On Disclosure of Credit Risk by Banks

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Abstract

This paper presents a review of the literature on credit risk disclosure of banks. It shows that the commonly asked questions in this area are those related to the information disclosed, the way it is disclosed, the quality of the information, and the factors affecting the disclosure of credit risk. Most of the studies present herein construct an index to analyze the credit risk disclosure of banks. However, the way the index is constructed differs. Proceeds from studies on credit risk disclosure can help banks to decide between disclosing more (and better) information on credit risk or not and also might help the reporting regulators in formulating guidelines or standards for disclosing information about credit risk by banks.

Ⅰ　Introduction

Information and transparency are rather important aspects to create and sustain a market economy, which is a model followed by almost all countries in the world. In this system, financial institutions are the glue that maintains the participants close together, creating bonds between resource-rich individuals or firms and those who seek funds for various purposes. However, for them to function efficiently, market participants need to have sufficient information about risks and returns to make informed trading and investment decisions.

Like any other business, financial institutions are experts in what they do (well, at least this is what they are supposed to be) and are expected to be well-informed about their own risks. Nevertheless, there is always a gap between what a firm's management knows and the information available to outsiders. In the context of market stress, this asymmetry of information or lack of clarity weakens the financial

system to rumors that can hinder the market access of a firm and cause funding to be impaired. This episode happened in 2008 as a consequence of the lack of full disclosure of banks' derivative positions.

The aforementioned implies that market participants should seek to disclose more meaningful information about risks and risk management performance to improve the transparency of financial risk exposures. Paradoxically, though, in an environment that transparency is overlooked, a firm that discloses more information about its risks than others may fear that outsiders will erroneously perceive its riskiness to be greater than that of other firms. Such concern may hamper progress in voluntary disclosures of risk exposures. Indeed "it is hard to be wise when everyone else is acting foolishly."

Thus, to minimize this problem, Basel issues guidelines that, with the necessary adjustments, can be applied in each jurisdiction around the world. It helps build consensus on the appropriate framework for understanding such disclosures so that enhanced disclosures could be seen as a sign of strength.

In this paper, we present a literature review on credit risk disclosure of banks. Banks specifically are selected because they are at the core of the financial system, also because, traditionally, it is the business of banks to receive deposits and lend money to firms and individuals. In all this process, credit risk must be managed to avoid the bank going under.

Ⅱ　Review of Literature

Since the great financial crisis of 2008-2009, risk disclosure of banks is a topic that has increasingly been gaining the attention of researchers. When it comes to disclosure, questions that are commonly asked are those related to the kind of information disclosed, the way the information is disclosed, the quality of the information disclosed, the factors affecting the disclosure of credit risk. Questions like this were the object of research of some papers that we now present.

Olaoye and Ojuolape (2017) conducted a case study of Zenith Bank Nigeria PLC,

one of the oldest banks in Nigeria. They used secondary data collected from the annual report published by the bank in 2015 and 2016 in which they attempted to find seven IFRS 7 disclosure items on credit risk in balance sheet using an unweighted dichotomous scoring method.

For measuring the relationship between credit risk disclosure of the bank with the explanatory factor, they draw the assumption from previous studies by Mendoza and Rivera (2017) that examine the credit risk and capital adequacy of rural banks in the Philippines, finding out that credit risk has a negative and statistically significant relationship with profitability.

After running a simple regression analysis, Olaoye and Ojuolape (2017) confirmed their assumption that there is a significant relationship between credit risk disclosure compliance and bank profitability in Nigeria (measured by the return on capital employed).

The way the study was conducted raises some concerns, however. It only analyzes one bank for two years, which means that the researchers had only four reports to work with assuming that the bank publishes its reports (Basel Pillar 3 and financial report) twice a year. This too small sample size certainly results in a regression analysis that yields a biased outcome. This limitation could be overcome if a cross-sectional analysis in which more banks are included in the sample was conducted as has been done by other studies in the area (Albuquerque, Morais and Pinto 2020; El-Bannany 2015; Scannella and Polizzi 2020, and Jones *et al.* 2018).

Albuquerque, Morais, and Pinto (2020), covering 4 years ending in 2015 and 60 European banks from 15 different countries, investigated the effect of supervisory power on the level of disclosure of loan loss provisions (LLP) and on the use of this item to smooth income. They conducted a content analysis and computed disclosure indices in order to analyze compliance with the International Financial Reporting Standards (IFRS) and Pillar 3 of the Basel accords. Similar to Olaoye and Ojuolape (2017), they applied a dichotomous method in constructing the index—a score of one was assigned to the different disclosure items required under IFRS 7 and Pillar 3 and then divided by the sum of the applicable items.

The study found that the level of supervision has impact on compliance with risk disclosure requirements and that income smoothing is lower in banks from countries with interventionist regulators. The researchers reach this conclusion, for they found that banks domiciled in countries with greater enforcement presented a significantly higher level of disclosure of loan loss provisions. However, when the level of disclosure was split into IFRS 7－Financial Instruments: Disclosures and Basel Pillar 3 disclosures, banks from countries with greater supervision only disclosed more information to meet the Pillar 3 and not the IFRS 7 requirements.

The results of the study are consistent with Stephanou (2010) who also shows that supervisory action and market discipline are complementary and that appropriate regulations can improve the disciplining power of markets, i.e., supervision is fundamental to maintain market discipline and banking stability. But what is the implication of these results? Is there any penalty in the form of lower profitability for banks of countries with laxer supervision as suggested by Olaoye and Ojuolape (2017) or do these banks present high levels of credit risk as suggested by Jones *et al.* (2018)? These questions are not tackled by the study thus remain open to be answered.

In Japan, the major study on risk disclosure is that conducted by Frolov (2004). The researcher argues that public disclosure of bank information, per se, does not necessarily imply government intervention with mandated disclosure rules, because banking organizations have the incentive to voluntarily disclose to the public. A role for mandated disclosure rules arises as far as the incentive is weakened by the presence of the government policy of financial safety net. That is, mandated rules should aim at bringing bank disclosures back to the socially desirable, optimal level. This is in line with Albuquerque, Morais, and Pinto (2020).

The study also examines the credit disclosure activities of banking organizations, focusing primarily on analyzing the quality of disclosed information about the banks' lending assets and investigating the strong and weak sides of the disclosure regime. It shows that banking organizations in Japan disclose information through multiple channels, including disclosure reports, securities reports, business result briefs, and

company presentation meetings. Information releases via the disclosure and securities reports follow mandated rules set up in by-laws, and the other two channels convey information disclosed largely voluntarily. Banking organizations have relatively weak incentives for voluntary disclosure in the mandatory (disclosure) reports because they are targeted mostly at protected creditors and typically require much time and effort to be used for comparison across multiple organizations. Unlike the reports, the business result briefs are less costly in use, and they have recently become the main channel of voluntary disclosures the commercial banks rely on in managing mass-media and reputation risks.

Still, another study worth noting is El-Bannany (2015), which tries to establish a model to explain the reasons for changing the level of credit risk disclosure among (a total of 14) UAE banks over the period 2006-2009 using disclosure index and multiple regression analysis. The assignment of the index was made electronically and then the credit risk disclosure level of bank i in year t was measured by the logarithm of the number of the frequency of credit risk term.

The use of computers to automate the process of assigning an index to the risk disclosure has a clear advantage for being time-efficient compared to manual content analysis. Nevertheless, an automated approach requires the researcher to spend a good deal of time constructing a very detailed list of items to be looked up by the computer, which can still miss some items if they are disclosed using a different term. For example, the researcher may find nothing if he tries to search "default probability" when the company uses "probability of default" instead. Slight differences like this can significantly alter the result of an automated approach, but they are less prone to hamper a manual approach. In conducting an automated analysis of risk disclosure, a researcher can use custom-made software or pick one of the several content analysis software out there, such as NVivo, MAXQDA, Atlas.ti, and Lexicoder.

El-Bannany (2015) found evidence that global financial crisis, foreign ownership, bank age, investment in information technology systems, and bank profitability variables have a significant impact on the level of credit risk disclosure, but listing

age has no impact on the level of credit risk disclosure.

Although the result of this study cannot be assumed to extend beyond the sampled banks, it helps to understand how the factors studied might affect banks in other geographies.

To the researcher's best knowledge, only Scannella and Polizzi (2020) provide a methodological tool researchers and analysts can use to measure and evaluate credit risk disclosure in the banking industry. For example, Frolov (2004), who conducts an empirical study on the same topic, relies on a survey performed by the Japan Investor Relations Association in 2004 without developing a methodological technique to examine credit risk disclosure. While Scannella and Polizzi (2020) use content analysis of a sample of ten Italian banks' annual reports (Management Commentary and Notes to Accounts) and Basel Pillar 3 report over six years, from 2012 to 2017, to gauge their credit risk disclosure over time (for the same bank over different years) and across space (between different banks in the same year) thus capturing a much higher degree of information than a purely historical or cross-sectional approach. Content analysis was performed by assigning scores to the disclosure based on two checklists created by the researchers. The first checklist was made of items of non-mandatory disclosure to which a binary scoring was used. The second checklist's items were assigned scores between 0 and 5 (severe lack of information and excellent information disclosure, respectively) to indicate the degree of quality based on a judgment analysis of the researchers. The final result was a semi-objective, manual approach. They found that there is high comparability of disclosure, especially over time, and it improved throughout the period of study. However, despite being subject to the same regulations and accounting standards, Italian banks have significant differences in their credit risk disclosure, thus there is room to improve several aspects of credit risk disclosure.

Jones *et al.* (2018) examine the voluntary disclosure of risk-related issues, with a focus on credit risk, in graphical reporting for 47 commercial banks from France, Germany, Italy, Spain, and the UK and listed from 2006 to 2010.

Consolidated annual reports were downloaded from the banks' websites and data

about all the graphs included in both the risk reports within the management report and in the notes to the financial statements was collected. A graphical accuracy index was then constructed and used in a multi-level linear model to investigate whether credit risk affects the quantity and quality of graphical credit risk disclosure.

The study found that banks used credit risk graphs to provide incremental, rather than replicative, information. They were also selective, with riskier banks less likely to use risk graphs. Banks were accurate in their graphical reporting, particularly those with high levels of credit risk. It seems that preparers of risk graphs prefer selective omission over obfuscation via inaccuracy.

Ⅲ Conclusion

Credit risk is one of the major risks a bank must face. Hence properly disclosing it should be regarded as a public good due to the important role banks play in the financial system.

Guidelines on credit risk disclosure have been around since the 1980s with the advent of the Basel Accord, but it was not since the great financial crisis of 2008-2009 that this topic has been gaining increasing attention from researchers.

There are four kinds of methods for analyzing credit risk disclosure used in the literature presented in this paper. They all seek to construct a disclosure index that is used in the further analysis:

- ・Dichotomous method, in which an item is scored 1 if disclosed or 0 otherwise. As it essentially counts the frequency a specific item appears in the report, it can more efficiently be done automatically.
- ・Scale method, in which the highest score is assigned when an item fulfills all the predefined disclosure requirements. The size of the scale depends on the researcher and because the assignment of score tends to be subjective, it is also hard to conduct electronically. Scannella and Polizzi (2020), for example, use a 5-score subjective scale while Do Rosario (2021) uses a 4-score objective scale.

・Partial compliance computes the ratio of compliance by adding the extent of compliance for each standard and divides the sum by the total number of standards applicable to the studied company (Abdullah 2013). It is somewhat limited as it considers that the bank should disclose only the information it is required to disclose.

・Full compliance (Do Rosario 2021) assumes that all banks should disclose credit risk information based on the same benchmark. Therefore, the full score should be equal across banks. It is suitable for comparing the disclosure of banks of the same type and disclosure practices of different countries.

・The computerized method is efficient as it automates the process of score assignment and allows to analyze a large number of reports. Nevertheless, it is prone to miss out on items disclosed in a slightly different way, for example, "default probability" and "probability of default."

・The manual method takes more time to conduct but, it gets much deeper content than a computerized analysis, not to mention the fact that sometimes it is the only way to have the report analyzed when there are no electronic versions available or the electronic version is not searchable.

Most of the literature in this area focuses on questions such as those related to the kind of information disclosed, the way the information is disclosed, the quality of the information disclosed, the factors affecting the disclosure of credit risk. Thus, it is apparent it still lacks comparison across different countries to understand what differences exist in the way credit risk is disclosed in different countries and what causes these differences: is it solely the rigorousness of the regulator, or are there other factors contributing to the level of disclosure? As there are studies that point that disclosure level is positively related to bank profitability, does it mean that banks from countries with poor disclosure levels are less profitable? Is their credit risk high? These kinds of questions might help banks to decide between disclosing more (and better) information on credit risk or not and also might help the reporting regulators in formulating guidelines or standards for disclosing information about credit risk by banks.

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