

Bank Governance Mechanisms' Effect on the Efficiency of Risk Management - A Case Study of Djelfa's Banking Agencies

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Received: 25/09/2024

Accepted: 03/12/2024

Abstract:

The goal of this research is to clarify how bank governance mechanisms affect the efficacy of risk management, through carrying out a field investigation on the specimen of banking institutions in Djelfa that is representative. Banking governance mechanisms' contribution to the efficacy of risk management was investigated using the approach of descriptive-analytical. The research findings indicate that risk management is significantly impacted by banking governance mechanisms. It also showed that the internal auditing process and the directors' board provided a statistically significant influence on risk management. Conversely, it was discovered that external auditing had no statistically meaningful impact on risk management. The investigation suggests that external audits be given more weight for assessing risk, expanding it to cover more aspects of risk beyond just financial review.

Key Words: Bank Governance Mechanisms, Risk Management Effectiveness, Field Study, Banking Agencies, Djelfa.

JEL Classification: D81, E59, G20, G28, G30, G32.

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1. Introduction

One of the major economic sectors that influence any nation's economic policy is the banking sector, notably in view of the market liberalization and current alterations to the worldwide economic climate. Globalization has contributed to opening up prospects for the flow of capital and enabled banks to invest in a variety of industries. As a result of this trend, banks are now more willing to take on more risks in an attempt to increase profits.

In this context, activating banking risk management has become an undeniable necessity for banks, as it has become a means of controlling these risks and achieving financial stability and sustainable success. In order to achieve this, they must adhere to the principles of governance and activate its mechanisms. Bank governance represents an integrated system that works to regulate all relations between the various parties in banks, encompassing the board of directors, executive staff, and shareholders, in order to make decisions that are necessary for the long-term viability of the business in question, achieving common interests, and preventing conflicts of interest.

The late 1980s witnessed a shift in the governance concepts in response to financial and economic difficulties, as well as the recent rise in financial and administrative corruption. These issues are having a greater impact on the banking sector than just businesses, because the 2008 financial crisis made the significance of banks' roles in these events much more apparent. In order to confront these banking challenges, thinking began on mechanisms to improve and control relations between the various parties, through continuous innovation in business and risk management strategies, and legislative and regulatory structures to protect the integrity of the banking sector. This strategy's goal is to strengthen financial transaction transparency and avert further financial crises.

We must realize that the banking sector operates in a complex environment dominated by uncertainty; it necessitates a range of risk management strategies and investing techniques. The important functions of internal auditing, external auditing, and the board of directors become apparent from this crucial beginning point in enabling the protocols that banks have implemented to handle the risks they encounter, with the aim of achieving their goals and ensuring their sustainability.

1.1. Study problem: Given the foregoing, the following primary issue can be brought up:

- What is the point to which risk management efficiency is improved by bank governance mechanisms?

The following sub-questions were developed using the main topic as a basis:

- A. Is the board of directors' impact on risk management statistically important at the significance level ($\alpha \leq 0.05$)?
- B. Does internal auditing have a major statistical impact on risk management at the significance level ($\alpha \leq 0.05$)?
- C. Does external auditing have a major statistical impact on risk management at the significance level ($\alpha \leq 0.05$)?

1.2. Study hypotheses: To answer the main problem, the basic hypothesis can be formulated:

- There is a statistically significant effect of bank governance mechanisms on risk management at the degree of significance ($\alpha \leq 0.05$).

To answer the sub-questions, the following sub-hypotheses were proposed:

1. The Board of Directors significantly influences managing risks at the significance level ($\alpha \leq 0.05$).
2. The statistical significance threshold ($\alpha \leq 0.05$) indicates that internal auditing contributes to risk management.
3. External auditing makes a statistically significant contribution to risk management at the significance level ($\alpha \leq 0.05$).

1.3. Relevance of the findings:

This research relevance is highlighted by its endeavor to clarify the significance of bank governance mechanisms on risk management effectiveness, which is indispensable at the present time to enhance economic stability and prevent the recurrence of financial crises in the future. Similarly, banking system governance and risk management constitute a pivotal topic that attracts the attention of researchers both locally and internationally.

The importance of bank governance lies in providing the necessary structure and framework to guarantee risk management is implemented in an efficient and long-lasting manner. This research relevance is consistent with its scope, which targets the banking sector, as it is considered a prominent sector due to its vital role in providing financing to various economic sectors.

1.4. Study objectives:

The study's main goal is to show how bank governance practices affect the efficiency of risk management.

The following sub-objectives can be accomplished to reach this goal:

- Improving the risk control and governance practices in banks.
- Demonstrating how crucial bank governance measures are to the success of risk management.
- Examining the relationship between risk management effectiveness and bank governance practices.
- Supplying suggestions for strengthening the function of bank governance mechanisms.

1.5. Study Methodology:

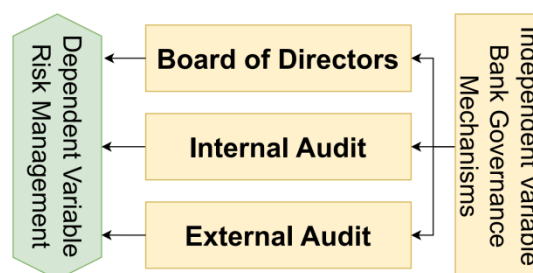
Taking into consideration the problem addressed and the hypotheses made via it, as well as the nature of the study and its goals to be achieved, the descriptive analytical technique was used to describe the research variables represented in the bank governance and risk management strategies.

The investigation subsequently focused on the applied aspect, examining the importance of the function that bank governance procedures perform in initiating risk management for the financial institutions that are the subject of the analysis.

A questionnaire instrument was used to collect the data, and both descriptive and inferential statistical methods were applied to the data analysis process. The statistical program SPSS was then used to examine the hypotheses.

1.6. Investigation Design:

Fig.1. Study Model



Source: Prepared by the researchers

1.7. Previous studies:

Study (Haddou Amel, 2021) titled "Governance Mechanisms in Banks and Financial Risk Management (The Case of Tunisian Banks)"

The goal of this investigation is to understand bank governance mechanisms and how they help lower sector risks and keep it safe from crises. Using a sample of ten Tunisian banks that were listed on the stock exchange between 2007 and 2016, the Board of Directors was selected as an internal governance mechanism to investigate the effects of its features on bank liquidity risks. The study's conclusions show that, in addition to size and capital, the presence of independent members and the dual roles of managing director and chairman of the board of directors and members representing institutional shareholders on the directors' board have a negative impact on the liquidity risk of banks. Additionally, the study showed that having representatives from the government and public institutions on the board of directors was positively correlated with liquidity risks.

Study (Yasser Taj Al-Sir, Asaad Mubarak, 2020) titled "The Role of Banking Governance in Risk Management in Banks a Field Study on a Sample of Sudanese Bank Branches in El-Obeid City"

The intent of this study is to examine the processes of banking governance and how they affect risk management in Sudanese banks. These mechanisms include the auditing committee, board of directors, and both internal and external auditors. The descriptive approach, which uses the information collection instrument, the questionnaire and the SPSS program to analyze the hypotheses, is the cornerstone of this investigation. The investigation's sample consisted of sixty-three bank accountants in El-Obeid City. The study's findings demonstrated a statistically meaningful correlation between governance mechanisms and banking risk management.

Study (Ben Thabet Alal, Amer Mohamed Al-Taher, 2018), titled: "The Role of Corporate Governance in Activating Banking Risk Management Study of a Sample of Algerian Banking Institutions"

Finding out how Algerian public and private banks view the importance of risk management is the goal of this study on corporate governance principles. In order to address the issue and determine whether the developed hypotheses were valid, the researcher used a descriptive and analytical technique in this study, given the data collection instrument was the questionnaire by distributing 100 questionnaires to managers and officials of 10 banking institutions distributed equally between public and private, and 82 questionnaires were accepted for statistical analysis and hypotheses testing using the SPSS software. The findings demonstrated that, in private

banks, the application of corporate governance mechanisms has a statistically significant impact on risk management perceptions, while in public banks, there is no such effect.

Study (Mariana & Vasile, 2020) titled "The Relationship between Board Characteristics and Risk Management of the Romanian Banking Sector"

This study aims to investigate the relationship between capital requirements, risk management, and bank board composition in Romania's banking sector. The study used a quantitative approach and statistical analysis with the SPSS software to investigate and identify the links between board composition and risk management. The study sample was selected by means of the banks that are constituents of the Romanian banking sector. The investigation's findings showed a direct link between Romanian banks' risk management practices and the makeup of their boards of directors. The nationality, gender, and educational attainment of the board members, as well as the board's size, were all found to have a substantial impact on risk management in the banking sector.

1.8. Scientific originality:

The investigation focuses on how crucial banking governance mechanisms are to turning on risk management. This was done through a field study on a sample of banking agencies in Djelfa, unlike previous studies that dealt with each mechanism separately. This study is also distinguished by its difference in spatial and temporal boundaries and the target sample.

2. Theoretical Framework of Bank Governance:

2.1. Governance Concept of Banks:

Given its significance as a mechanism that helps to change the banking sector and achieve economic development, the concept of bank governance has piqued the interest of numerous banking experts and practitioners. Although the term "bank governance" has been defined in a number of ways, the Basel Committee's definition is still the most thorough.

"The set of interactions between a bank's management, its board, its shareholders and other stakeholders, which provides the structure through which the bank's objectives are defined, the means of achieving those objectives and monitoring performance" is how the Basel Committee on Banking Supervision defines bank governance. It aids in deciding how decisions are made and how authority and responsibility are distributed (BCBS, 2015, p.1). According to the Economic Co-operation and Development Organization, good governance fosters investment, is built on accountability and openness, and promotes inclusivity and prosperity in society in addition to financial stability and corporate integrity. (OECD, 2017, p.7).

It should be noted here that the prevailing understanding is usually limited to governance as a mechanism to enhance control over the organization only. However, we find that control is part of the concept of governance, as it is divided into two main aspects. The first aspect is guidance, which refers to setting a general direction for the organization that includes all aspects of decision-making related to strategy and general vision. The second aspect is related to control and comes after determining the general direction, as the organization establishes a control system that ensures that it continues on the right track and does not deviate from the approved direction.

Corporate governance goes beyond the theoretical commitment to and interpretation of specific principles, to express an integrated organizational culture that aims to control relations between shareholders, management, and related parties (Kesri, 2021, p. 130).

In the same context, we find that Law No. 86-12 indicates that ensuring the loan is used as intended, keeping an eye on banks' and financial institutions' financial status, and taking all required steps to lower the risk of loan non-repayment are the goals of Algeria's banking system (Art 11, 1986, p. 1426); with a focus on taking into account the loan's terms and depositor rights (Art 12, 1986, p. 1426).

Here we must discuss the concept of governance in government-owned banks; it alludes to the several roles that the government plays in managing, controlling, and owning these banks concurrently. In this case, there must be a clear separation between these roles to achieve fair competition conditions with private individuals and prevent unjustified political meddling in bank management. The most important challenge is to ensure the implementation of sound governance practices.

Based on the above, bank governance can be defined as a set of strategies, policies, and regulations that the bank's board sets through guidance and oversight, so that they form the system by which the bank's objectives are determined and how to achieve them, while ensuring that the level of performance is monitored. It makes it possible to divide up all duties and responsibilities clearly, makes decision-making processes more transparent in a way that advances the interests of all parties involved and avoids conflicts of interest, and adds the structure and framework required to guarantee the efficient and long-lasting application of risk management.

2.2. Fundamentals of Banking Governance:

The following succinctly describes the 2015 Basel Committee on Banking Supervision (BCBS) Bank Governance Fundamentals (BCBS, 2015, pp.8-38):

- **Overall duties of the board:** The Board of Directors has the final say over the operation of the bank, so they can authorize and supervise senior management's application of the business environment, risk management strategy, governance structure, and strategic objectives of the business.
- **Qualifications and makeup of the board:** In along with possessing the skills required to stay in their current roles, board members must be able to use good judgment in leading or controlling the Bank's operations.
- **Composition and practices of the Board:** Governance frameworks and procedures that are suitable for the Board of Directors' work must be established, and establish the necessary means to follow these practices and review them periodically to ensure their continued effectiveness, such as forming committees emanating from it.
- **Upper management:** Senior Management is responsible for overseeing and directing the Board of Directors in order to ensure that the Bank's operations are carried out in accordance with the Board of Directors' authorized policies, including the business strategy, risk appetite framework, compensation, and other guidelines.
- **Group structure governance:** The Group's general management is supervised by the Board of Directors of the parent business (Bank's Directorate), which also oversees the creation and

implementation of an adequate and transparent governance framework for the Group's operations, structure, and risks. The Board of Directors and senior management have a responsibility to be aware of the organizational structure of the Bank Group as well as potential dangers.

- **Risk management function:** The Chief Risk Officer (CRO), who oversees and is accountable for the independent and efficient risk management function in banks, should have the necessary power and resources to oversee the department and maintain open lines of communication with the Directors Board.

- **Identification, tracking, and management of risks:** It is necessary for the bank and its affiliated entities to constantly detect, handle, and regulate risks. The evolution of the bank's risk management and internal control architecture must immediately take into account changes in the bank's risk profile as well as changes in the external risk environment surrounding the activities of the banking sector.

- **Risk communication:** Strong internal communication on risks, including reporting to the Board of Directors and senior management, is essential for an efficient risk management system at a bank.

- **Compliance:** The Board of Directors is in charge of overseeing the Bank's compliance risk management. The Bank's policies and procedures should develop and authorize a compliance function to identify, evaluate, monitor, report, and provide advice on compliance concerns.

- **Internal auditing:** The auditing process should assist the Board of Directors and upper management in advancing sound governance procedures and the Bank's long-term stability by offering the Board an objective guarantee.

- **Compensation:** The remuneration system is a crucial component of the governance and incentive framework. The board of directors and senior management uphold the bank's operating and risk-taking cultures and promote both appropriate risk-taking behavior and excellent performance.

- **Disclosure and transparency:** It is recommended that the bank provide shareholders, depositors, and other pertinent stakeholders with transparent information about its governance. This can be achieved by posting annual reports, official news releases, and details of the bank's product offers on the website.

- **Role of supervisors:** Supervisors have the responsibility of supervising and directing the governance of banks through comprehensive assessments and regular interactions with the boards of directors and top management. They should also share information about bank governance with other supervisors and request necessary improvements and corrective action.

2.3. Bank Governance Mechanisms: Bank governance has a set of mechanisms, whether internal or external, which together form an integrated system of guidance and monitoring based on the board of directors, shareholders, regulating authorities, and other mechanisms, including those described below:

2.3.1. Internal mechanisms: By having a defined structure that outlines the different roles and responsibilities, the bank is able to tighten control and oversight over the decisions made by the board of directors and top management.

• **Board of Directors:** At the forefront of internal procedures for bank governance is the Board of Directors, which oversees the company's operations and ensures that they are adequately supervised. As well as adhering to Basel Committee and Arab Committee for Banking Supervision directions, the Board is responsible for defining the Bank's governance policies. As stated by (ACBS, 2017, pp. 8-10), some of its responsibilities include:

- ✓ Creating an overall structure for the duties and obligations of the Board of Directors, with an emphasis on genuinely serving the Bank's interests.
- ✓ Ensuring that there are no conflicts of interest and that Board members are not affected by internal or external factors.
- ✓ Total monitoring of the Bank's financial stability, internal audit, and strategy for operations and activities.
- ✓ Establishing the framework for risk appetite in collaboration with the CRO and Executive Management, while ensuring its compatibility with the objectives, capital, financial plans, and remuneration policy, and disseminating it at all levels within the Bank.
- ✓ Preparing and monitoring the risk governance framework, developing an effective internal control system, and updating it regularly.
- ✓ Periodic review with the auditors to ensure that their work continues in a manner appropriate to the size and nature of the bank's operations.
- ✓ Making certain that the board members receive the required information from the executive management on time.
- ✓ Preparing the board of directors' reports and annual reports to shareholders and the Central Bank.
- ✓ Inviting shareholders to general assembly meetings and preparing agendas, ensuring fair treatment of shareholders, depositors and other stakeholders.
- ✓ Preserving the integrity of the bank's financial standing and its stellar standing with regulators.
- ✓ Disseminating the bank's values and code of professional conduct at all levels within the bank.

• **The Accounting Commission:** One of the most important instruments for the correct application of governance principles inside the bank is the Audit Committee, which enhances the effectiveness of the board's oversight of the bank's operations. This committee is permanent, answers to the board of directors, and has general responsibility for internal audit policies. It also prepares financial reports for the bank, manages the work of internal and external auditors and keeps in touch with them, and supervises the preparation of financial reports. In addition to doing research on the internal control system and writing a report with proposals and an assessment, it must efficiently coordinate and communicate with the risk council (ACBS, 2017, p. 25).

• **Internal Auditing:** The bank's third line of security is thought to be internal audits. Its goal is to provide reports on the effectiveness of the bank's operations, governance frameworks, and risk management in general to the Administrative Management, Auditing Committee, and Board of Directors. The reports include independent assurances. As long as this function is

given the necessary authority, capabilities, resources, and skills, it will be able to continuously assess the bank's risk governance framework, the efficiency of risk management and compliance, and the caliber of reports that are presented to the Executive Management and Board of Directors. It must also ask Executive Management to fix any associated issues as it sees fit (ACBS, 2017, p. 36).

Being one of the keys to institutional control, internal audit therefore assists the bank in achieving its objectives by using an objective method to assess and activate risk management mechanisms and the efficacy of control (Boufasa & Saeedani, 2016, p. 169).

- **Disclosure and transparency:** Disclosure means that banks are obligated to provide appropriate, reliable, comparable and understandable information in a timely manner, and it is reviewed by at least two auditors, so that investors can evaluate the performance of banks and make appropriate decisions to protect their investments (Al-Hawari, 2016, p. 741). As for transparency, it is the bank's provision of information and data related to its activities and making it available to shareholders and stakeholders, and providing the opportunity to view it for those who wish, except that which may negatively affect the bank's interests, as the bank has the right to keep this information confidential, provided that the available information reflects the bank's financial position (Al-Hawari, 2016, p. 741).

Therefore, it can be said that while transparency aims to achieve governance requirements during the process of preparing the annual reports to provide clear and comprehensive access to information, which helps the concerned parties understand how the bank manages risks and achieves its goals, disclosure aims to achieve governance requirements during the procedure of exporting annual reports to notify the concerned parties of important information that may affect their future decisions.

2.3.2. External mechanisms: These are mechanisms that exist outside the bank and seek to tighten monitoring and obtain assurances about the availability of practices that enhance the bank's governance and permanent safety.

- **Shareholders and the General Assembly:** The essence of effective governance is to protect shareholders and other stakeholders, ensuring their broader participation and effective oversight of the bank's management, in addition to facilitating the exercise of their rights (Al-Hawari, 2016, p. 746). In the case that shareholders disagree with the bank's position, they can play a significant role in holding the board members and the external auditors accountable as well as voicing their concerns through communication with the board of directors (ACBS, 2017, p. 17).

- **External Auditors:** The management of the bank and the external auditors must work cooperatively to meet the requirements of bank governance, and their relationship is marked by openness in terms of information sharing, the independence of the external auditors, and taking their opinions seriously when diagnosing errors (Boufasa & Saeedani, 2016, p. 171). According to Art 111 of the Monetary and Banking Law, every bank or financial institution, whether local or foreign, is required to appoint at least (2) external auditors registered in the National Chamber of external auditors according to specific conditions (Art 111, 2023, p. 19). External auditors seek, through their expertise in professional, ethical and behavioral standards

that contribute significantly to the application of governance principles, to express an impartial technical opinion and provide advice to their bank clients (ACBS, 2017, p. 6).

- **Central Bank:** As the regulatory body overseeing the banking and financial sector, the Central Bank of Algeria places bank governance at the top of its list of priorities. The Bank of Algeria's laws, rules, guidelines, and memos to banks and other financial institutions are regarded as the foundation for the banking and financial system's governance and are a significant part of the bank's continuous efforts to stay up to date with best practices across the globe.

We note that Monetary and Banking Law No. 23-09 issued on June 21, 2023, included within its folds many articles that are consistent with the guidelines of the Basel Committee, and also addressed many topics that contribute to supporting the trend towards governance of the banking and financial system, such as obligating banks and financial institutions to establish internal governance rules and an effective internal control system, as well as emphasizing the establishment of rules and standards for assessing and monitoring risks, publishing reports and disclosure, and rotating external auditors. The bill also establishes new committees, chief among them the Financial Stability Committee, which is in charge of crisis management and macro-prudential supervision (Monetary and Banking Law, 2023, pp. 16-23).

- **The Securities and Investments Organization and Monitoring Commission (COSOB):** The committee in question is a separate regulatory body that possesses both financial and legal independence. Legislative Decree No. 93-10 on May 23, 1993, as revised and supplemented, pertaining to the stock market, is what founded it. After proving they can provide adequate assurances about the kind and amount of their capital, their organization, their technical and financial resources, the background and standing of their managers and agents, and the safety of their clients' operations, stock exchange brokers are granted accreditation by COSOB (COSOB, 2024).

Given that banks in Algeria play the role of intermediaries in stock exchange operations, they will necessarily be subject to the regulations relating to the professional rules applicable to intermediaries in stock exchange transactions (IOB) (SGBV, 2024). Since the main objective of this body is to monitor the stock market and ensure its integrity, one of its tasks is to monitor the activities of intermediaries in stock exchange transactions and their compliance with the regulations intended to shield the market from any dishonest or unjust actions.

3. Theoretical framework of risk management:

3.1. Concept of banking risks and their management:

The idea of risk has existed for as long as there have been people, and they have had to deal with it in various ways. For example, it can be used to quantify the likelihood and severity of negative effects, or it can be used to express uncertainty about the results of decisions and actions, or it can be used to explain a range of hypothetical future situations (Maura, 2020, p. 44).

While banking risks are defined as "the state of uncertainty about recovering loaned capital or collecting expected future profits", Ben Rahmon Salim sees that these risks refer to "the possibility of the bank being exposed to unexpected and unplanned losses in addition to the fluctuation of the expected return on a specific investment, which usually results from

inefficient investment diversification; or lack of liquidity; or exceeding the bank's appetite for risk" (Ben Rahmon & Bouhafs, 2018, pp. 100-101).

It is given that risks of all kinds will always exist in human activity and cannot be completely avoided; instead, they can only be managed, or at worst, lessened. As a result, throughout time, businesses of all types and sizes have adopted strategies and instruments to control the possible risks to which they could be subjected while carrying out their activities. (Maura, 2020, p.44).

The Basel Committee on Banking Supervision defines risk management as "the procedures designed to guarantee that all significant risks and related clusters of risks are recognized, quantified, diminished, regulated, alleviated, and documented in a timely and thorough manner." (BCBS, 2015, p.2).

Based on the above, banking risk management can be defined as an integrated approach consisting of several steps including identifying risks; measuring and evaluating risks; developing strategies to control them; in addition to identifying and reporting risks by putting preventive measures into place, creating recurring reports that summarize the effectiveness of the management plan and the state of risks, and assigning the right staff members to handle the aforementioned tasks.

3.2. Risks Types: The most important types of risks that may arise in banks are (Al-Karasneh, 2010, pp. 37-42):

- **Credit Risk:** is the current or potential risk that may affect the bank's revenues and capital, resulting from the customer's failure to meet his obligations to the bank in a timely manner. Loans are considered one of the most important sources of lending risks, which we find in the bank's activities, whether on or off-balance sheet. Accordingly, the Board of Directors is responsible for approving and reviewing lending risk strategies in addition to the bank's lending policies. Senior management is also responsible for implementing these policies by creating an appropriate management team and establishing procedures to measure overall risks in order to ensure that loans are granted in a sound manner.
- **Liquidity Risk:** Current or future risks that have an impact on the bank's revenues and capital resulting from the bank's insufficient liquidity to meet its obligations when due without incurring unacceptable losses. Therefore, managing this type of risk requires the Board of Directors and senior management to take full responsibility for preparing comprehensive liquidity policies that take into account all of the bank's activities, and provide a system for measuring, monitoring and predicting liquidity risks.
- **Interest Rate Risk:** is the risk, either present or prospective, that results from changes in interest rates that go against the Bank's anticipated path and negatively affects the Bank's revenues and capital. Thus, trying to maintain levels that the Bank finds acceptable is the primary goal of interest rate risk management. As a result, the Board of Directors is in charge of comprehending the nature of this kind of risk and making sure that the management of the Bank takes all required steps to recognize, quantify, and track it.
- **Foreign Exchange Risk:** This is the risk that exists now and in future periods and could have an effect on the bank's capital and earnings due to unfavorable fluctuations in exchange rates. It represents the possibility of loss from the revaluation of a position taken in local currency against foreign currencies.

- **Operational Risk:** These are the risks brought on by inadequate systems and personnel, lax internal controls, or unfavorable outside conditions. That is, they are the risks of loss brought on by the potential for insufficient information systems, technological malfunctions, system violations, embezzlement, currency forgeries, and counterfeiting, all of which can result in unanticipated losses. The creation of a clear organizational structure outlining the authorities, functions, and accountabilities of each internal control and risk management component is arguably the most crucial task for the board of directors and its senior management when handling this kind of situation.

3.3. Risk management mechanisms: Banking risk management includes the following main mechanisms (Al-Karasneh, 2010, pp. 42-43):

- **Risk Identification:** As was previously noted, there are many risks associated with all bank activities. The first step in efficiently managing these risks is to identify them. As a result, risk identification needs to be a constant process, and everyone in the bank needs to be aware of how big of an impact these risks might have.

- **Risk Measurement:** After identifying the risks associated with an activity, we find ourselves in the second step, which is measuring these risks quantitatively and qualitatively, where we should focus on their three dimensions: size, duration, and likelihood of occurrence. Next, hazards are categorized into three categories: crucial, important, and insignificant. The step of comparing the risk assessment with the bank's implemented measures follows the completion of the risk analysis, in order to reach, through this assessment, decisions regarding important risks (Boufasa & Saidani, 2016, p. 164). Accordingly, accurate measurement that is done at the right time is of great importance to the entire risk management process.

- **Risk Control:** This is done by setting specific standards, policies and procedures that clarify responsibilities and authorities. Management is tasked with balancing the expected return from risks and the costs required controlling them. Risk control basically includes three main methods: avoidance or setting limits on some activities, or eliminating the impact of risks through insurance.

- **Risk Monitoring:** Banks must have dynamic and comprehensive information systems that enable them to accurately identify and measure risks, so that they have the ability to monitor significant changes in the level of risks they may face. Full commitment to the principle of communicating risks is demonstrated by developing reporting systems in the bank, which highlights its readiness to deal with these changes.

4. Method and procedures:

4.1. Community of study and specimen: The investigations targeted research community is made up of managers, department heads, internal and external auditors, and some workers of Djelfa financial organizations, which number seven agencies (BNA, BEA, BDL, CPA, CNEP, BADR, and AGB). As for the selection method, a simple random sample was used, which one of the random is sampling methods, assuming that each banking agency has 20 statistics that can answer the questionnaire, so that by multiplying 20 by 7 agencies we get the estimated community size of 140 statistics, in order to make the community limited. Regarding sample size calculation, the following formula must be used in the event of an infinite community. (Glenn D, 2013, p.3):

$$n_0 = \frac{z^2 \times p \times q}{e^2} = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} = 385$$

Where:

z value = 1.96; e: sampling error = 0.05; p: likelihood of occurrence = 0.5;

q: likelihood of non-occurrence = (p-1) = 0.5

Then, we calculate the sample size according to the finite population, using the following formula (Glenn D, 2013, p.4):

$$n = \frac{n_0}{1 + \frac{(n_0-1)}{N}} = \frac{385}{1 + \frac{(385-1)}{140}} = \frac{385}{3.74} = 102$$

Where:

N: population size; n: sample size in case of finite population; n₀: sample size in case of infinite population.

4.2. Study tool: The questionnaire was the only reliable source of data used in this study about the function of banking governance mechanisms in triggering risk management in banks. Following the data gathering procedure, it was discovered that 100 individuals had completed the questionnaire.

• **Study variables:** The foundation of the study is articulating the effects of the factors that make up the independent variable "bank governance mechanisms," which is represented by the board of directors, internal audit, and external audit, on the dependent variable, "risk management."

• **Study tool design:** All of the research variables were covered by the questionnaire, which was created with its terms, constructed using the theoretical framework. The following are the items on the questionnaire:

- The first Section: It contained the study sample's personal information.
- The second Section: It has fifteen phrases and is titled "Bank Governance Mechanisms".
- The third Section: Banking risk management, and it contains 7 phrases.

To answer the phrases of the second and third Section, the sample members were asked to give a degree of agreement to each of the 22 phrases based on the five-point Likert scale, as shown in the table below:

Table 1. Five-point Likert scale

Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Degree	5	4	3	2	1

Source: Prepared by the researchers

4.3. Approach to statistical analysis employed: Many appropriate statistical testing and procedures were performed out applying the Statistical Package for the Social Sciences (SPSS) application in order to meet the study's purposes and analyze the data obtained. These tests and approaches were chosen in light of the field study's objectives, suggested hypotheses, and research design. Because the five-point Likert scale was used, the variables and data were coded before being loaded into the statistical software, the range (5-1=4) was calculated, which was divided by the number of options to determine the category length (5/4=0.8), and thus the category length was determined as follows:

Table 2. Determining the category length in the five-point Likert scale

Adoption level	Mean	
	Maximum	Minimum
Very low	1,80	1,00
Low	2,60	1,81
Medium	3,40	2,61
High	4,20	3,41
Very high	5,00	4,21

Source: Prepared by the researchers

To make the coding procedure easier, the questionnaire responses were transcribed into the (Excel) program. The data was then transferred to the (SPSS v26) program. The following is a set of statistical methods that were used in the analysis:

- Frequencies and percentages to identify the main characteristics of the study sample;
- The stability of the measuring instrument using the Cronbach's alpha test;
- To ascertain the extent to which the independent factors impact the dependent variable, use simple regression;
- To gauge how closely the independent and dependent variables are related, the correlation factor (R) was utilized;
- The degree to which the independent variable influences the dependent variable is indicated by the factor of determination (R-square).

4.4. Validity and reliability of the study tool: Cronbach's alpha factor was utilized for confirming the study tool's reliability, which suggests that the findings will be nearly identical if the same questionnaire is given to the same people again. The questionnaire was arbitrated by a group of specialists prior to distribution.

• **Validity of the arbitrators:** The questionnaire was displayed in its initial form to a group of arbitrators to express their opinions on the questionnaire's phrases, its sections, its general form, and the included scales. After taking notes and directions, which were related to rephrasing some phrases, deleting some phrases, merging two phrases, and adding some phrases, the questionnaire was extracted into its final form that can be distributed.

• **Stability of the measurement tool:** Cronbach's alpha factor was calculated as an indicator to test the stability of the measurement tool, and we obtained the results shown in the table below:

Table 3. Cronbach's alpha factor

Variables	Cronbach's alpha	Number of phrases	Variables	Cronbach's alpha	Number of phrases
Board of Directors	0.781	5	Bank Governance Mechanisms	0.867	15
Internal Audit	0.729	5	Risk Management	0.810	7
External Audit	0.733	5	the Questionnaire	0.865	22

Source: Written by the researchers, using the SPSS v26 software's outputs

Reading the table above, we can see that the study's overall Cronbach's alpha factor was 0.865, which is a great value because it is higher than 0.7 and shows that the measurement tool has a high degree of stability and is open to research and analysis.

5. Study results (analysis and discussion):

5.1. Analysis of personal data: Finding the frequencies and percentages of the categories that comprise the study sample is necessary for the examination of its features, depending on the personal data required to be filled out in the questionnaire, which is represented in each of: academic qualification, job title, and professional experience. As displayed in the subsequent table:

Table 4. Characteristics of the study sample

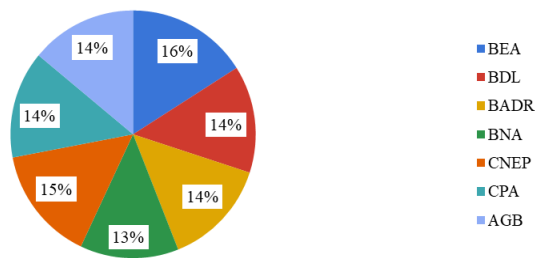
Academic qualification			Job title			Professional experience		
	Frequency	%		Frequency	%		Frequency	%
PhD	4	4%	Agency Manager	7	7%	Less than 5 years	37	37%
Master	80	80%	Deputy Director	7	7%	5 to less than 10 years	35	35%
License	16	16%	head of department	28	28%	10 to less than 15 years	17	17%
			Internal Audit	7	7%	Over 15 years	11	11%
			External Audit	7	7%			
			Employee	44	44%			
Total	100	100%	Total	100	100%	Total	100	100%

Source: Written by the researchers, using the SPSS v26 software's outputs

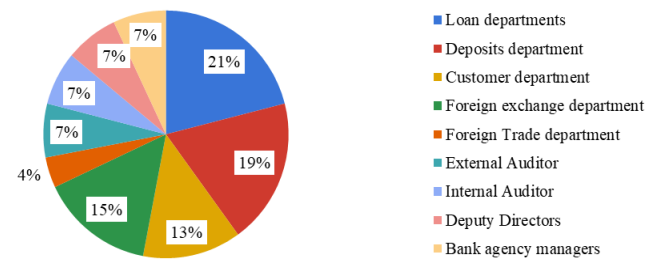
From the above table, it is clear that 80% of the study sample members hold a master's degree, while 16% hold a License's degree, and the rest hold a PhD degree. As for the job title, it appears that 44% of the sample members are employees, while 28% of them are heads of departments. While each category of agency managers, their deputies, internal auditors, and external auditors constitute 7% of the sample. As for professional experience, we find that 37% of the sample members have less than five years of experience, 35% have experience ranging from five to ten years, while 17% have experience ranging from ten to fifteen years, and the rest, at a rate of 11%, have more than fifteen years of experience.

Fig.2. Distribution of sample members

Number of participants by bank agency name



Number of participants by department name



Source: Prepared by the researchers, using Excel

5.2. Hypothesis Testing:

• **Testing and discussing the main hypothesis (H1):** This states that « there is a statistically significant effect of bank governance mechanisms on risk management at the significance level ($\alpha \leq 0.05$) ». We employed the simple regression analysis test and the Pearson correlation factor to evaluate the validity of this hypothesis, and the outcomes displayed in the table below:

Table 5. Results of testing the main hypothesis (H1)

Dependent variable: risk management											
	B	Standard error	Standardized Beta factors		t	Sig.	R-square	R	F	Sig.	VIF
Constant	3.071	0.328	/		9.361	0.000	0.073	0.270	7.703	0.007	/
Bank governance mechanisms	0.231	0.083	0.270		2.775	0.007					1.000
Source of variance		Sum of squares		ddl	Medium square			F		Sig.	
Regression		0.790		1	0.790			7.703		0.007	
from Student		10.055		98	0.103			/		/	
Total		10.846		99	/			/		/	
Mahalanobis Distance				Minimum 0.000				Maximum 4.324			

Source: Composed by the investigators, using the SPSS v26 software's outputs

We note from Table No. (05) that there is a statistically significant effect of bank governance mechanisms on risk management, as the correlation factor R reached a value of 0.270, which is statistically significant at a significance level ($\text{Sig} = 0.003$) less than 0.05, indicating the existence of a positive direct correlation between bank governance mechanisms and risk management. We also note that the factor of determination R^2 reached 0.073, meaning that bank governance mechanisms affect risk management by 7.3%, while the remaining percentage is due to other factors outside the model, and the significance level is less than 0.05. In addition, we note that the results of the Mahalanobis distance test prove that the data do not contain extreme values since all of its values are less than 15. This leads us to accept the main hypothesis (H1), and rejects its null hypothesis, which states that « there is no statistically significant effect of bank governance mechanisms on risk management at the significance level ($\alpha \leq 0.05$) ».

• **Testing and discussing the first sub-hypothesis (H_{1-1}):** The statement indicates that "at the significance level ($\alpha \leq 0.05$), the Board of Directors has a statistically significant effect

on risk management." The outcomes of our evaluation of the validity of this hypothesis using the basic regression analysis test and the Pearson correlation factor are shown in the following table:

Table 6. Results of testing the first sub-hypothesis (H₁₋₁)

Dependent variable: risk management										
	B	Standard error	Standardized Beta factors	t	Sig.	R-square	R	F	p	VIF
Constant	3.115	0.225	/	13.817	0.00	0.132	0.363	14.910	0.000	/
Board of Directors	0.227	0.059	0.363	3.861	0.00					1.000
Source of variance		Sum of squares		ddl	Medium square		F		Sig.	
Regression		1.432		1	1.432		14.910		0.000	
from Student		9.414		98	0.096		/		/	
Total		10.846		99	/		/		/	
Mahalanobis Distance				Minimum 0.000			Maximum 5.102			

Source: Written by the researchers, using the SPSS v26 software's outputs

The Board of Directors has a highly significant effect on risk management, as evidenced by Table No. 06, where the correlation factor R reached a value of 0.363, which is statistically significant at a significance level (Sig = 0.000) less than 0.05. This suggests that the Board of Directors and banking risk management have a positive direct correlation. We also note that the factor of determination R² reached 0.132, meaning that the Board of Directors affects risk management by 13.2%, while the remaining percentage is due to other factors outside the model, and the significance level is less than 0.05. In addition, we note that the results of the Mahalanobis distance test prove that the data does not contain extreme values since all its values are less than 15.

Therefore, the null hypothesis, "there is no statistically significant effect of the Board of Directors on risk management at the significance level ($\alpha \leq 0.05$)" is rejected and the first sub-hypothesis (H₁₋₁) is accepted.

• **Testing and discussing the second sub-hypothesis (H₁₋₂):** This states that « there is a statistically significant effect of internal audit on risk management at the significance level ($\alpha \leq 0.05$) ». Our requests employed the simple regression analysis test and the Pearson correlation factor to evaluate the validity of this hypothesis, and the results are shown in the table below:

Table 7. Results of testing the second sub-hypothesis (H₁₋₂)

Dependent variable: risk management										
	B	Standard error	Standardized Beta factors	t	Sig.	R-square	R	F	p	VIF
Constant	3.343	0.270	/	12.393	0.00	0.054	0.232	5.598	0.020	/
Internal Audit	0.163	0.069	0.232	2.366	0.02					1.000
Source of variance		Sum of squares		ddl	Medium square		F		Sig.	
Regression		0.586		1	0.586		5.598		0.020	
from Student		10.260		98	0.105		/		/	
Total		10.846		99	/		/		/	
Mahalanobis Distance				Minimum 0.032			Maximum 7.414			

Source: Written by the researchers, using the SPSS v26 software's outputs

The correlation factor R attained a value of 0.232, which is statistically significant at a significance level (Sig = 0.010) less than 0.05, indicating that there is a statistically significant influence of internal audit on risk management, as we can see from Table No. (07), which indicates the existence of a positive direct correlation between internal audit and banking risk management. We also note that the factor of determination R² reached 0.054, meaning that internal audit affects risk management by 5.4%, while the remaining percentage is due to other factors outside the model, and the significance level is less than 0.05. In addition, we note that the results of the Mahalanobis distance test prove that the data does not contain extreme values since all its values are less than 15.

Therefore, our team rejected the null hypothesis, which claims that « there is no statistically significant influence of internal audit on risk management at the significance level ($\alpha \leq 0.05$) » and accept the second sub-hypothesis (H₁₋₂).

• **Testing and discussing the third sub-hypothesis (H₁₋₃):** According to this, "at the significance value ($\alpha \leq 0.05$), there is a statistically significant effect of external audit on risk management." The findings of applying the Pearson correlation factor and the simple regression analysis test to assess the validity of the hypothesis are displayed in the following table:

Table 8. Results of testing the third sub-hypothesis (H₁₋₃)

Dependent variable: risk management										
	B	Standard error	Standardized Beta factors	t	Sig.	R-square	R	F	Sig.	VIF
Constant	3.868	0.363	/	10.665	0.000	0.001	0.031	0.092	0.763	/
External Audit	0.027	0.088	0.31	0.303	0.763					1.000
Source of variance		Sum of squares		ddl	Medium square		F		Sig.	
Regression		0.010		1	0.010		0.092		0.763	
from Student		10.836		98	0.111		/		/	
Total		10.846		99	/		/		/	
Mahalanobis Distance				Minimum 0.064			Maximum 5.566			

Source: Written by the researchers, using the SPSS v26 software's outputs

We note from Table No. (08) that there is no statistically significant effect of external audit on risk management, given that the correlation factor R reached a value of 0.031, which is not statistically significant at a significance level (Sig = 0.381) greater than 0.05, which indicates that there is no correlation between external audit and risk management. Since the significance level is greater than 0.05, We conclude that there is no statistically significant effect of external auditing on risk management at the significance level ($\alpha \leq 0.05$) and reject the third sub-hypothesis (H₁₋₃).

5.3. Results discussion:

One of the most significant subjects of interest for academics and sector experts in the banking field is this study, as it aims to understand the positive effects that may result from adopting banking governance practices on banking risk management. The statistical results indicate a statistically significant impact of governance mechanisms, such as the board of directors and internal audit, in activating banking risk management. This highlights the importance of effective oversight of financial and credit decisions.

The outcomes demonstrate that a large percentage of participants believe that the board of directors sets a comprehensive risk management strategy, which enhances its role as a maker of strategic decisions related to controlling risks and determining policies that ensure their sound management. Furthermore, the study demonstrated the importance of internal auditing in assessing the efficacy of the internal control system, since most sample participants thought that internal auditing, as the third line of defense, helped to ensure the effectiveness of risk-related operations.

However, the field results show that there is no statistically significant impact of external auditing on banking risk management, which may be explained by the focus of external auditing on reviewing financial statements rather than evaluating risk strategies, or that its impact is less clear compared to internal auditing.

The study also shows that banks rely on continuous mechanisms to assess risks using qualitative and quantitative analyses, which reflects the importance of continuous assessment of risks and their classification according to priority. It emphasizes that banks' organizational structures are designed to ensure comprehensive and systematic monitoring and control of risks. Upon examination of the data, it is evident that internal audit and the board of directors are important factors in triggering risk management, with external audit having little effect.

6. CONCLUSION

In conclusion, it can be said that bank governance mechanisms play a fundamental role in enhancing financial stability, improving transparency and assuming responsibility, and that their adoption of banking governance principles may contribute to enhancing the effectiveness of risk management and increasing trust between banks and stakeholders.

Main results:

- At the significance level ($\alpha \leq 0.05$), bank governance mechanisms have a statistically significant effect on risk management.
- Statistically speaking, at the significance degree ($\alpha \leq 0.05$), the board of directors has an influence on risk management.
- To a statistical important degree ($\alpha \leq 0.05$), auditing internal influences the management of risks.
- There is no statistically noteworthy effect of external auditing on risk management at the significance degree ($\alpha \leq 0.05$).

Recommendations:

- Improving the function of external audit in conducting a more thorough risk assessment, and expanding it to include more aspects related to risks, not just financial auditing.
- Increasing investment in training board members to manage risks more effectively, especially with regard to hiring qualified people in this field.
- Developing quantitative and qualitative analysis tools to assess risks more accurately and effectively, which contributes to improving risk management.
- Strengthening communication between external auditors and the banking committee to increase transparency and provide accurate reports on risk management.
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7. Bibliography List:

1. Books :

- BCBS (2015), Guidelines Corporate governance principles for banks, Bank for International Settlements, Basel, Switzerland.
- OECD (2017), G20/OECD Principles of Corporate Governance (Arabic version), OECD Publishing, Paris, France.
- Maura, L. T. (2020), Risk in Banking Developing a Knowledge Risk Management Framework for Cooperative Credit Banks, Palgrave macmillan, UK.
- Glenn D, I. (2013), Determining Sample Size, Institute of Food and Agricultural Sciences (IFAS), University of Florida, Florida, USA.
- Al-Karasneh, I. (2010), Basic and Contemporary Frameworks for Banking Supervision and Risk Management, Arab Monetary Fund, Abu Dhabi, UAE.
- ACBS (2017), Principles of Governance of Banking Institutions, Arab Committee on Banking Supervision, Arab Monetary Fund, Abu Dhabi, UAE.
- Monetary and Banking Law (2023), Law No. 23-09 of 21/06/2023 containing the Monetary and Banking Law, Official Journal of the Algerian Republic, Issue 43, Algeria.
- Art. 11 (1986), law No. 86-12 of 19/08/1986 relating to the banking and credit system, Official Journal of the Algerian Republic, Issue 34, Algeria.
- Art. 12 (1986), law No. 86-12 of 19/08/1986 relating to the banking and credit system, Official Journal of the Algerian Republic, Issue 34, Algeria.

2. Journal article :

- Al-Hawari, N. M. Y. (2016), The role of governance mechanisms in controlling banking risks, Scientific Journal of Economics and Trade, Egypt, 46(4).
- Boufasa S. & Saeedani R. (2016), Governance of the banking sector as an approach to activating risk management, Journal of Arab Research and Studies, Egypt, 42(64).
- Kesri Saad (2021), the adoption and implementation of corporate governance concepts by banking institutions, Journal of Economic Studies, Algeria, 15(2).
- Ben Rahmon S. & Bouhafs S. (2018), Theoretical foundations of banking governance and its role as a mechanism for managing banking risks, Journal of Banking Financial Economics and Business Administration, Algeria, 7(1).

3. Internet websites:

- COSOB (2024), Les Intermédiaires en Opérations de Bourse (IOB), Commission d'organisation et de Surveillance des Opérations de Bourse, <https://www.cosob.org/iob/> (consulted on 07/03/2024).
- SGBV (2024), Les Intermédiaires en Opérations de Bourse (IOB), La Bourse d'Alger, <https://www.sgbv.dz/ar/?page=rubrique&mod=154> (consulted on 07/03/2024).