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A Systematic Review of the Literature on Bank Credit Risk Management in MENA Countries: Evolutions, Challenges, and Emerging Paradigms

Zaynab HJOUJI
Private University of Marrakech, Laboratory of Management and Economic and Social Sciences, Marrakech, Morocco.

Ziad BOUSRARAF
Sidi Mohamed Ben Abdellah University, Interdisciplinary Research Laboratory in Economics, Finance and Organizational Management, Fez, Morocco.

Meriem MELGHAGH
Private University of Marrakech, Laboratory of Management and Economic and Social Sciences, Marrakech, Morocco.

Abstract. This systematic literature review explores the evolution of bank credit risk management in the Middle East and North Africa (MENA) region during the 2020-2025 period. Through an indepth analysis of recent academic literature, we identify key research themes, methodological approaches, and emerging trends shaping credit risk practices in the region. Our review covers more than 50 peer-reviewed studies addressing the conventional and Islamic banking sectors, regulatory frameworks, the impact of the COVID-19 pandemic, fintech innovations, and machine learning applications. We employ a systematic review methodology compliant with PRISMA guidelines to ensure reproducibility and rigor. The main findings reveal: (1) increased use of advanced risk modeling techniques in the wake of the pandemic; (2) significant heterogeneity in credit risk profiles across different sub-regions of the MENA region; (3) the growing integration of digital technologies into risk assessment; and (4) persistent challenges related to non-performing loans in oil-dependent economies. We identify research gaps regarding longitudinal studies, cross-country analyses, and the intersection between climate risk and credit risk. This review provides a comprehensive foundation for researchers, practitioners, and policymakers seeking to understand contemporary credit risk management in the MENA banking sector.
Keywords: *MENA; Banking sector; Machine learning; Credit risk management; Islamic banking; Fintech; Climate risk.*

1. Introduction

a. Background and Context

The Middle East and North Africa (MENA) region represents a highly heterogeneous banking environment characterized by significant differences in economic structures, financial development levels, institutional quality, and regulatory frameworks. Comprising more than twenty countries, the region encompasses both hydrocarbon-dependent economies and more diversified markets, resulting in varying credit risk exposures and banking sector dynamics. Consequently, the MENA region provides a particularly relevant setting for examining contemporary credit risk management practices.

Between 2020 and 2025, the MENA banking sector experienced profound transformations driven by several major developments. The COVID-19 pandemic generated unprecedented disruptions in

economic activity and borrower repayment capacity, while fluctuations in oil prices affected the financial stability of many regional economies. At the same time, the accelerated adoption of digital banking technologies, fintech innovations, and data-driven risk assessment tools reshaped traditional credit evaluation processes. These developments occurred alongside the progressive implementation of Basel III regulatory requirements, further transforming the risk management landscape of banking institutions throughout the region.

Credit risk remains the dominant source of vulnerability for banking institutions operating within heterogeneous regulatory and macroeconomic environments across the MENA region. Given the central role of lending activities in bank business models, effective credit risk management is essential for preserving financial stability, maintaining profitability, and ensuring the resilience of banking systems. The region presents unique challenges due to its economic dependence on strategic sectors such as hydrocarbons, the coexistence of conventional and Islamic banking systems, and the varying effectiveness of legal and institutional mechanisms governing credit recovery and borrower protection.

b. Research Motivation

Despite the growing body of research on bank credit risk management in the MENA region, the existing literature remains fragmented across several independent research domains. Recent studies have separately examined Basel III implementation, fintech adoption, machine learning applications, Islamic banking resilience, the effects of the COVID-19 pandemic, and emerging climate-related financial risks. However, to the best of our knowledge, no recent systematic literature review has simultaneously synthesized these six dimensions within a unified analytical framework covering the MENA region during the 2020–2025 period. Existing reviews generally focus on individual topics, specific countries, or isolated banking models, thereby limiting a comprehensive understanding of how these interconnected transformations collectively reshape credit risk management practices. This study addresses this gap by providing an integrated and systematic synthesis of the literature at the intersection of Basel III regulation, fintech innovation, machine learning adoption, Islamic banking, COVID-19-related disruptions, and climate risk challenges in MENA banking systems.

c. Research Objectives

This study has four objectives:

- Mapping the literature landscape: Review all the existing research on credit risk management in banks in the Middle East and North Africa between 2020 and 2025.
- Synthesizing methodological approaches: Analyze the methods used by researchers, including the data and statistics used, the software employed, and the methods of comparison.
- Identifying factors influencing credit risk in these banks, such as the economic climate, the banks themselves, applicable regulations, and new technologies.
- Highlight research gaps: Identify under-explored areas and propose avenues for further research to deepen our understanding of credit risk management in the Middle East and North Africa.

d. Contributions

This study contributes to the literature at four complementary levels. Theoretically, it develops an integrated understanding of credit risk management by connecting previously fragmented research streams, including Basel III regulation, fintech, machine learning, Islamic banking, COVID-19 impacts, and climate-related risks. Methodologically, it applies a PRISMA-based systematic review framework and proposes a structured thematic classification of the literature into seven dominant research streams. From a managerial perspective, the review identifies best practices that can support banking institutions in strengthening risk governance and technological adaptation. Finally, from a regulatory perspective, the findings provide insights for policymakers regarding supervisory harmonization, Basel III implementation, and the integration of emerging climate-related financial risks into banking regulation.

2. Methodology

a. Research Framework

This study is based on a method that involves reviewing what other authors have written on a given topic. It adheres to the guidelines established by the "Preferred Reporting Items for Systematic Reviews and Meta-Analyses" (PRISMA), which were presented by Page and other authors in 2021. Systematic reviews are more reliable than reviews that simply tell a story, as they use reproducible steps to identify and select the items to be examined, and then to synthesize the information. This reduces errors and makes the results more reliable.

b. Search Strategy

A comprehensible literature search was carried out using several major academic databases, including Google Scholar, Scopus, Web of Science, and EconLit. The search process was based on a structured combination of keywords and Boolean operators organized around three main conceptual categories, as illustrated in the following table.

Table 1: Conceptual Domains and Search Keywords

Category 1	*Category 2*	*Category 3*
Focused on the geographical scope and included terms such as "MENA", "Middle East", "North Africa", "Gulf Cooperation Council", "GCC", as well as the names of individual countries within the region.	Targeted the main research topic and incorporated keywords related to credit risk, including "Credit risk management", "Default risk", "Non-performing loans (NPLs)", "Loan loss provisions", and "Impairment".	Referred to the banking and the financial sector, using terms such as "Bank", "Banking", "Financial Institution", "Islamic Bank", and "Commercial Bank"

These different categories were combined using the Boolean operator "AND," while related terms within the same category were linked using the "OR" operator to broaden the scope of the search and ensure the inclusion of relevant studies. To account for the most recent developments in this field, this review focused exclusively on publications released between January 2020 and May 2025.

c. Inclusion and Exclusion Criteria

To ensure that the studies we selected were of high quality and relevant, we established specific guidelines regarding inclusion and exclusion criteria during our review. We applied these guidelines throughout our analysis. Studies had to meet these criteria to be considered.

We reviewed studies that met the following criteria:

- The studies were published in peer-reviewed journals or working paper series
- The studies focused on credit risk in the banking sector of the MENA region
- The studies provided information or theoretical insights
- The studies were published between 2020 and 2025
- The studies were written in English or French

We excluded studies that met the following criteria:

- Studies focusing on institutions other than banks, such as insurance companies or leasing firms that do not focus on banking activities
- Reports that merely described facts without analyzing them
- Studies published more than once
- Studies covering only the period prior to 2020 and which are no longer relevant today

Credit risk in the MENA region's banking sector was our primary focus; therefore, we ensured that we included only studies addressing credit risk in this sector.

d. Data Extraction and Synthesis

For each selected study, we extracted information on various aspects. These include:

- Bibliographic references
- Research objectives
- Characteristics of the study participants
- The methodology used
- The results obtained
- Implications for credit risk management.

We used an analytical method to identify trends common to all the studies. We developed a framework to organize our findings. We grouped them according to research topic. This allowed us to better understand the research on credit risk management.

Following the data extraction process, a thematic synthesis was conducted to identify the dominant research areas within the selected literature. The analysis relied on manual coding of each study according to its primary research objective, theoretical focus, and empirical contribution. Both deductive and inductive approaches were employed. Initially, broad analytical categories were established based on key themes frequently discussed in the credit risk management literature. Subsequently, an inductive examination of the selected studies enabled the emergence of additional themes reflecting recent developments in the MENA banking sector. This iterative process resulted in the identification of seven major literature streams, which are presented and discussed in the Results section. These streams were retained because they collectively captured the most recurrent and influential research directions observed across the reviewed studies.

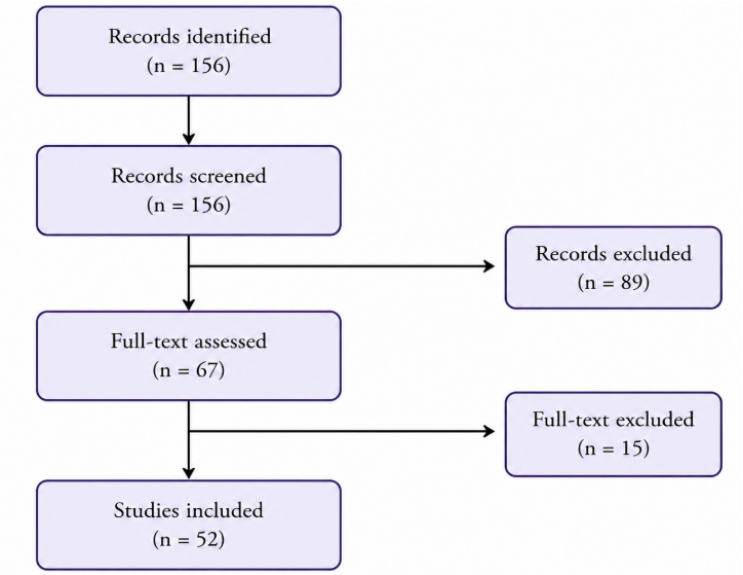
3. Results : Literature streams analysis

a. Overview of the Literature Corpus

The literature search initially identified 156 potentially relevant publications. After applying the predefined inclusion and exclusion criteria, 52 studies were retained for final review and analysis. The various stages of the selection process are summarized in Figure 1 using the PRISMA flow diagram.

Following the thematic synthesis described in the methodology section, the analysis of the selected studies led to the identification of seven major literature streams that structure the contemporary research landscape on credit risk management in the MENA banking sector. These streams emerged from the thematic coding of the reviewed studies and reflect the principal research directions developed between 2020 and 2025. Collectively, they provide a comprehensive overview of the evolving challenges, regulatory developments, technological innovations, and risk management practices shaping the banking industry in the region. The following sections present and discuss each stream in detail.

Figure 1: PRISMA Flow Diagram for Study Selection



b. Stream 1 : Credit risk determinants and banks performance

Numerous studies examine the relationship between credit risk and bank performance in the MENA region (Harb et al.,2023; Almualla and Al Gasaymeh, 2023; Youssef et al., 2022).

Table 2 below summarizes the key findings from these studies on credit risk and bank performance.

Table 2: Summary of Credit Risk and Bank Performance Studies

Study	*Sample*	*Key Variables*	*Main Findings*
Harb et al. (2023)	89 banks operating in the MENA region	Credit risk, Liquidity risk, ROA, ROE	The study demonstrates that increased credit risk adversely influences both financial profitability indicators and market based bank performance
Almualla and Al Gasaymeh (2023)	71 MENA banks	NPL ratio, Risk weighted assets	Findings reveal that elevated levels of credit risk are associated with a substantial decline in banking profitability
Youssef et al. (2022)	45 banks	Loan loss provisions, Efficiency	The authors show that deteriorating credit quality negatively affects bank performance through lower efficiency levels.
Wang and Luo (2020)	279 banks	Oil price fluctuations, credit risk	Results indicate that instability in oil prices significantly contributes to higher levels of bank credit risk.

Research consistently shows an inverse relationship between credit risk and indicators of bank performance. Harb et al. (2023) analyze 89 banks in 13 countries in the MENA region and find that the management of liquidity risk and credit risk has a significant impact on both accounting and market-based performance measures. Their estimates using the generalized method of moments (GMM) reveal that higher credit risk, as represented by non-performing loan ratios, is correlated with lower return on assets (ROA) and return on equity (ROE).

Extending this analysis, Almualla and Al Gasaymeh (2023) examine the dynamics of the relationships between risk and profitability using data covering the 2016–2021 period. Their findings emphasize the need for robust risk management techniques, particularly during periods of economic uncertainty. The study highlights that banks in the MENA region with proactive credit risk management frameworks demonstrate greater resilience during times of crisis.

c. Stream 2: Islamic banking risk credit risk management

The Middle East and North Africa region is home to some of the world's largest Islamic finance sectors. As such, Islamic finance in this region must pay close attention to its credit risk management practices to ensure compliance with Sharia principles. Islamic banks in the Middle East and North Africa face credit risk challenges because they finance asset-backed transactions and do not engage in interest-based lending.

In 2018, Akram and Rahman conducted a study comparing credit risk management by Islamic and conventional banks in Pakistan. Their findings revealed that Islamic banks are exposed to credit risk because they require collateral and share that risk. However, another study, conducted by Al Rahahleh et al. in 2019, highlighted a problem for Islamic banks in the Gulf Cooperation Council (GCC) region. Their significant investments in real estate and commodities make them particularly vulnerable to fluctuations in these sectors.

More recently, studies have been conducted on financial technology solutions for credit risk management in Islamic finance. For example, Shah and his team conducted a study in 2023. They explained how Islamic finance can leverage technologies such as blockchain and smart contracts. This innovation allows Islamic banks to track asset-backed financing in real time. It also enables them to automatically execute clauses that reduce the risks associated with Sharia-compliant transactions. Islamic finance can thus fully benefit from these fintech solutions for managing Islamic credit risk.

d. Stream 3 : Basel III framework and banking risk regulation

Basel III standards have profoundly transformed credit risk management in the Middle East and North Africa. This phenomenon has been observed in several countries. For example, researchers such as Alaoui Mdaghri and Oubdi (2022), Addou et al. (2024), and Ghanem (2017) have all written on this topic.

Table 3 illustrates how different countries in the Middle East and North Africa are adopting Basel III standards.

Table 3: Basel III implementation status in selected MENA countries

Country	*Implementation Year*	*Capital Conservation Buffer*	*LCR/NSFR*
UAE	2014	2,5%	Fully implemented
Saudi Arabia	2014	2,5%	Fully implemented
Qatar	2015	2,5%	Fully implemented
Kuwait	2015	2,5%	Partial
Egypt	2016	2,5%	In progress
Morocco	2016	2,5%	Fully implemented
Tunisia	2017	2,5%	In progress

Alaoui Mdaghri and Oubdi (2022), examine the influence of Basel III liquidity standards on banks' ability to generate liquidity in the economies of the MENA region. Their analysis shows that while stricter liquidity constraints contribute to greater stability in the banking system, they can also reduce banks' lending capacity, particularly to small and medium-sized enterprises (SMEs). The authors therefore advocate a gradual and tailored implementation of Basel III rules to reconcile financial stability with economic development objectives.

In a related study, Addou et al. (2024), analyze the effects of Basel III requirements on the solvency and risk-taking practices of Islamic banks. Their findings reveal that more stringent capital adequacy measures have strengthened the financial soundness and resilience of Islamic banking institutions, while also enabling them to maintain their competitiveness relative to conventional banks.

e. Stream 4 : Covid-19 Pandemic Impact

The COVID-19 crisis posed a major challenge to banking systems in the MENA region, placing unprecedented pressure on financial institutions and their risk management frameworks (Ghenimi et al., 2024; Ahmed et al., 2022; Mateev et al., 2025). The economic slowdown, the collapse in oil prices, and disruptions to international trade significantly increased banks' exposure to credit risk.

Ghenimi et al. (2024) conducted a comparative analysis of Islamic and conventional banks throughout the pandemic. Their findings suggest that Islamic banks demonstrated relatively greater resilience, primarily due to lower debt levels, stronger capitalization, and financing mechanisms backed by tangible assets. Nevertheless, the crisis negatively impacted asset quality in both banking models, as evidenced by the regional increase in non-performing loan ratios, averaging 2.3 percentage points.

Similarly, Ahmed et al. (2022) analyzed the pandemic's influence on the relationship between credit risk and bank profitability. The authors demonstrate that COVID-19 intensified the negative impact of non-performing loans on financial performance, particularly for banks with weaker risk governance structures prior to the crisis.

Furthermore, Mateev et al. (2025) examine the stability and performance of the banking sector during the pandemic and draw important lessons for managing future crises. Their study highlights several structural weaknesses revealed by the crisis, including high exposure to sensitive sectors such as tourism, aviation, and retail; inadequate mechanisms for testing resilience to systemic shocks; limited capacity for remote credit assessment; and excessive reliance on wholesale financing.

f. Stream 5: Fintech and Digital transformation

The integration of financial technologies has profoundly transformed credit risk management practices within the banking sector in the MENA region (Shah et al., 2023; Afzal et al., 2025; Nobanee et al., 2024). The emergence of digital lending solutions, innovative credit scoring techniques, and automated assessment systems has progressively altered conventional banking approaches to risk assessment and loan management.

Shah et al. (2023) investigate the contribution of financial technologies to credit risk management in Islamic banks operating in Indonesia, Malaysia, the United Arab Emirates, and Pakistan. Their study demonstrates that the use of fintech solutions improves the accuracy of credit risk assessment

while reducing operational costs. Among the technologies examined, mobile and online banking platforms appear to play the most significant role in improving the efficiency of risk management.

Similarly, Afzal et al. (2025) analyze the impact of fintech investments on banking stability in MENA countries. Their findings highlight a positive correlation between technological innovation and financial stability, primarily due to more efficient credit risk assessment processes and increased diversification of funding sources. However, the authors emphasize that the acceleration of digitalization can expose banks to additional operational and cybersecurity vulnerabilities.

Furthermore, Nobanee et al. (2024) present a comprehensive overview of fintech applications in the field of credit risk management. The study highlights four main areas of application: the integration of alternative data into credit scoring models, the use of real-time monitoring and early warning mechanisms, the automation of loan approval and analysis procedures, and the application of blockchain technology to supply chain finance.

g. Stream 6 : Machine learning application

The use of machine learning methods in credit risk assessment is attracting increasing interest in recent academic research (Leo et al., 2019; Bhatore et al., 2020; Moscato et al., 2021). Recent studies increasingly highlight the ability of these advanced analytical techniques to improve the accuracy and effectiveness of credit risk prediction models. Table 4 presents the main machine learning approaches applied in studies related to credit risk management in the banking sector of the MENA region.

Table 4: Machine learning applications in credit risk assessment

Method	***Advantages***	***Application in MENA***
Support Vector Machines	Effective with high-dimensional data	Consumer lending in Saudi Arabia
Random Forest	Handles non-linear relationships, robust to outliers	SME credit scoring in UAE
XGBoost	High predictive accuracy, handles missing values	Retail portfolio assessment
Neural Networks	Captures complex patterns	Large corporate exposures
Ensembles Methods	Improved accuracy through model combination	Cross-country risk models

Leo et al. (2019) present a comprehensive analysis of the use of machine learning techniques in bank risk management, highlighting that credit risk prediction remains the most explored application area. Their study shows that advanced approaches, such as ensemble learning and

gradient boosting algorithms, generally offer better predictive performance than traditional logistic regression models.

In a comparative analysis, Moscato et al. (2021) evaluate several machine learning models designed for credit scoring. Their results indicate that optimized machine learning techniques can improve classification performance by approximately 5% to 10% compared to traditional scoring approaches. Despite these advantages, the authors highlight significant limitations related to the transparency, interpretability, and regulatory compliance of the models—all critical issues for their practical adoption in the financial sector.

h. Stream 7 : Non-Performing Loans Analysis

Non-performing loans (NPLs) remain a major source of vulnerability for banking institutions in the MENA region (Alnabulsi et al., 2022; Mohamad and Jenkins, 2021; Aledeimat and Bein, 2025). Therefore, identifying the factors contributing to the growth of NPLs is crucial for strengthening credit risk management practices and preserving banking stability.

Alnabulsi et al.(2022) analyze the determinants of NPLs during periods of financial and health crises. Using panel data from banks in the MENA region, their research highlights the significant influence of macroeconomic instability, rapid credit expansion, and bank-specific characteristics, such as capital adequacy and operational efficiency, on NPL levels. The study also emphasizes that the COVID-19 crisis introduced additional factors contributing to credit deterioration, including sector exposure and the implementation of loan deferral programs.

Furthermore, Mohamad and Jenkins (2021) explore the link between corruption and non-performing loans in the economies of the MENA region. Their findings suggest that higher levels of corruption are associated with higher non-performing loan ratios, indicating that institutional weaknesses and poor governance negatively impact credit quality. Therefore, the authors emphasize the importance of strengthening governance and regulatory frameworks alongside traditional risk management practices.

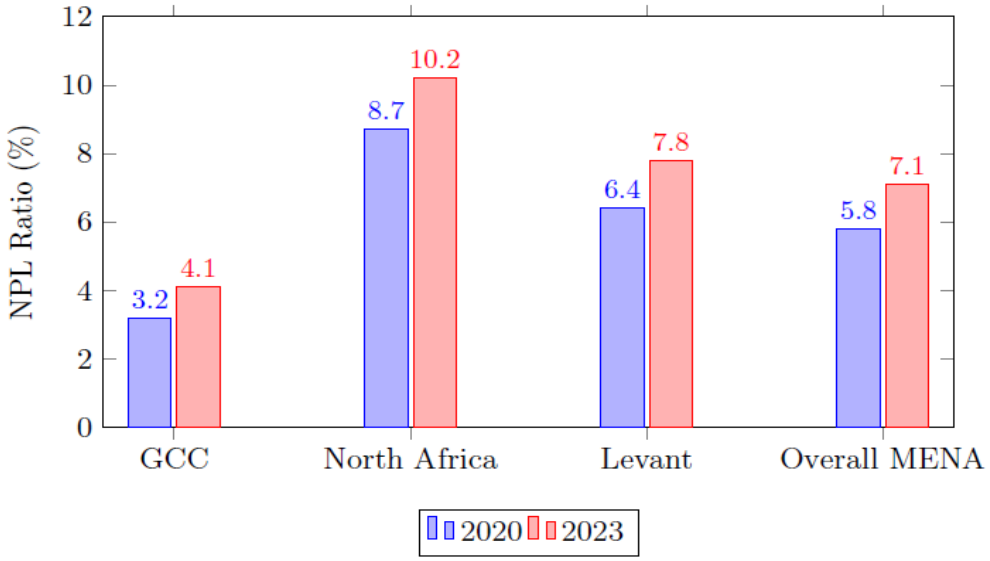
4. Comparative analysis and Findings Synthesis

a. Cross-Country Variations

Credit risk management approaches differ considerably across the sub-regions of the MENA region. Figure 2 highlights the main disparities observed between the Gulf Cooperation Council (GCC) countries, North African economies, and Levant banking markets.

Generally, GCC banking systems exhibit lower levels of non-performing loans (NPLs), primarily due to greater economic diversification, more robust supervisory and regulatory environments, and substantial government support measures. Conversely, North African banking sectors are more exposed to credit risk pressures due to macroeconomic instability, exchange rate fluctuations, and the relative fragility of their institutional and regulatory frameworks.

Figure 2: Average NPL Ratio by MENA Sub-Region



b. Islamic vs. Conventional Banking

Comparative studies reveal substantial differences in the credit risk profiles of Islamic and conventional banking institutions (Ghenimi et al., 2024; El Chaarani, 2023). Islamic banks generally exhibit lower leverage ratios and higher capital adequacy ratios, which contributes to their financial resilience during periods of economic instability. Furthermore, their financing activities are primarily based on tangible assets and asset-backed transactions, thus reducing their exposure to unsecured loans and speculative operations.

Another distinctive feature of Islamic finance is the adoption of risk-sharing mechanisms, where banks and clients share profits and losses. This approach tends to improve the alignment of interests among stakeholders and can limit excessive risk-taking. However, Islamic banks also face specific vulnerabilities, particularly due to their concentration in sectors such as real estate and commodities, which increases their exposure to sector shocks.

Furthermore, Islamic banking institutions face unique challenges related to managing transferred commercial risk, particularly when they are required to maintain competitive returns for depositors despite profitability fluctuations. Therefore, credit risk management in Islamic banks necessitates tailored regulatory frameworks and specialized risk assessment approaches that incorporate the specific principles of Sharia-compliant finance.

c. Methodological trends

Analysis of recent studies highlights a clear evolution in the methodological approaches used in credit risk research between 2020 and 2025. Several analytical techniques have gradually gained prominence in the literature:

- Econometric approaches: Panel data models, particularly those based on the generalized method of moments (GMM), remain widely used to address endogeneity issues in the relationship between credit risk and bank performance.
- Integration of machine learning techniques: Researchers are increasingly relying on supervised learning algorithms for predicting payment defaults and credit ratings, while emphasizing the importance of model transparency and interpretability.
- Network analysis: Recent studies have introduced network analysis methods to better understand the transmission of systemic risk through interconnected banking relationships and interbank exposures.
- Text mining and sentiment analysis: Advanced text analysis tools are used to examine financial reports, published information and media sentiment in order to develop early warning indicators of banking risk.

5. Discussion

a. Key findings summary

This systematic literature review provides several important insights into credit risk management practices within the MENA banking sector.

First, credit risk remains a major source of vulnerability for banks in the region. The rise in non-performing loans has a direct impact on profitability, liquidity, and capital adequacy, particularly during periods of economic and financial instability. Recent crises have exacerbated the link between credit risk and bank performance, highlighting the need for more proactive and effective risk management frameworks.

Second, Islamic banking systems possess distinctive characteristics that can enhance financial resilience, notably through asset-backed financing structures and risk-sharing mechanisms compliant with Sharia principles. Nevertheless, Islamic banks remain exposed to specific risks, such as sector concentration and displaced commercial risk, which require tailored regulatory and managerial approaches.

Third, the implementation of regulatory reforms, particularly Basel III standards, has contributed to strengthening the stability and resilience of banking systems in the MENA region. However, differences in the pace and scope of implementation across jurisdictions can lead to uneven competition and create opportunities for regulatory arbitrage.

Finally, technological innovation and digital transformation are increasingly reshaping credit risk management practices. Fintech solutions and machine learning models offer opportunities to improve the accuracy of risk assessments, reduce operational costs, and promote greater financial inclusion. Despite these advantages, banks also face new challenges related to cybersecurity threats, technology dependency, and operational risk management.

b. Policy implications

The study highlights several important implications for policymakers. Digital transformation is progressively reshaping traditional risk assessment models through the integration of fintech solutions, alternative data sources, machine learning algorithms, and real-time monitoring systems.

This shift enables more accurate and dynamic credit risk evaluation while simultaneously introducing new cybersecurity and operational vulnerabilities.

At the same time, regulatory evolution, particularly through the implementation of Basel III standards, has strengthened banking resilience by enhancing capital adequacy, liquidity management, and supervisory practices. However, heterogeneous implementation across MENA jurisdictions continues to generate regulatory asymmetries and varying levels of risk preparedness.

In addition, geopolitical and macroeconomic factors remain critical determinants of credit risk exposure. Oil price volatility, regional conflicts, inflationary pressures, and fiscal imbalances continue to influence borrower solvency and banking stability across several MENA economies.

Recent crises, particularly the COVID-19 pandemic, have further accelerated the adoption of more resilient risk management frameworks and highlighted the importance of stress testing, scenario analysis, and crisis preparedness. Together, these transformations suggest a transition from traditional reactive credit risk management models toward more integrated, predictive, and technology-driven approaches.

c. Research gaps and future directions

Despite significant progress, several areas still require further academic research investigation. Most previous studies rely primarily on cross-sectional data or short-term panel approaches. Longitudinal research, tracking the evolution of credit risk through different economic phases, would provide more in-depth and reliable information.

Another important research avenue concerns the integration of climate-related risks into credit risk assessment framework. Although MENA economies are particularly exposed to environmental and transition risks. The relationship between climate change and credit risk remains insufficiently explored in the regional literature.

Furthermore, the behavioral aspects of credit risk deserve greater attention. Current studies provide limited evidence on how borrower behavior, decision-making processes, and sociocultural factors influence lending outcomes and default probabilities within the MENA context.

The transmission of financial instability across banking systems also remains an underexplored topic. As economic and financial integration among MENA countries continues to deepen, a better understanding of regional contagion mechanisms and spillover effects is essential for strengthening financial stability.

Finally, more comprehensive evaluations of the effectiveness of banking regulations and supervisory frameworks are needed. Assessing the extent to which regulatory measures influence credit risk outcomes would contribute to the design of more robust and efficient regulatory policies.

6. Conclusion

This systematic literature review provides a comprehensive synthesis of recent research on bank credit risk management in the MENA region during the period 2020–2025. By reviewing and analyzing 52 selected studies, the paper highlights the major transformations affecting banking risk management practices across the region, including regulatory reforms, technological innovation, the expansion of Islamic finance, and the consequences of recent economic and health crises.

The findings reveal that credit risk remains a central challenge for banking institutions despite significant progress in risk assessment methodologies and regulatory frameworks. The implementation of Basel III standards, the increasing adoption of fintech solutions, and the growing use of machine learning techniques are progressively transforming traditional approaches to credit risk management. At the same time, important differences persist across MENA countries due to variations in institutional quality, economic structures, regulatory maturity, and levels of technological development.

The review also demonstrates that recent disruptions, particularly the COVID-19 pandemic, have accelerated the transition toward more resilient and data-driven risk management systems. Furthermore, the specific characteristics of Islamic banking continue to require tailored risk management approaches capable of balancing financial stability, Sharia compliance, and competitiveness within increasingly complex financial environments.

From a strategic perspective, the evidence suggests that the future of credit risk management in the MENA region will be shaped by the interaction of four major forces: digital transformation, regulatory evolution, geopolitical uncertainty, and emerging climate-related financial risks. Consequently, banking institutions will need to move beyond traditional compliance-oriented approaches and develop more predictive, integrated, and technology-enabled risk management frameworks capable of adapting to rapidly changing economic conditions.

This review contributes to the literature by providing an integrated synthesis of fragmented research streams and by highlighting the growing interconnections between Basel III implementation, fintech innovation, machine learning applications, Islamic banking practices, COVID-19-related challenges, and climate-risk considerations. The study also offers valuable insights for banking practitioners and policymakers seeking to strengthen financial resilience and improve risk governance across the region.

Looking ahead, the future of credit risk management in the MENA region will increasingly depend on the ability of banking institutions to integrate advanced analytics, climate-risk considerations, and digital technologies into their decision-making processes. Strategic competitiveness will no longer rely solely on regulatory compliance but also on the capacity to develop predictive, data-driven, and resilient risk management systems. Future research should therefore prioritize longitudinal analyses, cross-country comparative studies, explainable artificial intelligence models, and the interaction between climate transition risks and banking stability. These directions are essential for supporting a more sustainable and resilient banking sector across the MENA region.

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