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Credit Risk Minimizing: Analysis study of Islamic and conventional banks in Yemen

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ABSTRACT

Purpose: *The study aims to compare the credit risk minimization between Islamic and conventional banks in Yemen.*

Approach/Methodology/Design: *This paper is limited to a homogeneous sample that includes the Islamic and conventional banks' coverage as they represent the most significant part of the Yemeni banking sector. Using a descriptive-analytical method, data has been collected by a questionnaire sent by post to each Islamic and conventional bank separately located in Yemen's capital city.*

Findings: *The study concludes that credit risk is the most critical risk facing banks, and there is a significant difference in credit risk minimizing between Islamic.*

Originality/value*: The result showed that the banks' most critical risks are credit risks, and there is a significant difference in credit risk minimisation between Islamic and conventional banks. Also, conventional banks possessed a credit risk minimizing system better than Islamic banks. Several recommendations identified where the Yemeni banks, whether Islamic or conventional, should use advanced methods to measure and analyze credit risks.*

INTRODUCTION

Financial institutions lay at the heart of every economy (Kabir et al., 2015), where Islamic and conventional banks are major financial institutions which contribute significantly to achieving the country's economic stability by granting credit to fund the commercial projects of different sectors (Amran, 2015). Islamic banks (IBs) have the same functions of their conventional counterparts even if the nature and structure of their products are completely different (Hassan et all.,2018); in addition, IBs operate based on the principles of Islamic Sharia and sharing of losses (Ayub, 2007).

Furthermore, according to the Bank for International Settlements (2000), credit risk is a leading source of financial instability in the banking sector. Credit risk is the potential financial loss resulting from the borrower's inability or counterparty to comply with the loan's terms in full and on time (Abu Kamel, 2002).

However, IBs operate as an entrepreneur in that they provide financing rather than just a standard loan (Al Rahahleh, 2019), where credit risk in IBs in the form of settlement risks or payments arising when one of the parties to the transaction has to pay money, as of Istisna contract or non-payment of the bank's share by the end of the term in the form of profit-sharing formulas, as of speculation and participation, which expose the IBs to a potential loss. In contrast, credit risk in conventional banks (CBs) involves the borrower's inability to meet his commitments in relation to lending and other financial transactions (Spuchlakova, 2015).

Therefore, IBs that are based in countries with predominantly Muslim populations have lower credit risk and higher stability than CBs (Abedifar,2013) (How et al. , 2004) (Baele et al. ,2012) (Rajhi & Hassairi ,2013), while many researchers believe that Islamic financial institutions may be at higher credit risk than conventional financial institutions (Alqahtani, 2017) (Rafiq & Siddiqui, 2018) (Hussain & AlAjmi , 2012) for several reasons, including the nature of the risks and the unspecified financing methods to finance projects, whether in the sharing of profit or loss. Despite the significant difference, both banks have banking risk management. Its role is to minimize the risks faced by the banks. Furthermore, the major reasons for the several banking problems are directly related to the poor portfolio risk management, lack of credit standards of borrowers and counterparties, or lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of the counterparties (Gil, 1994).

Moreover, many current studies focus on examining banks' financial risks. Given the importance of credit risk minimizing practices as an indicator to maintain sound credit risk management. Considering that studies on the Islamic credit risk and their comparison with conventional banks are few in Yemen; thus, it is crucial to study credit risk minimisation of Islamic and conventional banks. Credit risk is presently a crucial part of Islamic and conventional banks, and banks have to pay more attention to minimising it. Therefore, this paper aims to compare the credit risk minimisation between Islamic and conventional Yemeni banks to highlight how banks can be extremely cautious and vigilant in handling credit risk and set recommendations that help raise credit risk management levels. Against this background, the current study focuses on Yemen, considering that Yemeni banks suffer from profound imbalances in their risk management practices and in keeping pace with technical and technological developments in credit risk minimisation, which leads to an increase in credit risk. As far as we know, this study is considered the first in Yemen that compares the credit risk minimizing of Yemeni Islamic and conventional banks. The remainder of this paper was organized into the following: 2 Review of Literature, 3 Data and Methodology, 4 Findings, and 5 Conclusion.

REVIEW OF LITERATURE

Risk is a fixed fact that arises when there is a possibility of more than one outcome, and the outcome is unknown (Khan & Ahmed, 2003). Bank risk arises from the uncertainty surrounding the probability of achieving or not achieving the expected investment (Matar, 2004). Credit risk is one of the main reasons banks have stumble, and economic crises occur in developing and developed countries. There is almost a consensus among bankers that credit risk is the most common type of financial risk. Mongi (2018) examined whether credit risk in Islamic banks is higher than in conventional banks in Malaysia and found that Islamic banks were more liable to credit and insolvency risk than conventional banks. Alandejani et al. (2017) emphasized that Islamic banks' exposure to higher failure more than conventional banks, and Islamic banks have shown a shorter survival time than conventional banks, while Pappas et al. (2015) pointed out that Islamic banks have a significantly lower risk of failure than conventional banks.

Furthermore, Kabir et al. (2015) compared the credit risk in the Islamic and conventional banks across thirteen countries by employing the distance-to-default, the Z-score and NPL ratio. They concluded that Islamic banks had significantly lower credit risk when using the distance-to-default measure than conventional banks. In contrast, Islamic banks displayed higher credit risk than conventional banks when using the Z- score and NPL ratios.

Risk management in banks aims to confront risks in the best way and at the lowest costs by detecting, analyzing, and measuring the risk to achieve the desired goal (Salam & Mosa, 2007). Credit risk management's role is to keep exposure to credit risk within the parameters and safe levels to maximize rates of return against acceptable risks (Sinkey & Greenawalt, 1991). Credit risk management is all the management's actions to minimize risk's negative impact to a minimum. Therefore, Nadeem & Khalil (2014) highlighted the risk management theory in conventional and Islamic banks and revels that Islamic banks were more professional in managing risk than conventional banks. Abdou et al. (2014) explored the risk management practices of Yemeni Islamic banks. They found no significant differences in risk management and risk management practices between Islamic and foreign banks or Islamic and national banks. This result was supported by Noman's (2017) study, which indicated no significant difference in credit risk management practices between Islamic and conventional banks. Also, Al Fawaz et al. (2016) emphasized that Islamic banks were more sensitive to credit risk management. There is no significant difference between Islamic and conventional banks' credit risk management practices to reduce credit risk.

Furthermore, Shaikh & Jalbani (2008) investigated risk management practices and performance of Islamic and conventional banks and concluded that risk management showed adequate mitigating in Islamic banks than in conventional banks. At the same time, Mokni et al. (2015) argued that conventional banks possessed a formal risk management system better than Islamic banks when they compared the current existence of risk management practices in Islamic and conventional banks. However, Ali & Naysary (2014) explored the risk management practices in Islamic banks in Kuwait and found that Islamic banks used risk management practices similar to conventional banks' risk management practices.

According to the previous studies on the credit risk management of Islamic and conventional banks, there is no difference in the practices used by banks to minimize the credit risk. In this respect, despite previous studies' existence, we believe this study is an addition to the earlier studies because it includes investigating the credit risk minimizing in Islamic banks and its comparison with the conventional banks. Therefore, based on the foretasted theoretical developments to test the hypothesis that formulated as below:

H0: There is no significant difference between Islamic and conventional banks concerning credit risk minimizing.
H1: There is a significant difference between Islamic and conventional banks concerning credit risk minimizing.

METHODOLOGY AND PROCEDURES

This paper is limited to a homogeneous sample that includes the Islamic and conventional banks' coverage as they represent the most significant part of the Yemeni banking sector. Furthermore, risk managers from the fourteen banks working in Yemen have been selected on the assumption that they would have sufficient knowledge about credit risk management practices in banks, in addition to their experience in designing and implementing credit risk management policies.

Data has been collected by a questionnaire sent by post to each Islamic and conventional bank separately located in Yemen's capital city. where one questionnaire has been sent to each bank because the research aims to study the credit risk minimizing practices in banks, which are considered one for each bank either in the main branches or in its branches distributed in Yemen. Data were collected from Yemeni Bank for Reconstruction and Development, Yemen Commercial Bank, Islamic Bank for Finance and Investment, National Bank of Yemen, Cooperative Credit Bank, the Agricultural Bank, Al- Thadaman Islamic Bank, Bank of Yemen and Bahrain Shamil, Saba Islamic Bank, International Bank of Yemen, Arab Bank, Bank of Yemen and Kuwait, Bank of Yemen and Gulf, Qatar International Bank, which included ten conventional banks and 4 Islamic banks.

Moreover, after completing the collection, it was sorted for review to determine the completed and validated questionnaires for analysis and exclude non-fulfilling questionnaires that are not valid for statistical analysis. Then it was coded in numbers in (SPSS-21).

RESULTS AND DISCUSSION

Descriptive Analysis

The study uses a direct question, the Dichotomy scale, and the 5-Likert scale approaches in the questionnaire. Table 1.1 highlights the direct questions, where based on the responses, the risk managers in Islamic banks believe that the most critical risks facing banks are credit risks followed by market risks. In contrast, the risk managers in conventional banks believe that credit risk is the most critical risk facing banks. The majority of banks' risk managers agree that credit risk management is vital for the bank's strategy. Therefore, Islamic and conventional banks consider credit risk management in the bank's current business strategy. Furthermore, both banks use models or software for measuring credit risk, where Islamic banks use Altman and software developed by the bank, and the conventional bank uses Altman, followed by McKinsey's credit portfolio.

Table 1.1: Descriptive analysis of the question

Questions	Bank	Answer
What are the most important risks faced by the bank?	Islamic bank	Credit risk and market risk
	Conventional bank	Credit risk
Does credit risk management important for the bank's strategy	Islamic bank	Important
	Conventional bank	Very important
What is the model/software used for measuring credit risk?	Islamic bank	Altman and software developed by the bank
	Conventional bank	Altman and McKinsey's credit portfolio

Source: Authors

Table 1.2 presents dichotomy questions, where the analysis shows a variation in the arithmetic mean values for all questions, where the questions include a (Yes - No) distribution with a hypothetical average (0.50). Furthermore, the risk managers of Islamic and conventional banks believe a separate credit risk management department ensures compliance with risk management. A credit risk management committee oversees the credit risk management function. Credit risk strategy in the banks and credit policy is commensurate with the overall risk management strategy and policy. The board of directors (BOD) approve the credit risk strategy and periodically review the credit risk strategy and credit policy.

Moreover, Islamic and conventional banks used to choose qualified personnel in credit management and guide them on credit risk management policy in the banks. All employees in the bank's credit risk management usually send for refresher training on procedures, legal issues, and financial evaluation that helps make a better credit risk analysis

Table 1.2: Dichotomy Questions

Credit Risk Minimizing	Conventional Bank Mean	Islamic Bank Mean
Is there a separate credit risk management department to ensure compliance with risk management?	.80	1.00
Does the Bank have a credit risk management committee to oversee the credit risk management function?	.70	.50
Do the heads of the credit department, risk management department and treasury constitute this committee?	.60	.25
Does the Bank have a pre - disbursement audit system for the credit facilities?	.80	1.00
Does the BOD approve the credit risk strategy?	.90	1.00
Does the BOD periodically review the credit risk strategy and credit policy	.90	.50
Are the credit risk strategy and credit policy commensurate with the overall risk management strategy and policy?	.90	.75
Do the Banks choose qualified personnel in credit management?	.90	1.00
Does the credit risk department provide the guide on risk management to the workers?	.90	.75
All the Bank's employees sent for refresher training on credit risk management?	.80	.75
Do you agree that training helps to make better credit analysis?	4.90	5.00

Source: Survey Data

As shown in Table 1.3 that there is a variation in the values of the arithmetic mean for all questions, wherein the questions that include a Likert-scale (Strongly agree, Agree, Neutral, Disagree, strongly disagree) distribution with a hypothetical average (3). Risk managers of Islamic and conventional banks agreed that computerization has helped in better credit risk monitoring. The banks use quantitative and qualitative analysis methods in credit risk assessment. Moreover, the Islamic banks do not agree on whether the committee approach to credit sanction mitigates risk, while conventional banks agree. However, both banks agreed that there is a conflict of interest between the credit management department and the risk management department, which means that banks need to make more separation between the departments. Furthermore, both banks agreed that the powers of sanction might improve service quality. They also agreed that computerization has helped in better credit risk monitoring and credit risk management tools to help judge borrowers' ability but not their willingness to pay.

Table 1.3: Likert-scale Questions

Credit Risk Minimizing	Conventional Bank Mean	Islamic Bank Mean
As risk managers, Do you agree that computerization has helped in better credit risk monitoring?	4.40	4.50
Does credit risk management use the quantitative analysis methods	4.00	3.50

in credit risk assessment?		
Does credit risk management use qualitative analysis methods in credit risk assessment?	3.80	3.00
As risk managers, do you agree that the committee approach to credit sanction really mitigates risk?	4.40	2.75
As risk managers , do you agree that there is a conflict of interest between the credit management department and the risk management department?	3.50	3.25
Delegation of powers of sanction may improve service quality but impairs credit quality?	3.80	3.25
Credit risk management tools help to judge borrowers' ability, but not his willingness to pay?	4.00	3.25

Source: Survey Data

Hypothesis testing

Table 1.4 shows that the value of T for the Credit Risk Minimizing reached 7.667 at the significance level (000.), which is less than 0.05, which means that it is statistically significant in favour of the realistic mean of 7.48. Thus, it can be said that Credit Risk Minimizing was available in Yemeni banks to a reasonable degree.

Table 1.4: Result of One Sample Statistics

Domains	N	Real mean	Expected mean	Std. Deviation	Df	T	Sig
Credit Risk Minimizing	14	7.48	4	2.35	13	7.667	.000

Source: Survey Data

Table 1.5 shows that Z's value is 2.56 at the level of significance at 0.01, which is less than 0.05, which means that it is significant in favour of conventional banks, which means conventional banks have better credit risk minimisation than Islamic banks.

Table 1.5: Result of Mann-Whitney Test for CRM

	Bank	Mean	N	Mean Rank	Sum of Ranks	Z	Sig.
Credit Risk Minimizing	Conventional	8.2222	10	16.72	301.00	2.56	.010
	Islamic	6.0000	4	8.56	77.00		

Source: Survey Data

The result differs from the study of Alfwzan et al. (2016), where it refers that Islamic banks are better than conventional banks, and the study of Ali & Naysary (2014) indicated that Islamic banks used risk management practices similar to the risk management practices used by conventional banks. While the present study refers that conventional banks are better than Islamic banks in credit risk minimizing because Islamic banks face more credit risk, whereas the conventional Yemeni banks deal with common types of credit risk, which is supported by the study of Mokni et al. (2015) where revels that conventional banks possessed a formal risk management system better than Islamic banks when they compare the current existence of risk management practices in the Islamic and conventional banks.

Therefore, we accept the alternative hypothesis:
H1: There is a significant difference between Islamic and conventional banks concerning credit risk minimizing.

CONCLUSION AND SUGGESTION

The present research sheds light on credit risk-minimizing, which is considered a critical banking industry area. The main objectives were to study whether there are differences between Islamic and conventional banks' credit risk-minimizing practices. The present study covered the banking sector, where a sample of fourteen Banks - four, three Islamic and ten conventional - across the Yemeni banking sector. The descriptive and analytical method was used to describe and analyze the results to achieve the study's objectives by analyzing the questionnaire designed related to the study variables.

The result showed that the banks' most critical risks are credit risks, and there is a significant difference in credit risk minimisation between Islamic and conventional banks. Also, conventional banks possessed a credit risk minimizing system better than Islamic banks. Several recommendations identified where the Yemeni banks, whether Islamic or conventional, should use advanced methods to measure and analyze credit risks. Yemeni Islamic and conventional banks should improve the methods used in managing credit risks and take advantage of technical and technological development. Banks must offer training and qualified employees working in credit risk management to take a right and proper measures to evaluate credit applicants' documents.

CONFLICT OF INTEREST

No conflict of Interest

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None

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