BANKING RISK MANAGEMENT IN JORDANIAN COMMERCIAL BANKS IN ACCORDANCE WITH THE BASEL ACCORDS

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ABSTRACT
Purpose: The aim of this study is to shed a light on risk management in Jordanian commercial banks in accordance with the Basel Accords.

Theoretical framework: The researcher reviewed the relevant literature related to risk management.

Design/methodology/approach: The descriptive analytical approach was adopted. The questionnaire was used as a data collection tool. The sample consists of all the public administrations in banks and employees in risk management and control. It consists from 120 individuals.

Findings: The results of the study showed that the field of "The application of banking risk management in Jordanian commercial banks in accordance with the Basel Accords" ranges from strong to medium, while the field of "Techniques and principles of banking risk management applied by Jordanian commercial banks" ranges from strong to moderate.

Research, Practical & Social implications: This study allows Jordanian commercial banks to improve their abilities in managing risks based on Basel accords.

Originality/value: This study is important because it is one of the few studies that shed a light on Basel Accords along with risk management.

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GERENCIAMENTO DE RISCO BANCÁRIO EM BANCOS COMERCIAIS DA JORDÂNIA DE ACORDO COM OS ACORDOS DA BASILEIA

RESUMO
Objetivo: O objetivo deste estudo é esclarecer a gestão de riscos nos bancos comerciais da Jordânia de acordo com os Acordos da Basileia.

Estrutura teórica: O pesquisador analisou a literatura relevante relacionada ao gerenciamento de riscos.

Projeto/metodologia/abordagem: Foi adotada a abordagem analítica descritiva. O questionário foi usado como ferramenta de coleta de dados. A amostra consiste em todas as administrações públicas de bancos e funcionários da gestão e controle de riscos. Ela é composta por 120 indivíduos.

Conclusões: Os resultados do estudo mostraram que o campo "A aplicação do gerenciamento de risco bancário nos bancos comerciais jordanianos de acordo com os Acordos da Basileia" varia de forte a médio, enquanto o campo "Técnicas e princípios de gerenciamento de risco bancário aplicados pelos bancos comerciais jordanianos" varia de forte a moderado.

Implicações sociais, práticas e de pesquisa: Este estudo permite que os bancos comerciais jordanianos aprimorem suas habilidades no gerenciamento de riscos com base nos acordos da Basileia.

Originalidade/valor: Este estudo é importante porque é um dos poucos estudos que lançam luz sobre os Acordos da Basileia juntamente com o gerenciamento de riscos.

Palavras-chave: Gestão de Risco Bancário, Bancos Comerciais, Acordos de Basileia.

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GESTIÓN DEL RIESGO BANCARIO EN LOS BANCOS COMERCIALES DE JORDANIA SEGÚN LOS ACUERDOS DE BASILEA

RESUMEN
Objetivo: El objetivo de este estudio es aclarar la gestión del riesgo en los bancos comerciales jordanos según los Acuerdos de Basilea.
Marco teórico: El investigador examinó la bibliografía pertinente relacionada con la gestión de riesgos.
Diseño/metodología/enfoque: Se adoptó un enfoque analítico descriptivo. Se utilizó un cuestionario como herramienta de recogida de datos. La muestra está formada por todas las administraciones públicas de los bancos y el personal de gestión y control de riesgos. Consta de 120 individuos.
Conclusiones: Los resultados del estudio mostraron que el campo “La aplicación de la gestión del riesgo bancario en los bancos comerciales jordanos según los Acuerdos de Basilea” oscila entre fuerte y medio, mientras que el campo “Técnicas y principios de gestión del riesgo bancario aplicados por los bancos comerciales jordanos” oscila entre fuerte y moderado.
Repercusiones sociales, prácticas y de investigación: Este estudio permite a los bancos comerciales jordanos mejorar sus competencias en materia de gestión de riesgos sobre la base de los Acuerdos de Basilea.
Originalidad/valor: Este estudio es importante porque es uno de los pocos que arrojan luz sobre los Acuerdos de Basilea junto con la gestión del riesgo.

Palabras clave: Gestión del Riesgo Bancario, Bancos Comerciales, Acuerdos de Basilea.

INTRODUCTION
Risk management is based on identifying risks and handling them. Such identification can be carried out through analyzing documents, consulting experts, and assess documents related to projects and etc.. (Shakatreh et al., 2023). It is a very important type of management due to its significant positive impact on the functions of any organization or bank (Kulinich et al., 2023).

The issue of risk management is one of the topics that has attracted the attention of financial and banking institutions because of what the financial and banking industry witnessed many financial crises that led to the insolvency of many of these institutions, especially the financial sector and banks, which are more vulnerable to risks because of their direct dealings with them, whether the risks are the privacy of jobs Banks or the sector in which they operate or because of the conditions of the local or global economy, which requires the management of the banking sector how to deal with these risks in their general form and in their diversity due to the integration of this sector into the global economy. Within an appropriate financial environment (Ullah et al., 2021).

From this point of view, the issue of risk management in general and banking risk management in particular is receiving great attention and focus by the monetary and supervisory authorities in order to formulate special strategies to study this phenomenon, which is the increasing severity of banking risks through the risk management system. In 1974, the Basel Committee for Oversight was formed Banking under the auspices of the Bank for International
Settlements and the central banks of the Group of Ten Great Countries, where the committee developed a number of principles that comprehensively cover the necessary conditions in order to increase the efficiency of risk management. After the intensification of risks, the Basel II agreement appeared, which achieved proportionality between the bank’s capital and its dangerous assets and strengthened the role of the supervisory authorities (Mitchell, 2022).

Banking business, in light of the nature of its business, is exposed to many risks. Banks have become accustomed to hedging risks in many ways, the most important of which is to maintain a sufficient amount of resources. Hence, the thinking about new mechanisms to confront these risks and the creation of a joint body between central banks in different countries that coordinate and control Therefore, those interested in the banking field had to define the concept of banking risk management (Shakya & Smys, 2021).

They are fluctuations in the market value of the bank, as it is the presence of opportunities in which activities deviate from plans in one of its stages, and that part of the outputs of the bank’s operational operations are difficult to predict. As for the American Institute of Internal Auditors (IIA), the risks are defined as the possibility of conditions or events that may affect the achievement of the objectives of the organization and those risks are measured by the degree of their impact on the objectives of the organization and the degree of possibility of their occurrence (Fatah, Hamad & Qader, 2021).

The banking risks faced by institutions of all kinds have been categorized, and all of them share the fact that they are future, as they are closely related to every financial decision. Among these types of risks are the classic risks that include all risks related to the management of assets and liabilities related to the bank, such as liquidity risks, which result when there is a general common desire for some Depositors in order to withdraw their deposits from the commercial bank suddenly, which forces the bank’s management to sell some of its assets within a short period and at low prices. As for the credit risks, as granting credit is a major activity for most banks, so they must pay attention to the credit capacity of borrowers when granting them credit, in the event that this ability changes or It decreased after a period of time due to many factors, the client’s inability to pay, and it is considered a credit risk or the risk of the client’s failure to fulfill his contractual obligations. The volatility of buying and selling foreign currencies The market risk, which is measured by fluctuations in market parameters, is Kalpha Stock market indexes and indexes that result from fluctuating returns, interest rates and exchange rates (Hasen & Elnour, 2022).
As for the concept of banking risk management, it was defined by (Oudat & Ali, 2021) as identifying, analyzing and controlling the economic risks that threaten the financial assets of the organization or the investor. By reducing the chances of expected losses to the least possible extent, whether caused by nature, human errors or judicial rulings, the seven basic rules and elements for risk management have been defined as set by the Risk Management Rules Committee, which is the responsibility of the Board of Directors and senior management, a framework for risk management, integration Risk management, business line accounting, risk scale assessment, independent review and contingency planning (Adam, Soliman & Mahtab, 2021).

The importance of banking risk management has grown widely at the present time after successive financial crises, which led the authorities and international supervisory and supervisory authorities to search for new ways to reach a well-structured risk management system due to the importance of risk management, which is to help in clear future visions, and the development and development of competitive advantage. For the bank by controlling the future and current costs that affect the bank’s profit, presenting risks and ways to hedge them, as they do not affect the profitability of the bank. All decisions related to taking risks are consistent with the strategic objectives of the financial institution. Banking risk is the allocation of capital and resources commensurate with the level of risk (Thach, Hanh, Huy & Vu, 2021).

Among the parties concerned with managing banking risks is the Basel Committee, which adopted the setting of international standards for banks and is concerned with banking supervision. The latter is concerned with removing the sources of unfair competition between banks arising from the differences in the national regulatory requirements regarding the adequacy of banking capital and is working to find mechanisms to adapt to the changes that international banks are exposed to, the most important of which is globalization. A stable world capable of adapting to situations (Pervez, Mansour & Bansal, 2022).

The Basel Committee worked in the Basel Agreement 1 to achieve compatibility in the national regulatory systems and practices with regard to the measurement of capital adequacy and its standards for banks that conduct international business, as these provisions became among the general standards adopted by many countries and dealt with focusing on credit risks and deepening attention to the quality and efficiency of assets Provisions to be formed and dividing the countries of the world into two groups in terms of credit risk weights (Jin et al., 2021).
As for the Basel II agreement, it came with three main pillars, the first of which is the minimum requirements for capital adequacy, which is based on the introduction of some modifications to the methods of measuring credit risk compared to the Basel 1 agreement. As for the third pillar, it is market discipline, which aims to provide a set of disclosure requirements that allow market participants to assess information related to credit risks and the volume of banks’ capital. Made in Basel 1 and Basel 2 documents (Azevedo et al., 2022)

STATEMENT OF THE PROBLEM

The development of the banking system and the intensification of competition between banks, whether locally or globally, led to an increase in the degree of risks that threaten the safety of these banks. Credit risks are no longer the only threat to the bank’s stability, as market risks, liquidity, interest rates, operational risks, etc. Accurate monitoring by the supervisory authorities of these developments and listing their main risks to set effective controls to protect banks from current and future risks, On this basis, the need arose to adopt unified standards that are binding on all banks operating at the international and local levels as global standards to confront and manage those risks that banks are exposed to, headed by the Basel Committee on Banking Supervision, in order to deepen the suitability of banks and improve risk management methods while ensuring the stability of the financial system in light of The latest developments in the global banking environment. Based on the foregoing, the current study came to examine banking risk management in Jordanian commercial banks in accordance with the Basel Accords.

OBJECTIVES

This study aimed to

- Identify the extent to which the Jordanian commercial banks practice risk management in accordance with the Basel Accords
- Identify the risk management techniques and principles adopted by the Jordanian commercial banks.

QUESTIONS

This study aimed to answer the following questions:

Q.1. To what extent is banking risk management applied in Jordanian commercial banks in accordance with the Basel Accords?
Q.2. What are the techniques and principles of banking risk management applied by Jordanian commercial banks?

**HYPOTHESES**

This study aimed to test the following hypotheses:

H0.1. The Jordanian commercial banks doesn’t applied banking risk management in accordance with the Basel Accords - at the statistical significance level of ($\alpha \leq 0.05$).

H0.2. The techniques and principles of risk management applied by Jordanian commercial banks doesn’t consist with the Basel Accords - at the statistical significance level of ($\alpha \leq 0.05$).

**LITERATURE REVIEW**

Azevedo et al (2022) analyzed the risk reporting practices and their determinants of commercial banks during the period of adoption of the Basel II agreement in Portugal. The study relied on the descriptive approach, as well as built a questionnaire tool to achieve the goal of the study. The results showed that the theoretical frameworks supported in the theories of agency and legitimacy continue to provide valid interpretations of risk reporting by Portuguese banks. More specifically, the findings suggest that agency costs, public visibility, and reputation are critical factors for risk reporting. The findings also indicate that younger banks with lower risk management skills use risk reporting either as an informational process or as a channel for managing regulatory legitimacy.

Kassem (2022) develop a proposed framework to explain the impact of disclosure of credit risks on financial reports to achieve bank stability in accordance with the requirements of the decisions of the Basel Committee. The study relied on the descriptive approach, as well as built a questionnaire tool to achieve the goal of the study. The results of the study showed there are specific criteria that can be relied upon in order to measure bank credit risk, create a provision, classify customers and creditworthiness. It is possible to incorrectly classify the merit of a customer to improve his image in front of investors and stakeholders and thus the value and the stability of the bank. The framework proposed by the researcher aids in the disclosure of bank credit risk of commercial banks to obtain more efficiency, competition, stability.

Kinda, Lounasy & Seddiqi (2022) identify banking risks and their management processes, considering that risk management has a key role in maximizing bank returns and avoiding the occurrence of financial crises. This is done through the development of an
integrated framework that helps the bank to develop risk management systems based on the standards set forth in the Basel decisions on banking supervision. The study supported our research with an applied study in the Bank of Agriculture and Rural Development, Adrar Agency, BADR, by referring to the various risks that this bank is exposed to and how to manage them. On advanced systems for assessing banking risks.

Siddique et al (2022) examined the impact of credit risk management and bank-specific factors on the financial performance (FP) of the South Asian commercial banks. The targeted credit risk measures used are NPLs and capital adequacy ratio (CAR). The latter researcher used the cost-efficiency ratio (CER), average lending rate (ALR) and liquidity ratio (LR) as bank-specific factors. They considered the return on equity (ROE) and the return on the asset (ROA) as measures for FP. After analyzing data, CER, NPLs and LR are significantly and negatively correlated with FP (ROA and ROE). It was found that CAR and ALR are significantly and positively correlated with FP in the South Asian commercial banks.

Morrar and Oudeh (2022) aimed to explore the role of meeting the requirements mentioned in Basel Accord II in reducing credit risks in the Palestinian commercial banks. They adopted a descriptive analytical approach. They used a questionnaire to obtain data from the sample. The sample consists from 150 employees. The latter employees were chosen from the departments of credit risk management in the Palestinian commercial banks. It was found that there isn’t any statistically significant relationship between meeting the requirements mentioned in Basel Accord II and reducing the credit risks related to the (credit policy). It was found that there is a statistically significant relationship between meeting the requirements mentioned in Basel Accord II and reducing the credit risks related to (liquidity).

Saad & Ibrahim (2021) analyzed the operational risks of commercial banks and their relationship to the operating profit margin, and how to calculate the required capital as a guarantee to cover all operating expenses in accordance with the decisions of the Basel II Committee, and Basel III reforms issued in December 2017 in accordance with the instructions of the Central Bank of Egypt regarding the management of operational risks. The study relied on the descriptive approach, as well as built a questionnaire tool to achieve the goal of the study. To meet the study’s goal, the financial statements of the ten largest commercial banks operating in Egypt were collected and analyzed during the period from fiscal year 2013 to fiscal year 2018. The researchers concluded that there is an inverse relationship between operational risks and their profitability, and there is a direct relationship between operational risks and the capital requirements necessary to meet them for commercial banks, the sample of the research and
study. The previous results reflect the weak commitment of Egyptian banks to the basic principles of sound practices for managing operational risks.

Osa (2021) explored the impacts of risk management on the performance of deposit money banks that are located in Nigeria. Risk management is one of the core functions that must be handled by banks. Many Nigerian banks failed in the past in managing risks due to the inadequate risk exposure. The risk management comes from those risks which may lead to poor performance. The researcher found that there is a significant relationship between risk management and banks performance. Thus, the managements of banks must manage risks effectively for protecting the interests of investors.

Alfarjani, and Atarooghi (2021) aimed to shed a light on the reality of risk management in Libyan commercial banks based on Basel Accord III. To be specific, they aimed to identify the extent of complying with the risk management principles by the Libyan commercial banks. They aimed to identify the extent of meeting the risk management-related requirements mentioned in Basel Accord III by the Libyan commercial banks. It was found that the extent of complying with the risk management principles by the Libyan commercial banks is moderate. It was found that the extent of meeting the risk management-related requirements mentioned in Basel Accord III by the Libyan commercial banks is low.

Sleimi (2020) explored the effect of risk management practices on the performance of the Jordanian commercial banks. The targeted risk management practices are represented in understanding risk and risk management, credit risk analysis, risk analysis and assessment, risk identification, risk monitoring. The researcher adopted a quantitative approach through using a survey. The survey was used to obtain data from the risk managers and the employees working at the risk management departments at several commercial banks. The sample consists from 23 individuals. A partial least squares structural equation modeling (PLS-SEM) was used. It was found that the components of risk management practices positively and significantly affect the performance of the targeted banks.

Abuzarqa (2019) offered a review on bank risk management. He shed a light on Basel principles (Basel I, Basel II, and Basel III). He summarized the results of the previous studies to enable the bank managers to understand the risk management processes in banks. This summary aims to offer guidance for the ones who want to conduct research in the future.

Mekhtar et al. (2019) aimed to identify the challenges hindering Arab commercial banks from managing risks effectively in accordance with Basel Accord. They chose Algeria as a model. They conducted a meta-analysis to obtain data. They found that such challenges include:
having banking systems that are not well-developed and the absence of effective control systems in banks. Such challenges include: reliance on self-evaluation for the financial activities of the bank rather than relying on analysis and accurate evaluation for risks.

Salem (2019) aimed to shed a light on the methods used by Basel II Committee for credit risks. He explored the relationship between using those methods and the performance of the commercial banks operating in Egypt. She used a survey and conducted interviews to collect data. The sample consists from four banks. Three banks of those are public banks. One bank of those banks is a private bank. It was found that there is a significant relationship between using the targeted risk management methods and the performance of the commercial banks operating in Egypt.

Rehman et al (2019) shed a light on the risk management strategies adopted by the commercial banks located in Balochistan, Pakistan. His study aimed to reduce or eliminate credit risk. The findings of the study are considered important for the employees working in commercial banks. They shall enable those employees to gain more knowledge on the effectiveness of various risk management strategies. They shall enable those employees to reduce the credit risk. The researcher aimed to analyze the opinions of the employees at the chosen commercial banks about which strategies are useful for mitigating credit risk. Based on the results, four things affect credit risk management (CRM). Those four things are: corporate governance exerts, followed by diversification, hedging and, and the bank’s capital adequacy ratio respectively.

Muhammad et al (2018) shed a light on the risk management practices. Those practices can be affected by many factors, including: the extent of understanding risk management, risk identification, risk assessment & analysis, risk monitoring and credit risk analysis in the commercial banks located in Pakistan. The collected data meet the reliability-related requirements. The regression and correlation analyses were conducted. Based on the results, understanding risk and risk management (URM), risk monitoring (RM), risk assessment and analysis (RAA), risk identification (RI), and credit risk analysis (CRA) positively and significantly affect the risk management practices (RMP).

Hafez (2017) aimed to assess the performance efficiency level of the financial risk management process in the Egyptian banks. He collected data through using a survey. He sampled 36 banks. He found that the Egyptian commercial banks show higher performance efficiency than the Egyptian Islamic banks in terms of managing financial risks. He found that the most important risks faced by Egyptian banks are: liquidity and credit risks.
Makokha et al (2016) shed a light on the effect of risk management practices on the performance of commercial banks. They used a questionnaires and conducted interviews. The targeted population consists of 43 licensed commercial banks that are located in Kenya. (133) managers were randomly sampled. It was found that there is a positive statistically significant relationship between financial performance and risk management practices. It was found that the risk management practices can explain 62.2% of the changes that occur to the financial performance in commercial banks located in Kenya.

Masood & Fry (2012) investigated the barriers hindering the process of implementing the Basel Accord in the emerging countries. Several issues of wider interest to risk management and financial regulation also emerge. Based on the results, the Basel Accord is well received due its dual goals of improved capital administration and scientific risk management. Regarding operational risk, it is considered a significant barrier hindering such implementation, with a number of further issues only partially addressed (see below). Equally supported by both public and private sector banks the reasons for delay appear due to lack of technical expertise and the level of preparation. The results shed a light on practical implementation issues (IT and HR), credit risk, minimal capital requirements, operational risk and data security.

Ojo (2009) tracked the developments related to Basel Accod with starting from the inception of the 1988 Basel Capital Accord till the today (Basel II). In highlighting the flaws of the 1988 Accord, an assessment was conducted for the efforts of Basel Committee to address such weaknesses through Basel II. Considerable progress has been achieved. The researcher found that those accords aim at managing risks. He found that exerting more effort is still required, especially in relation to hedge funds and those risks attributed to non-bank financial institutions.

After the researcher reviewed the relevant studies, he found that the current study has agreed with all previous studies in terms of its reliance on the study tool, the questionnaire, and its reliance on the descriptive approach to achieve the study’s goal.

**METHODOLOGY**

**Approach**

A descriptive approach based on survey used because of its relevance to the study and its questions.
Sample

The study sample consisted of all public administrations in banks and workers in risk management and control, and their number was (120).

Instrument

For the purposes of achieving the objectives of the study, a questionnaire tool was developed, and after reviewing the theoretical literature and previous studies as a study, where the initial questionnaire included (14) paragraphs, where the researcher modified the questionnaire and extracted it in its final form, after formulating its paragraphs in simple language, adding a number of paragraphs and canceling some of them until the questionnaire became in its final form (15) Paragraph.

5-point Likert scale (Strongly agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1) was employed by giving each item a score ranging from strongly disagree to strongly agree. The following scale was adopted to analyze the results:

- 1.00–2.33 low
- 2.34–3.67 Moderate
- 3.68–5.00 High

By using the following equation:

\[
\text{The higher limit (5) – the lowest limit (1)} \div \text{Number of categories (3)}
\]

\[
\frac{1-5}{3} = 1.33
\]

And adding (1.33) to the end of each category

Validity of the Instrument

To measure the validity through identifying the extent of the tool's ability to fit with the objective, which it has been prepared to measure. Also the content validity of the study tool verified by presenting it in its initial form to a number of experienced and competent arbitrators specialized to determine the clarity of the items, their relevance to the field, and to present their opinions in terms of addition, or modification or omission some items, so that the questionnaire appears in its final form at least (84%) of the acceptance will be accredit for accepting the item.
Reliability of the Instrument

The researcher extracts reliability coefficient by using the Test–Retest reliability method through applying the study instruments to a sample from outside the study sample by (15) of public administrations in banks and workers in risk management and control, and re-applying it after two weeks, then extracting reliability coefficient using simple correlation coefficient, and its value was (0.81). Moreover, Cronbach's Alpha equation was employed for verifying the internal consistency reliability of the Instruments, and its value was (0.80). These values are acceptable to be used for the questionnaire and its measure to collect the data.

Procedures

The study consists of a number of procedures, as follows:

1. Reviewing the theoretical literature from the previously published studies related to the topic.
2. Selecting a proportional random stratified sample from the study population.
3. Developing the study tool, to achieve Banking risk management in Jordanian commercial banks in accordance with the Basel Accords, by referring to the theoretical literature and previous studies.
4. Verifying validity of the study tool after presenting it to the arbitrators and using appropriate statistical methods.
5. Applying the study tool to the study sample individuals and retrieving their answers to the questionnaire items.
6. Using the statistical package for social sciences (SPSS) software for data analysis, results discussion, and introducing recommendations.

Statistical Analysis

- Means, standard deviations, and ranks were used for each item of the questionnaire, each field and the instrument as a whole.

RESULTS AND DISCUSSION

Results and Discussion Related to the First Question

Q.1. What extent is banking risk management applied in Jordanian commercial banks in accordance with the Basel Accord?
To answer this question, the arithmetic averages and standard deviations of the questionnaire items were calculated to the extent of the application of banking risk management in Jordanian commercial banks in accordance with the Basel Accords, as shown in Table (1) below.

Table (1): Means and Standard Deviations of Responses to the “Extent of Application of Banking Risk Management in Jordanian Commercial Banks in Accordance with the Basel Agreements” arranged in descending order

<table>
<thead>
<tr>
<th>Order</th>
<th>Item</th>
<th>Mean</th>
<th>S.D</th>
<th>Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Bank has an independent risk management unit</td>
<td>4.28</td>
<td>.76</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Develop risk management policies and strategies commensurate with the potential risks that may be exposed</td>
<td>3.88</td>
<td>.97</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>The bank follows the policy of diversification (not focusing on a single customer, or a specific type of loan), and distribution (according to geographical regions and economic sectors) with regard to the process of granting credit</td>
<td>3.67</td>
<td>1.23</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>The bank sets rules for granting loans and rules for obtaining information and documents that must be available for granting these loans.</td>
<td>4.62</td>
<td>.64</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>The bank studies and analyzes the guarantees provided, and their legality and adequacy, before accepting the credit request.</td>
<td>4.77</td>
<td>.60</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>The Bank conducts a comprehensive analysis of the circumstances surrounding the customer, and this is to assess the current and future risks surrounding him</td>
<td>3.47</td>
<td>1.35</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>A financial feasibility study for the client to determine the adequacy of his capital, as well as knowledge of his sources of income, and the expected profits from the project to ensure his ability to fulfill his obligations.</td>
<td>3.20</td>
<td>1.54</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>The bank sets limits on the loan that can be granted to a single customer.</td>
<td>4.16</td>
<td>.68</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>The Bank relies on an internal system for customer risk rating</td>
<td>3.98</td>
<td>.98</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>The Central Bank’s instructions for implementing the decisions of the Basel Committee usually take into account the protection of property rights.</td>
<td>3.78</td>
<td>1.12</td>
<td>9</td>
</tr>
<tr>
<td>11</td>
<td>The bank usually takes into account the protection of customer information, when issuing instructions to commercial banks regarding the implementation of the decisions of the Basel Committee.</td>
<td>3.73</td>
<td>1.02</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>The Bank measures market risk by following the internal modeling method</td>
<td>3.65</td>
<td>1.40</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>The Bank provides programs and systems that monitor and measure liquidity risk</td>
<td>3.60</td>
<td>1.26</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>The bank is working on introducing the short-term liquidity ratio</td>
<td>4.55</td>
<td>.82</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>The bank is working on introducing the long-term liquidity ratio</td>
<td>4.53</td>
<td>.70</td>
<td>3</td>
</tr>
<tr>
<td>The whole domain</td>
<td></td>
<td>3.99</td>
<td>.99</td>
<td></td>
</tr>
</tbody>
</table>

Source: Developed by the researcher based on (Fatah et al, 2021; Hasen & Elnour, 2022).
The extent of practicing risk management in Jordanian commercial banks is high based on the Basel Accord. The arithmetic averages of the field ranged between (4.77 - 3.20), meaning that they ranged from strong to moderate. And item (5) “The Bank shall study and analyze the guarantees provided and their legality and adequacy before accepting the application for accreditation” got the highest average of (4.77), with a standard deviation of (.60). This indicates that Banks are based on the art of risk management, as everything that the bank accepts with greater risks has succeeded in achieving a greater amount of profits. Therefore, the most important element in risk management is to analyze the guarantees provided, their legitimacy and adequacy, before accepting the bank’s request for approval by specifying the guarantees, whereby the bank determines the guarantees. Describe them accurately, take precautions, and put in place controls and systems to confront them if they occur.

It is followed by clause (4) “The Bank shall lay down the rules for granting loans and the rules for obtaining information and documents which shall be available for granting such loans.” With a mean (4.62) and a standard deviation (.64). This indicates that banks are committed to managing the risks approved by the Basel Committee related to grants and loans, where the bank determines and publishes the conditions related to grants and loans. It faces a shortage of liquidity, so banks pay great attention to information, documents, how and to provide rules for granting loans, and this method contributes to reducing risks.

As for the item "a financial feasibility study for the client to determine the adequacy of his capital, as well as knowledge of his sources of income, and the expected profits from the project to ensure his ability to meet his obligations." in last place with mean (3.20) and standard deviation (1.54). This indicates that some banks may not be required to conduct a feasibility study, which consumes a great deal of time and effort, and take alternative measures to the feasibility study, such as developing policies and setting loan limits for a single customer and obligating him to documents for indebtedness.

**Results and Discussion Related to the Second Question**

Q.2. What are the techniques and principles of banking risk management applied by Jordanian commercial banks?

To answer this question, the arithmetic averages and standard deviations of the questionnaire items related to the banking risk management methods and techniques applied by Jordanian commercial banks were calculated, as shown in Table (2) below.
Table 2: Arithmetic means and standard deviations of the responses to “Banking Risk Management Techniques and Principles Applied by Jordanian Commercial Banks” arranged in descending order

<table>
<thead>
<tr>
<th>Order</th>
<th>Item</th>
<th>Mean</th>
<th>S.D</th>
<th>Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The bank discloses to a sufficient extent the components of the capital in accordance with the stipulations of the Basel agreements and their developments.</td>
<td>3.68</td>
<td>1.21</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>The Bank discloses sufficiently the methods and techniques it applies to assess risks.</td>
<td>3.48</td>
<td>1.35</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>The Bank adequately discloses in the published financial statements its risk assessment and strategy processes, management.</td>
<td>4.40</td>
<td>.93</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>The Department of Control and Risk Management is engaged in exchanging information between different banks, especially with regard to credit risks, to improve the risk management process.</td>
<td>3.26</td>
<td>1.45</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Banks have clear risk management systems and allow employees to view them</td>
<td>3.77</td>
<td>.101</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Ensuring the adequacy of the capital to face all the risks to which the bank is exposed.</td>
<td>4.47</td>
<td>.89</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>The Bank adequately discloses in the published financial statements the structure and volume of its own funds.</td>
<td>4.20</td>
<td>.96</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>The Central Bank's instructions for implementing the decisions of the Basel Committee usually take into account the protection of property rights.</td>
<td>3.86</td>
<td>1.08</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>The Bank measures market risk using the standard method</td>
<td>3.95</td>
<td>0.98</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>The bank has the necessary foundations and ingredients to implement modern methods for measuring credit risks, such as (SA, IRB).</td>
<td>3.59</td>
<td>1.12</td>
<td>8</td>
</tr>
<tr>
<td>The whole domain</td>
<td></td>
<td>3.80</td>
<td>1.09</td>
<td></td>
</tr>
</tbody>
</table>

Source: Developed by the researcher based on (Fatah et al., 2021; Hasen & Elnour, 2022).

It is clear from the previous table No. (3) that the arithmetic averages of the field ranged between (4.47 - 3.26), meaning that they ranged between strong and medium. Clause (6) "Ensure the adequacy of the capital to face all the risks that the bank is exposed to." The highest mean is (4.47), with a standard deviation of (89). This indicates that banks follow policies and procedures related to their capital to face any risks they may be exposed to, as the bank management sets a capital reserve that they use when necessary to solve problems that may face liquidity in them. Problems and risks within banks, and because it is the most used way to face risks.

It is followed by item (3), “The bank adequately discloses in the published financial statements the risk assessment and strategic management operations...” with a mean (4.40) and a standard deviation (.93). This indicates that all banks issue financial statements in the Amman Stock Exchange and their reports include risk assessment and administrative processes, where the Jordan Securities Commission imposes on banks to publish their own lists and reports, and this in turn complies with the standards of the Basel Committee, which emphasizes the need to
publish lists related to risks and increase the number of Li monitors banks and thus this helps to attract investors.

As for the item "The Department of Control and Risk Management is engaged in exchanging information between different banks, especially with regard to credit risks, to improve the risk management process", it ranked last with a mean of (3.26) and a standard deviation of (1.45). This indicates that some banks maintain their own risk management methods and techniques in order to maintain their competitive advantage in the market and attract a larger number of clients and investors.

Results and Discussion Related to Testing the Hypotheses

H0.1. The Jordanian commercial banks doesn’t applied banking risk management in accordance with the Basel Accords - at the statistical significance level of (α≤0.05).

Table 3: First Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Source: Statistical analysis results</th>
</tr>
</thead>
</table>

Based on the data in table (3), it should be noted that Jordanian commercial banks applied banking risk management in accordance with the Basel Accords. That was concluded because the significance value is 0.000. The latter value is statistically significant at the statistical significance level of (α≤0.05). That means that the first hypotheses is rejected.

H0.2. The techniques and principles of risk management applied by Jordanian commercial banks doesn’t consist with the Basel Accords - at the statistical significance level of (α≤0.05).
Based on the data in table (4), it should be noted that techniques and principles of risk management applied by Jordanian commercial banks are consistent with the Basel Accords. That was concluded because the significance value is 0.000. The latter value is statistically significant at the statistical significance level of (α≤0.05). That means that the second hypotheses is rejected.

CONCLUSION

The study aimed to identify the extent of practicing risk management in Jordanian commercial banks is high based on the Basel accord. It aimed to identify the risk management techniques and principles adopted by Jordanian commercial banks. It was found that the extent of practicing risk management in Jordanian commercial banks is high based on the Basel Accord. It was found that the risk management techniques and principles adopted by such banks include disclosing data about the banks’ funds in the published financial statements. It should be noted that the study’s results can’t be generalized because the researcher may reach different results when using another questionnaire or a different sample. The researcher recommends conducting studies about the extent of practicing risk management in the Jordanian Islamic banks. He recommends conducting studies about the extent of practicing risk management in Jordanian pharmaceutical companies.

RECOMMENDATIONS

In light of the researcher's findings, the recommendations were presented as follows:

1- More effort is devoted to the issue of managing all types of banking risks, both financial and operational, which helps them improve their performance and the results of their operations.
2- Establishing a risk department in commercial banks that is capable of accurately identifying risks by analyzing the data and information available to them, developing systems for reports and work plans for the various units, and following up on the level of compliance with them.

3- Strengthening banking supervision and emphasizing the need for banks to comply with the standards of the Basel Committee on capital adequacy and the principle of transparency.

4- The necessity for Jordanian banks and financial institutions to have advanced systems for assessing banking risks, ensuring that all types of risks are covered, and periodically reviewing these systems to ensure that they keep pace with the developments in the banking arena.

REFERENCES


