of post-crisis disclosure measures. A summary of papers approaching market discipline from transparency perspective, trying to measure the level of risk information disclosure, identifying and discussing its consequences on banking environment is presented in Appendix, providing details related to papers' objectives, their research design, pointing out the ways of measuring risk information disclosure and categories of risks assessed, and their main findings and conclusions.

Among the first studies there is the one of Bauman and Nier (2004), who investigated the value of bank disclosure and the risks and benefits associated with this, trying to identify a relationship between stock volatility and bank disclosure, as well as the factors that are likely to affect the volatility of a bank's stock. Their study was conducted on a set comprising close to 600 banks from thirty-one countries over the period 1993-2000. Basing on the methodology of development used for CIFAR index of transparency (Center for International Financial Analysis Research) that measures overall corporate disclosure, a new index suitable for credit institutions was constructed. It measures whether a bank discloses information on seventeen categories of disclosure related to interest rate risk, credit risk, liquidity risk, market risk, and capital in its annual accounts as represented in the BankScope database.

Their findings reveal that banks that disclose more information on key items of disclosure show lower measures of stock volatility. When trying to testing for the effect of disclosure on the volatility of equity returns for each considered factor, almost all sub-indices showed a negative coefficient and most were statistically significant, thus becoming difficult to draw firm conclusions as to which risk information disclosure might be the most important.

Two year latter, after the New Accord of Basel was issued and was under implementation in many banking system, the same authors (Nier and Bauman, 2006) extended their prior research focusing on the relationship between equity capital and the strength of market discipline, comprising the transparency of banks' risk choices or in the other words, the level of risk information disclosure. The sample considered for this study was extended up to 729 banks from 32 different countries over the same period 1993 to 2000. The index constructed for assessing risk information disclosure is based on the same methodology like the one from their prior study. The only difference that can be observed is related to "securities by type" sub-index, which was divided into two different sub-indices (namely "detailed breakdown" and "coarse breakdown") thus, the disclosure index comprising a total of eighteen categories of risk information to be disclosed. Thus, almost the same disclosure index was used this time for examining if market discipline is effective in providing incentives for banks to limit their risk of default, by holding capital buffers against adverse outcomes in portfolio risk. Their results reveal that stronger market discipline coming from higher disclosures results in larger equity capital.

Basing on Nier and Bauman (2006) findings, a similar study (Wu and Bowe, 2010) was conducted most recently in China analyzing market discipline and its impact on equity capital level for a comprehensive sample of Chinese banks over the 1998-2008 periods. This study uses almost the same structure of the first disclosure index developed by Bauman and Nier in 2004, the only sub-index that is missing being "loans by counterparty". Unlike previous paper, in this study market discipline is captured through the impact of four sets of factors namely, market concentration, inter-bank deposits, information disclosure, and ownership structure. Thus the only common aspect that has been considered in both studies is risk information disclosure, the results achieved being consistent. Consequently banks which disclose more risk information limit their probability of default by choosing a higher capital buffer.

Closely related with the association between risk disclosure and banks' capital, Poshakwale and Courtis (2005) conducted an empirical study on a sample of 135 banks from Europe, Australia and North America from 1995 to 1999 period, aiming to identify the impact of voluntary disclosure on the cost of equity capital. Their analysis was based on testing the correlations between capital asset pricing model (CAPM) and the dividend growth model (DGM) as proxies for assessing the cost of equity capital and the level of voluntary disclosure. In this respect, a disclosure scoring model was constructed, by incorporating 29 key financial and non-financial performance measures specific for banking industry, inspired from a survey done by Price Waterhouse Coopers, and classified under six headings, one of these being related to risk management. Their results reveal that disclosures about risk management practices have the highest impact in the sense of reduction in the cost of equity capital, this influence being greater in case of European banks.

Among the first studies focused on risk information disclosure, as a part of good corporate governance, there is the one of Linsley and Shrives (2005), aimed to analyze the requirement imposed by Basel Committee through the 3rd pillar of Basel II Accord, while also reviewing bank disclosure practices of those times within the context of risk disclosure debate. This study was actually based on the three surveys conducted by Basel Committee over 1999-2001 periods and published under the title "Public disclosures by banks: results of the [year] disclosure survey" in 2001, 2002 and respectively 2003. After providing a short comparative analysis of Basel's surveys results, emphasizing those categories of information that were the mostly disclosed (accounting and presentation policies, followed by capital structure) or the least disclosed (credit derivatives and other credit enhancements, preceded by securitization activities), paper ends concluding that the level of information disclosed, even if proved to followed an upward trend, it is still very low. The authors also have doubts upon the effectiveness of the 3rd pillar of Basel II Accord as regards disclosure requirements pointing out the fact that these are predominantly backward-looking, thus not being able to provide a full risk picture of the bank.

Basing on the debates and conclusions of their prior study and on the premise that stakeholders need to receive relevant information to be able to understand the risk profile of any financial institutions they have an interest in, the same authors (Linsley, et al., 2006) performed an empirical analysis aiming to examine risk disclosure practices within annual reports of Canadian and UK banks. Their study is based on a content analysis used for measuring the volume of disclosure risk information by counting risk and risk management sentences from banks' annual reports. Thus, they developed a disclosure coding grid where six categories of risk information (credit, market, interest rate, operational capital structure and adequacy, and risk management frameworks and policies) have been assessed through text disclosure sentence characteristics. For this purpose there were considered the following attributes: quantitative vs. qualitative, good news vs. bad news and future vs. past, various combinations of these being made. Using this specific method of measuring disclosure, authors could emphasize, basing on empirical data, the relatively little quantitative risk information disclosed and the strong bias towards disclosing past rather than future risk-related information, which concluded their prior study. Furthermore, the volume of risk disclosure assessed using the disclosure coding grid was tested for correlation with various features of banks, such as their size, profitability or the level of risk within the bank. Their findings reveal positive association of the total quantity of risk disclosures, but also of the quantity of risk definitions and bank's size, whereas no significant association was found in case of relative profitability and risk levels.

A quite similar methodology was used by Asongu (2010) in its empirical research focused on investigating post-crisis measures adopted by twenty of top thirty-three world banks in a bid to manage liquidity risk. Thus, researchers were searching on banks' annual reports through sentences like: "liquidity risk management", "cash risk management", "liquidity management", "cash management", "liquidity risk", "Basel II pillar 3 disclosure", "Basel II", "pillar disclosure", for assessing liquidity risk management disclosure, which according to Basel II, pillar 3, should include: risk identification and assessment; risk management and mitigation; and risk monitoring and reporting.

Thus, unlike prior studies focused on risk information disclosure, this research addressed just one single type of banking risks – the liquidity one - the analysis performed being properly design in this respect, following particular contents, namely: development of a structure for managing liquidity, measurement and management of net funding requirements, management of market access and contingency planning and last but not the least criterion, the role of internal control, supervisors and public disclosure in improving liquidity management.

Their findings reveal that only 25% of sampled banks provide publicly accessible liquidity risk management information, which was perceived as a clear indication that, in the post-crisis era, many top ranking banks do not still take Basel disclosure norms seriously. Thus, their conclusions are consistent with prior evidences pointing out the main fears and shortcomings of improving disclosure, namely that could breed chances of a contagious bank run (Chen and Hassan, 2006) or even could lead to bank failure through increasing interest rate (Cordella and Yeyati, 1998). Consequently, their paper ends concluding that with respect to the World Wide Web, banks have not adopted more appealing post-crisis disclosure principles and country regulatory systems actually do not affect disclosure patterns.

Other studies focused on a particular risk include credit risk (Frolov, 2006) and market risk (Liu, et al., 2004; Perignon and Smith, 2010).

"Bank credit risk disclosure in Japan" is the title of the study conducted by Frolov (2006) in order to review the disclosure practices of Japanese credit institutions and analyze the quality of disclosed information about the banks' lending assets. For achieving its goal a content analysis of various banks' reports that are required according to national laws (disclosure reports, securities reports, mini-disclosure reports, business result briefs, company presentation meeting) has been conducted. It mainly consisted of searching for certain risk information disclosures, such as: breakdown of the total exposure by loans and other credits, by type of lending contract, by place of origination (domestic vs. abroad), by impaired/non-impaired exposures).

This study concluded that there is a large flow of financial information delivered, which is the result mandatory disclosure regime that sets up specific types of required disclosures. It also suggested some ways of improving the quality of disclosure (e.g. disclosure of exposure on credit loss, breakdowns by borrower risk category, more data on the number of stand-alone credit exposures and their distribution by size, more forward-looking indicators of credit losses such as direct loss estimates and effective interest rate on new advances).

Market risk information disclosure also was the subject of various studies conducted on US commercial banks, being focused on VaR disclosures, either by providing evidence about improvements in their quantity and quality over time (Perignon and Smith, 2010) or by testing for their ability to predict trading incomes (Liu, et al., 2004).

In order to assess the accuracy of the disclosed VaR figures and to study the trend of the level of VaR disclosure over time Perignon and Smith (2010) developed a VaR Index comprising six components (VaR characteristics, summary VaR statistics, intertemporal comparison, daily VaR figures, trading revenues and backtesting). Their analysis firstly comprised the largest ten US banks, revealing large differences in the level of disclosure across banks and an overall upward trend between 1996 and 2005 in the quantity of information released to the public. Than, the analysis was extended to 60 US, Canadian, and international banks, but limited just at data for the year 2005, leading to drastic differences in disclosure across regions: from an overall satisfactory disclosure in Europe and Canada to absolutely no VaR disclosure in China.

Whereas there has found an overall upward trend in the quantity of information released to the public, the quality of VaR disclosure showed no sign of improvement over time. Consequently, although there is a general belief that more information is better, investors, creditors, and other users of VaR information still have to concern about information accuracy. Furthermoe, Value-at-Risk disclosure proved to have the power to predict trading income variability. This is the conclusion reached by Jorion (2002) and Liu, et al. (2004) after testing for trading VaR disclosures in public financial reports.

A more comprehensive study, comprising all risk information settled by Basel Committee for enhancing transparency and disclosure was conducted on Brazilian financial system for period 2001 to 2005 with the purpose of examining the disclosure issues adopted in banks' annual reports, by analyzing the adherence level of the disclosure practices in relation to the recommendations of the Basel Committee. The level of disclosure for each credit institution was established by searching for certain risk information items through their annual reports. There have been considered for assessment the same disclosure categories, which made the objective of Basel surveys on public disclosures conducted from 1999 to 2001. the empirical results reveal that there is less interest of Brazilian financial institutions to take the attitude of harmonizing the information disclosed in the annual report with Basel recommendations on transparency and disclosure.

Other authors (Demirguc-Kunt, 2008) approached risk information disclosure topic, closely related with Basel II requirement, but from an indirect perspective. Thus their paper, which relies on assessments of compliance with the Basel core principles for effective bank supervision (BCP), was aiming to study whether better banking supervision and regulation is associated with sounder banks. It this respect, they developed a BCP compliance rating, consisting of seven different measures, each of these being related with a chapter of Basel regulations. Consequently, one of these measures addresses information disclosure, corresponding to Chapter 5 "Information requirements", which states that "Each bank must maintain adequate records that enable the supervisor to obtain a true and fair view of the financial condition of the bank of the bank, and must publish on a regular basis financial statements that fairly reflect its condition". This index of information disclosure measures the presence in the laws and regulations of various provisions related to discipline, information disclosure, and auditing requirements. After testing for the relationship between soundness of banking system and disclosure provisions, researchers concluded that countries that require their banks to regularly and accurately report their financial data to regulators and market participants have more highly rated banks, as timely disclosure of high quality information strengthens monitoring by regulators and markets alike.

While most studies presented above were done through a content analysis of banks' annual reports, a different approach could be seen in the paper of Ariffin et al. (2009), who used as data collection technique both questionnaire and interview, and where risk information disclosure topic of research was analyzed from supervisors, external auditors and rating agencies' perspectives. Thus, starting from the premises that market discipline is generally enhanced if the activities of banks are disclosed to market participants, authors decided to look at the issue of transparency in twenty-eight Islamic banks from fourteen countries. For assessing the interviewees' opinion about transparency, a questionnaire survey was done, followed by additional interviews where appropriate. The answers received from the respondents, sow that the level of risk-reporting, particularly of qualitative information, in existing annual reports of Islamic banks, was not adequate to provide sufficient transparency, thus consistent improvements, especially on risk management positions and strategies being required as a necessity for enhancing corporate governance through corporate transparency for market participants.

Corporate governance and its association with risk information disclosure is another topic of research of great importance. The impact of corporate governance structure, determined by both board of directors (assessed through the board leadership structure, board composition, board size) and ownership (assessed through director ownership, institutional ownership and block ownership) on strategic risk information disclosure was the purpose of the empirical research conducted by Htay, et al. (2011) on a sample of twelve listed banks from Malaysian banking system from 1996 until 2005. For measuring the level of disclosure a weighted index of risk management information disclosure was developed, comprising thirty-three items grouped into eight categories of information (market risk, interest rate risk, liquidity risk, credit risk, operational risk, currency exposure of net assets, derivatives and hedging strategy). The opinions of one hundred and thirty one accountants and fifty-one financial analysts have been taken to weigh risk management information disclosure score. By testing for statistically significant correlations between corporate governance structures and transparency of risk information in banks' annual reports, authors concluded that higher risk management information disclosure can be achieved if board leadership structure, higher proportion of independent directors, institutional ownership, block ownership, board size and lower director ownership are separated.

3. Concluding remarks

Risk information disclosure stood as a topic of research in many studies, which approached this concept various perspectives, all off these actually deriving from the general accepted idea that in the light of market disciple and as a part of good corporate governance, banking institutions are expected to be transparent as regards risk taken. In the latest years, on the background of financial instabilities that affected various regions of the world beginning with 1990's, many policy initiatives recognized the importance of market discipline in safeguarding the overall financial stabilities. Because banking activity is by its nature a risky one, these initiatives often addressed risk taken by credit institutions, being focused on enhancing their transparency. Consequently, the continuously improving regulatory environment, gave researchers a lot of possibilities to approach risk information disclosure topic, but there are many unexplored, yet.

However, the results of our study reveal a significant "enrichment" of risk disclosure related literature, due to a continuously increasing interest on this topic mainly because of the latest financial scandals that led to the collapse of many international recognized companies, corporate governance failures due to lack of transparency being often considered as their major cause. Developments in research methodology are obviously seen by far, thereby strengthening the importance given to empirical studies in the latest years.

Like any other research, we are aware of the limitations of our study that come from the sample's dimension made of a relatively small number of selected articles, considered relevant for the performed analysis. But, these limitations offer us outlooks for future research, by extending the sample of journals and papers included in analysis, considering more specific criteria for selection than the "risk disclosures" concept as a whole. Also, the research methodology might be improved by using comprehensive statistical methods for testing the relationship between the established variables, which is the main purpose of a future study already in progress.

Acknowledgment

This work was supported from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number POSDRU/1.5/S/59184 „Performance and excellence in postdoctoral research in Romanian economics science domain", Babeş-Bolyai University Cluj-Napoca being a partner within the project.

REFERENCES

Ariffin, N.M., Archer, S. and Abdel Karim, R.A. (2009), "Issues of Transparency in Islamic Banks", Review of Islamic Economics, Vol. 13, No. 1, pp. 90-103.

Asongu, S.A. (2010), "Post-crisis bank liquidity risk management disclosure", University Library of Munich, Germany, MPRA Paper no. 27266.

Baumann, U. and Nier, E. (2004), "Disclosure, volatility, and transparency: an empirical investigation into the value of bank disclosure", Economic Policy Review, Vol. 10, No. 2, pp. 31-45.

Basel Committee on Banking Supervision (2001), "Public disclosures by banks: results of the 1999 disclosure survey".

Basel Committee on Banking Supervision (2002), "Public disclosures by banks: results of the 2000 disclosure survey".

Basel Committee on Banking Supervision (2003), "Public disclosures by banks: results of the 2001 disclosure survey".

Chen, Y. and Hasan, I. (2006), "The Transparency of the Banking System and the Efficiency of Information-Based Bank Runs". Journal of Financial Intermediation, Vol. 15, pp. 307-331.

Cordella, T. and Yeyati, E. L.(1998), "Public Disclosure and Bank Failures". IMF Staff Papers 45.

Demirguc-Kunt, A., Detragiache, E. and Tressel, T. (2008),"Banking on the principles: Compliance with Basel Core Principles and bank soundness", Journal of Financial Intermediation, Vol. 17, No. 4, pp. 511-542.

Di Beneditto, E.A.N. and Da Silva, R.N.S. (2008), "Analysis of the Disclosure Level by Brazilian Financial Institutions Following the Basel Capital Accord (Basel II) - A multiple case study", Brazilian Business Review, Vol. 5, No. 3, pp.181-197.

Frolov, M. (2006), "Bank credit risk disclosure in Japan", Journal of Banking Regulation, Vol. 7, No. 3/4, pp. 221-242.

Htay, S.N.N, Adnan, M.A., Rashid, H.M.A. and Meera, A.K.M. (2011), "Corporate Governance and Risk Management Information Disclosure in Malaysian Listed Banks: Panel Data Analysis", Proceedings of Global Business and Social Science Research Conference, World Business Institute Australia

Jorion, P. (2002). "How Informative Are Value-at-Risk Disclosures?", The Accounting Review, Vol. 77, pp. 911–931.

Linsley, P.M. and Shrives, P.J. (2005), "Transparency and the disclosure of risk information in the banking sector", Journal of Financial Regulation and Compliance, Vol. 13, No. 3, pp. 205 – 214.

Linsley, P.M., Shrives, P.J. and Crumpton, M. (2006), "Risk disclosure: An exploratory study of UK and Canadian banks", Journal of Banking Regulation, Vol. 7, pp. 268–282.

Liu, C., Ryan, S.G. and Tan, H (2004), "How Banks' Value-at-Risk Disclosures Predict their Total and Priced Risk: Effects of Bank Technical Sophistication and Learning over Time", Review of Accounting Studies, Vol. 9, No. 2/3, pp. 265-294.

Nier, E. and Baumann, U. (2006), "Market discipline, disclosure and moral hazard in banking", Journal of Financial Intermediation, Vol.15, No. 3, pp. 332-361.

Perignon, C. and Smith, D.R. (2010), "The level and quality of Value-at-Risk disclosure by commercial banks", Journal of Banking and Finance, Vol. 34, No. 2, pp.362-377.

Poshakwale, S. and Courtis, J.K. (2005), "Disclosure level and cost of equity capital: evidence from the banking industry", Managerial and Decision Economics, Vol. 26, No.7, pp. 431-444.

Wu, Y. and Bowe, M. (2010), "Information Disclosure, Market Discipline and the Management of Bank Capital: Evidence from the Chinese Financial Sector", Journal of Financial Services Research, Vol. 38, No. 2/3, pp. 159-186.

Appendix

Synthesis of empirical papers dealing with risk information disclosure measurement

Author	Topic	Sample, Data, Methodology	Risk information disclosure measurement	Categories of risk information assessed	Main findings and conclusions
Linsley and Shrives (2005)	analysis of risk information disclosure basing on three Basel surveys examining bank risk disclosures	- more than 50 banks - 1999-2001 - descriptive statistics	NA	NA	NA
Perignon and Smith (2010)	analysis of VaR disclosure quantity and quality over the time	- US and international commercial banks - 1996-2005 - descriptive statistics - Likelihood test	- by developing the VaR Index comprising six components are: VaR characteristics, summary VaR statistics, intertemporal comparison, daily VaR figures, trading revenues and backtesting.	- market risk (VaR)	- there has found an overall upward trend in the quantity of information released to the public, whereas the quality of VaR disclosure shows no sign of improvement over time
Liu, et al. (2004)	analysis of relationship: VaR disclosures for trading portfolios - trading income variability prediction	- US - 1997-2002 - regressions	- by collecting trading VaR data from annual Form 10-K or quarterly Form 10-Q filings	- market risk (VaR)	- banks' trading VaRs have predictive power for trading income variability that increases with bank technical sophistication and over time
Frolov (2006)	analysis of credit risk information disclosure by reference to national regulation	- Japan - 2004 - descriptive statistics	- by searching for certain credit risk information contained in the disclosure reports and business result briefs (e.g. breakdown of the total exposure by loans and other credits, by type of lending contract, by place of origination (domestic vs abroad), by impaired/non-impaired exposures)	- credit risk	- there is a large flow of financial information delivered, which is the result mandatory disclosure regime that sets up specific types of required disclosures - there have been suggested the following ways of improving its quality: disclosure of exposure on credit loss, breakdowns by borrower risk category, more data on the number of stand-alone credit exposures and their distribution by size,

Author	Topic	Sample, Data, Methodology	Risk information disclosure measurement	Categories of risk information assessed	Main findings and conclusions
					more forward-looking indicators of credit losses such as direct loss estimates and effective interest rate on new advances
Linsley, et al. (2006)	analysis of relationship risk information disclosure - banks features	- UK, Canada - 2001 - content analysis - Mann-Whitney U-test - Pearson's rank correlation	- by counting risk and risk management sentences in the annual reports	- risk management frameworks and policies - capital structure and adequacy risk - credit risk - market risk - interest rate risk - operational risk	- positive association with the quantity of risk definitions disclosed in case of bank's size and the total quantity of risk disclosures - no significant association in case of relative profitability and risk levels
Baumann and Nier (2004)	analysis of relationship risk information disclosure - volatility of a bank's stock price	- banks from 31 countries - 1993-2000 - cross-sectional analysis - OLS method	- by developing a disclosure index using the BankScope database as root source of information	- interest risk - credit risk - liquidity risk - market risk through various accounting information (related to assets, liabilities and income statement) grouped into 17 subindices	- banks that disclose more information on key items of disclosure show lower measures of stock volatility
Wu and Bowe (2010)	analysis of relationship market discipline (including risk information disclosure) - banks equity capital level	- China - 1995-2003 - panel data analysis -correlations - regressions	- by developing a disclosure index using the BankScope database as root source of information	- interest risk - credit risk - liquidity risk through various accounting information (related to assets, liabilities and income statement) grouped into 15 subindices	- higher share of inter-bank deposits (uninsured funding) in a bank's portfolio leads the bank to operate with a larger capital buffer - banks which disclose more information limit their probability of default by choosing a higher capital buffer - higher degree of perceived government support potentially engenders moral hazard, reducing the sensitivity of changes in the bank capital buffer to levels of risk
Di Beneditto and Da Silva (2008)	analysis of risk information disclosure level by reference to BIS regulation	- Brasilia - 2001-2005 - content analysis - descriptive statistics	- by searching for certain risk information items through the annual reports	- capital structure - capital adjustment - internal models for market risk - internal and external rating - credit risk model - securitization activities - quality of assets	- there is less interest of financial institutions to take the attitude of harmonizing the information disclosed in the Annual Report with Basel recommendations on transparency and

Author	Topic	Sample, Data, Methodology	Risk information disclosure measurement	Categories of risk information assessed	Main findings and conclusions
				- credit derivatives and "credit enhancements" - derivatives - geographic and business diversification - accounting and presentation policies - other risks	disclosure
Poshak-wale and Courtis (2005)	analysis of relationship voluntary disclosure (including risk management) - cost of equity capital	- Europe, Australia and North America - 1995-1999 - descriptive statistics - correlations - regressions	- by developing a disclosure scoring incorporating 29 key financial and non-financial performance measures contained in the annual reports (there have been awarded bonus points if disclosures were prospective and quantitative nature)	- strategy - customer and markets - people and reputation - risk management - financial position - financial performance	- higher disclosure levels are associated with a reduction in cost of equity capital
Asongu (2010)	analysis of post-crisis disclosure measures (related to liquidity risk) taken into account by top world banks	- 20 of top 33 world banks - 2008 - content analysis	- by searching on the annual report through sentences like: "liquidity risk management", "cash risk management", "liquidity management", "cash management", "liquidity risk", "Basel II pillar 3 disclosure", "Basel II", "pillar disclosure"…..etc.	- liquidity risk	- only 25% of sampled banks provide publicly accessible liquidity risk management information, a clear indication that, in the post-crisis era, many top ranking banks do not still take Basel disclosure norms seriously
Htay, et al. (2011)	analysis of relationship corporate governance structure - risk information disclosure	- Malaysia - 1996-2005 - panel data analysis - generalized least square method	- by developing a weighted index of risk management information disclosure basing on data published in annual reports	- market risk - interest rate risk - liquidity risk - credit risk - operational risk - currency exposure of net assets - derivatives - hedging strategy	- higher risk management information disclosure can be achieved if board leadership structure, higher proportion of independent directors, institutional ownership, block ownership, board size and lower director ownership are separated
Ariffin, et al. (2009)	analysis of current perceptions about disclosure in Islamic banks with regard to risk	- 28 Islamic banks in 14 countries - 2008 -questionnaire survey - descriptive statistics	- by conducting a questionnaire survey made of assessing 13 disclosure items, supplemented by material from the interviews where appropriate	- credit risk - market risk - operational risk - liquidity and funding risk - capital adequacy - solvency - profitability	- Islamic banks are still lacking with regard to risk disclosure, even though transparency from Islamic banks is more pertinent than for conventional

Author	Topic	Sample, Data, Methodology	Risk information disclosure measurement	Categories of risk information assessed	Main findings and conclusions
	information	- non-parametric tests		- risk measurement and evaluation for each category of risk - risk management strategies and practicies or each category of risk - significant accounting policies - corporate governance information - other qualitative risk information	banks due to their profitsharing arrangements
Nier and Baumann (2006)	analysis of relationship market discipline (including disclosure) - the size of individual banks' capital buffers	- banks from 32 countries - 1993-2000 - panel data analysis - generalized least square method	- by developing a disclosure index using the BankScope database as root source of information	- interest risk - credit risk - liquidity risk through various accounting information (related to assets, liabilites and income statement) grouped into 18 subindices	- government safety nets result in lower capital buffers and that stronger market discipline resulting from uninsured liabilities and disclosure results in larger capital buffers - the effect of disclosure and uninsured funding is reduced when banks enjoy a high degree of government support. - while competition leads to greater risk taking incentives, market discipline is more effective in curbing these incentives in countries where competition among banks is strong.
Demirguc-Kunt, et al. (2008)	among others - analysis of relationship between information disclosure and bank soundness - (main aim: compliance with Basel Core Principles related to information provision)	- banks from 39 countries - 1993-2003 - panel data analysis - regressions	- by developing a compliance score (BCP- Basel Core Principles) based on information provided by IMF and World Bank, which includes two measures of the frequency and timeliness of disclosure	NA	- banks receive more favorable Moody's financial strength ratings in countries with better compliance with Basel Core Principles related to information provision - having many disclosure requirements but not enforcing them is detrimental to bank soundness

Source: own projection based on literature review