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Banks' Strategies for Managing COVID-19 Risks: International Experiences

استراتيجيات البنوك في إدارة مخاطر أزمة فيروس كورونا (كوفيد-19):
تجارب دولية

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Abstract:

This study examines how banks in different international contexts managed the complex risks associated with the COVID-19 crisis. Using a descriptive and analytical approach, supported by case studies, the research identifies key challenges such as credit risk, liquidity stress, and operational disruptions. It also highlights the crucial role of central banks and the importance of digital readiness, capital adequacy, and proactive governance in mitigating crisis impacts. The findings reveal a shift toward predictive risk management models and the institutionalization of crisis preparedness. The COVID-19 experience is viewed as a turning point, offering lessons to build more resilient, adaptive, and future-oriented banking systems. Based on these insights, the study recommends strengthening capital buffers, enhancing digital infrastructure, improving staff training, and fostering international cooperation to better manage future systemic shocks.

Keywords: Banking Risk; Risk Management; COVID-19 Crisis.

المخلص:

تهدف هذه الدراسة إلى تحليل كيفية تعامل البنوك في سياقات دولية مختلفة مع المخاطر المعقدة الناتجة عن أزمة كوفيد-19. وبالاعتماد على منهج وصفي تحليلي مدعوم بدراسات حالة، تحدد الدراسة أبرز التحديات، مثل: مخاطر الائتمان، ضغوط السيولة، والاضطرابات التشغيلية. كما تبرز الدور المحوري للبنوك المركزية وأهمية الجاهزية الرقمية، وكفاية رأس المال، والحوكمة الاستباقية في التخفيف من آثار الأزمة. وقد كشفت النتائج عن تحول نحو نماذج تنبؤية لإدارة المخاطر، وإضفاء طابع مؤسسي على خطط التأهب للأزمات. وتعد تجربة كوفيد-19 نقطة تحول رئيسية، تقدم دروساً لبناء أنظمة مصرفية أكثر مرونة وتكيفاً واستشرافاً للمستقبل. وبناءً على هذه النتائج، توصي الدراسة بتعزيز رؤوس الأموال، وتطوير البنية الرقمية، وتحسين تدريب الكوادر، وتكثيف التعاون الدولي من أجل مواجهة الصدمات النظامية المستقبلية بشكل أكثر فعالية.

الكلمات المفتاحية: المخاطر المصرفية؛ إدارة المخاطر؛ أزمة فيروس كورونا (كوفيد-19).

1. INTRODUCTION

Today, banks are facing unprecedented challenges amid global economic and health crises. Among these challenges is the COVID-19 pandemic, which has profoundly impacted the banking sector. This crisis has led to fundamental changes in the economic and social environment, making risk management more complex and difficult. The crisis has triggered unexpected pressures on liquidity, deterioration in credit quality, and a rise in operational risks, prompting banks to adopt new, more flexible risk management strategies.

In response to this situation, banks had to quickly adapt to changing conditions and innovate new solutions to ensure business continuity and avoid significant losses. This challenge was not confined to a particular region or country but was global, with banks worldwide affected to varying degrees

depending on each country's circumstances and its economic and health policies.

Therefore, studying the experiences of global banks in managing the risks of the COVID-19 crisis has become essential to understand how they handled these significant challenges. These experiences reflect the diversity of strategies employed by banks in facing the crisis. Some banks focused on strengthening capital and liquidity, while others emphasized improving control and governance systems, and some relied on technological innovation to offer remote banking services. From the foregoing, the following main question can be asked:

What are the strategies that banks use to manage the risks of the COVID-19 crisis?

To answer the main question, we will try to answer a set of the following sub-questions:

- What is the concept of banking risks, their types, and causes?

- What is meant by banking risk management, and what is its role?
- What are the most significant risks that banks faced during the COVID-19 crisis?
- What measures and actions did banks take to confront the COVID-19 crisis?

Hypothesis: This study is based on the following hypotheses:

- The most prominent risks that banks faced during the COVID-19 crisis include liquidity risks due to mass deposit withdrawals, credit risks resulting from an increase in customer defaults, and operational risks stemming from the disruption of traditional banking operations and the rapid shift to digital services;
- Among the measures and actions taken by banks to address the COVID-19 crisis are enhancing cash liquidity, implementing flexible credit policies, and improving digital infrastructure to ensure the continuity of banking operations under exceptional circumstances.

Importance of the study:

The significance of this study lies in providing a comprehensive analysis of the strategies adopted by banks in response to the COVID-19 pandemic. This analysis can enable banks and other financial institutions to benefit from these experiences when facing similar future crises. Additionally, the study contributes to highlighting the crucial role of central banks in providing support and stability during critical periods.

Objectives of the study:

This study aims to achieve several key objectives, including:

- Clarifying the theoretical framework of banking risks and their management;
- Analyzing the main risks that banks face during crises, particularly the COVID-19 pandemic;
- Reviewing the strategies that banks have employed to manage various risks, with a focus on the measures and actions taken by central banks, which serve as international models for risk management in unstable conditions.

Literature review:

Several studies have addressed the topic of risk management in the banking sector during crises, including:

- Study (Ahmad, Z., et al; 2022), entitled: **"The Impact of COVID-19 on Credit Risk: An Assessment in Malaysian Banking System"** aimed to evaluate how the COVID-19 pandemic affected credit risk in the Malaysian banking system, using quarterly data covering the period from 2013 to 2020. The study concluded that the COVID-19 pandemic resulted in a surge in credit risk, particularly non-performing loans, which constrained the lending capacity of conventional banks. It also showed that the economic downturn caused by the pandemic contributed to a rise in the rate of defaulted loans. The study recommended that the Malaysian banking sector and government adopt debt restructuring measures, strengthen risk assessment policies before granting loans, and adjust forecasting models based on changing economic conditions in order to reduce credit risk and improve the quality of loan assets during crises;

- Study (De Bock, L., & Demyanets, A.; 2022), entitled: **"How central banks responded to the pandemic: COVID-19 policy measures and financial stability"** aimed to examine the actions taken by major central banks including the ECB, Fed, Bank of England, and others to stabilize the banking system during the COVID-19 pandemic. The analysis covered interventions such as rate cuts, liquidity injections, asset purchases, and temporary capital relief measures. The study concluded that swift and coordinated interventions by central banks such as lowering policy rates and providing emergency liquidity facilities substantially stabilized financial markets and banking operations, preventing deeper liquidity stress and credit crunches. It advocated for the development of faster and more comprehensive crisis-response mechanisms, including: pre-positioned liquidity facilities, Enhanced coordination among central banks, Clear communication strategies, in order to be better prepared for future systemic shocks;

- Study (Peng, X.; 2023), entitled: **"Assessment of Banking Risk Management under COVID-19"** aimed to evaluate how banks dealt with liquidity and credit risks during the outbreak of the pandemic. It focused on cases such as the collapse of Silicon Valley Bank and the failure of Credit Suisse to illustrate the impact of these risks. The study concluded that banks that primarily relied on internal liquidity and maintained sufficient cash reserves were less vulnerable to financial shocks compared to other institutions. It recommended enhancing the strategic capabilities of banks in liquidity management by developing early warning systems to forecast future needs and planning for better utilization of liquid assets, in order to ensure effective preparedness for future crises.

These studies suggest that the strategies implemented by banks were effective in enabling banks to manage the risks associated with the COVID-19 crisis, reducing the impact of the crisis, and achieving financial stability.

Study methodology:

This study relies on the descriptive-analytical method in establishing the theoretical framework. Additionally, a case study approach was employed to examine the risks faced by banks in various countries during the COVID-19 crisis and the measures and actions taken to address these risks.

2. Theoretical framework of the study

The banking sector is one of the main pillars of the global economic system; however, it faces a range of risks that may impact its stability and profitability. These risks vary from liquidity, credit, operational, market, and fraud risks, among many other types. Understanding these risks and analyzing their causes is a crucial step in identifying the tools and strategies necessary to manage them effectively.

2.1. Risks in the banking sector:

Banking risks are among the most significant challenges facing the banking sector, involving a wide range of uncertainties that may affect the stability and profitability of financial institutions. These

risks come in various forms, from liquidity and credit risks to market and operational risks. Each type of risk is associated with specific fluctuations in the financial and economic environment, necessitating the adoption of effective strategies by banks to manage them. In this context, understanding the nature of these risks and their causes is essential to ensure the continuity of banks and protect them from potential losses.

2.1.1. Concept of banking risks: There are numerous definitions of banking risks, including the following: "The term 'risk' is generally associated with financial losses, but it is more accurately described as uncertainty regarding the returns that can be achieved from an asset. To achieve returns, the asset owner must bear some risks. Some risks are related to the bank's business model, such as the maturity transformations that the bank undertakes, which lead to liquidity risks and credit risks" (Bologna, P., 2018, p. 7). In another definition, "Banking risks are defined as the potential for financial loss due to various uncertainties that affect a bank's operations and financial health. These risks are broadly categorized into market risks, including interest rate risk, credit risk, and liquidity risk, which are influenced by external economic factors; and operational risks, which stem from internal processes, systems, and human errors. Effective risk management aims to identify, assess, and mitigate these risks to ensure the stability and profitability of the banking institution". (Nguyen Thi Thieu , Q; Christopher , G;, 2019, pp. 3-4)

Thus, based on the above, banking risks encompass all forms of uncertainty that can affect a bank's financial returns. This concept is linked to potential losses resulting from fluctuations in the bank's market value and includes risks associated with the bank's business model, such as liquidity and credit risks arising from maturity transformations. Additionally, these risks are divided into two main types: general risks, influenced by factors beyond the control of the bank and the client, such as inflation, interest rate changes, and exchange rate fluctuations, and specific

risks related to the nature of the bank's activities and its clients, which reflect the uncertainty of recovering loaned capital or realizing future profits.

2.1.2. Types of banking risks: There are several types of risks that threaten the banking sector, the most important of which include:

- **Fraud risks:** These risks arise from the increasing use of electronic devices and methods in banking transactions, such as ATMs and credit cards, which can lead to the disruption of information networks, affecting banking operations and compromising the confidentiality of customer information. Fraud risks are a key area that banks must manage carefully, as they represent the possibility of financial losses and negatively impact the bank's reputation. Banks face numerous challenges in dealing with various forms of fraud, making the management of these risks essential to maintaining customer and stakeholder trust;

- **Credit risks:** These are the potential risks that arise when borrowers, whether individuals or companies, are unable to repay their loans or experience a deterioration in their creditworthiness, or fail to meet their financial obligations. This can lead to complete or partial loss of the loaned amounts and negatively impact the quality of the bank's loan portfolio; (Investopedia, 2024)

- **Liquidity risks:** Liquidity risks occur when lenders are unable or find it difficult to borrow under normal conditions. Banks need to ensure they have sufficient liquidity to meet their short-term obligations. (Joël Bessis, 2015, p. 3) Managing liquidity risks involves ensuring that enough liquid assets are available to cover funding needs, even under difficult market conditions; (Federal Deposit Insurance Corporation, 2023)

- **Solvency risks:** These refer to the risk of being unable to absorb losses with the available capital. According to the regulatory principle of "capital adequacy," the minimum capital base is considered sufficient to cover unexpected losses that may arise from the current risks faced by the institution. A

solvency problem arises when unexpected losses exceed the allocated capital, as occurred with many financial institutions during the 2008 crisis; (Joël Bessis, 2015, p. 4)

- **Interest rate risks:** These risks refer to the potential fluctuations in net interest income due to changes in interest rates. Most loans and receivables, along with time deposits and savings deposits, generate income and costs tied to interest rates. Both lenders and borrowers are exposed to interest rate risks, where lenders might incur higher costs or receive variable income due to short-term market rate changes. Loans and debts, whether at fixed or variable rates, are subject to interest rate risks. Fixed-rate lenders may bear higher costs if interest rates rise, while variable-rate borrowers might benefit from falling rates. Both parties rely on available opportunities and costs associated with market changes. (Joël Bessis, 2015, p. 4) Interest rate fluctuations can impact a bank's profitability. Managing interest rate risks involves strategies to counter the potential negative effects of interest rate changes on the bank's net interest income; (Federal Deposit Insurance Corporation, 2024)

- **Currency exchange rate risks:** These risks refer to the potential for losses due to fluctuations in foreign exchange rates. Such changes can impact profits by affecting revenues and costs linked to exchange rates or by altering the value of assets and liabilities denominated in foreign currencies (translation risks); (Investopedia, 2023)

- **Market risks:** These risks arise from market fluctuations in interest rates, foreign exchange rates, and adverse movements that lead to a decrease in the value of financial assets. (Joël Bessis, 2015, p. 3) Health crises often lead to sharp volatility in financial markets, impacting the prices of assets and securities held by banks. Banks may struggle to manage and diversify their investment portfolios effectively under unstable market conditions, making market risk management crucial in developing strategies to counter potential losses; (International Monetary Fund (IMF), 2020)

- **Operational risks:** These involve direct or indirect losses resulting from inadequate or failed internal processes, people, systems, or external events. The focus on operational risks has evolved over time, especially as regulatory bodies have imposed requirements to allocate capital charges for such risks. (Joël Bessis, 2015, pp. 4-5) Managing operational risks focuses on ensuring the effectiveness and resilience of a bank's internal operations, with measures to prevent and mitigate losses from operational failures. (Basel Committee on Banking Supervision, 2011) These risks increase during crises due to business disruptions, staff shortages, and challenges in ensuring business continuity and effectively carrying out daily banking operations;

- **Strategic risks:** These are the current and future risks that can impact a bank's revenue and capital due to incorrect decisions, poor implementation, or inadequate response to changes in the banking sector. These risks include changes in the competitive environment, technological developments, economic shifts, and regulatory changes. Effective management of strategic risks is crucial to ensuring the bank's ability to adapt to these challenges and maintain its profitability and stability in the long term. These risks stem from uncertainty related to the bank's business strategy. (Saunders & Cornett, 2020, p. 233)

Strategic risk management involves accurately defining the bank's objectives while assessing its risk tolerance and ensuring that the strategies adopted are robust in the face of various economic and market scenarios;

- **Compliance risks:** Legal and regulatory requirements mandate that banks adhere to laws, regulations, and guidelines. Non-compliance can result in significant financial penalties and damage to the bank's reputation. Compliance risk management focuses on ensuring full adherence to all applicable laws and regulations;

- **Reputation risks:** A bank's reputation is a valuable asset that must be protected through transparency, ethical conduct, and effective communication. (Investopedia, 2022)

It is important to note that health crises can negatively impact a bank's reputation if it fails to provide adequate support to its customers or is associated with negative reports of poor crisis management;

- **Cybersecurity risks:** With the increased reliance on digital services during the pandemic, the risks associated with cyber threats such as cyber-attacks and hacking also rise. Banking information systems may be compromised due to increased attempts at breaches, necessitating the enhancement of cybersecurity measures and the development of advanced defensive strategies. (KPMG, April 2020, pp. 1-2)

2.1.3. Causes of banking risks: Banks face a wide range of risks that can affect their financial stability and profitability. Some of the primary causes of these risks include: (Saunders, A; Cornett, M M, 2020, pp. 215-240)

- **Globalization of financial markets and financial liberalization:** No institution is immune from the risks that can affect any participant within the global economic and financial system. The interconnectedness of financial markets allows risks to spread rapidly across borders;

- **Emergence of financial engineering and Innovation:** This has resulted in increased complexity in the business environment and greater uncertainty. Financial engineering involves the creation of sophisticated financial instruments, which can introduce new risks;

- **Excessive use of financial derivatives:** Particularly when used by speculators to profit rather than hedge and manage risks (noting that the primary purpose of financial derivatives is risk management). Overuse of derivatives can contribute to financial instability;

- **Monetary policy and tools used for managing the money supply:** Changes in monetary policy, such as interest rate adjustments and quantitative easing, can significantly impact the financial stability of banks. The effectiveness and timing of these tools are critical in managing economic fluctuations;

- Political, economic, and social instability:

Political and economic instability, including sudden shifts in government policies or social unrest, can adversely affect the banking sector. Banks operating in unstable environments face heightened risks;

- Recessions and economic downturns:

Economic recessions can vary in severity due to monetary policies or business and investment challenges, particularly in long-term areas. These downturns can lead to increased default rates and reduced profitability for banks.

By understanding the various types and causes of banking risks, it becomes clear that banks operate in a complex environment that requires advanced risk management strategies to ensure financial stability. These risks include external factors like global market fluctuations and political and economic changes, as well as internal factors related to the bank's operations. Therefore, adopting a comprehensive approach to risk management, conducting periodic analysis, and adapting to changing conditions are essential for maintaining the integrity and sustainability of the banking system in the long term.

2.2. Banking risk management:

Banking risk management plays a crucial role in ensuring the stability and continuity of financial institutions. Amid increasing challenges and a continuously changing environment, effective risk management has become more important than ever. It involves identifying and understanding the risks that financial institutions may face, accurately measuring them, and implementing appropriate measures to mitigate their impacts. Additionally, risk management requires the establishment of comprehensive strategies for monitoring risks and ensuring they remain within acceptable limits set by the bank's board of directors. With this comprehensive understanding, banks can maintain their financial stability and reputation, thereby enhancing trust among customers and stakeholders alike.

2.2.1. Concept of banking risk

Management: Several definitions of risk management are provided, including: "Risk management involves identifying and understanding key risks, measuring operational risks, selecting appropriate steps to address them, and implementing procedures to monitor risks and ensure that the bank acts efficiently to maintain its stability and reputation" (Pyle D. H, 1997, p. 4), In another definition, it is "The process of risk management involves identifying, measuring, monitoring, and controlling risks to ensure that they are fully understood and remain within the limits and framework established by the bank's board of directors". (Basel Committee on Banking Supervision, 2006, p. 14) It can also be defined as "the process of coordinating efforts to direct and monitor the institution's activities according to the surrounding risks". (ISO, 2018, p. 2)

In summary, risk management is a comprehensive process that involves identifying and understanding the risks a financial institution may face, with a focus on key risks that could impact its stability and reputation. This process includes measuring operational and other risks, selecting and applying appropriate measures to address them, and establishing ongoing monitoring procedures. Additionally, risk management involves coordinating efforts within the institution to guide and monitor its activities in accordance with surrounding risks, ensuring the achievement of strategic objectives and business continuity.

2.2.2. Risk management activities: Risk management involves the following activities: (COSO, 2017, pp. 27-104)

- Gathering information: Collecting data about the company's risky assets;

- Identifying threats: Determining potential threats for each asset;

- Identifying weaknesses: Recognizing system vulnerabilities that may allow threats to materialize;

- Assessing potential losses: Evaluating the losses the organization could face if the expected threat occurs;

- **Exploring alternatives:** Identifying alternative methods and tools to mitigate or avoid potential losses;

- **Choosing risk management Tools:** Selecting the methods and tools the organization will use to manage potential risks.

2.2.3. Role of risk management: The role of risk management includes: (Hopkin, P., 2018, pp. 30-60)

- **Identifying risks:** Identifying risks associated with each activity, whether it involves individuals, projects, or organizational processes;

- **Analyzing risks:** Evaluating each identified risk to understand its nature, causes, and how it interacts with other risks;

- **Measuring risk levels:** Assessing the severity and probability of each risk and estimating the potential financial losses;

- **Selecting management methods:** Choosing the most appropriate methods for managing identified risks based on safety levels and associated costs;

- **Capital preservation:** Protecting and stabilizing capital, which is vital for the long-term sustainability of the bank and minimizing the likelihood of significant financial losses;

- **Enhancing financial stability:** Contributing to greater financial stability by reducing the impact of unforeseen events and risks that could threaten the bank's operations;

- **Ensuring compliance:** Ensuring adherence to regulations and compliance laws to avoid legal penalties and fines;

- **Informed decision-making:** Supporting informed decision-making based on thorough risk analysis, which enhances strategic planning;

- **Protecting reputation:** Mitigating the effects of negative events that could harm the bank's reputation, such as financial scandals or non-compliance, thereby maintaining a positive image;

- **Building trust:** Establishing trust with clients by safeguarding their funds and protecting against fraud and theft, leading to increased customer satisfaction and loyalty;

- **Sustainable growth:** Facilitating sustainable growth by preventing financial crises and managing resources efficiently, aiding in the expansion of market reach;

- **Improving internal processes:** Reducing internal risks related to systems, processes, or personnel through the improvement of internal operations and control systems.

Consequently, based on the above, it can be said that risk management in banking is a fundamental pillar for enhancing financial stability and ensuring the sustainability of financial institutions. By identifying, analyzing, and taking preventive measures against potential risks, risk management helps mitigate the impact of unexpected events and threats that could affect the bank's stability. It also strengthens the bank's ability to comply with regulatory requirements, make informed decisions based on comprehensive risk analysis, and build trust with clients while achieving sustainable and stable growth.

In essence, banking risks pose a significant challenge to the stability of financial institutions. By understanding the various types and causes of these risks, banks can develop effective strategies to manage them and reduce their negative impacts. Effective risk management is not merely a tool for maintaining stability but is crucial for ensuring the bank's continuity amidst increasing challenges in the global financial environment. Proper risk management provides banks with the opportunity to achieve sustainable growth and enhance customer trust in their services.

3. Risks faced by banks during the COVID-19 crisis

The COVID-19 pandemic has been one of the greatest challenges faced by banks worldwide in recent years. The economic repercussions of the pandemic led to radical changes in banking activities and exposed banks to unprecedented risks related to credit, liquidity, and macroeconomics. In this section, we will review the main risks encountered by central banks and the banking sector in various countries, including the Federal Reserve, the Bank of Canada, the

European Central Bank, the Bank of England, the Swiss National Bank, and banks in China, Japan, India, the UAE, Egypt, and Algeria.

3.1. The Federal Reserve:

The Federal Reserve faced significant challenges during the COVID-19 crisis, with one of the most notable being the increased credit risk due to the sharp rise in unemployment rates and the decline in economic activity. Additionally, major market interventions, such as bond purchases and lowering interest rates to historic lows, raised concerns about asset inflation and the potential for a financial bubble. These measures were necessary to support the economy in the short term but have increased future challenges for the central bank in terms of ensuring financial stability and reducing the economic gap between different segments of society. (CGFS, 2020, pp. 20-25)

3.2. The Bank of Canada:

Canadian banks were significantly impacted by the repercussions of the COVID-19 crisis, particularly due to the decline in oil prices, which severely affected the Canadian economy, especially in the western provinces that rely heavily on the oil sector. This led to an increased risk of bankruptcy for companies operating in this sector, posing a major challenge for banks that heavily rely on loans to these companies. Additionally, banks increased their exposure to credit risk due to rising unemployment rates and increased demand for loans from both individuals and struggling businesses. (Bank of Canada, January 20, 2021, pp. 3-4)

3.3. The European Central Bank:

The European Central Bank faced major challenges during the COVID-19 crisis, as the Eurozone experienced a severe recession due to widespread lockdowns in many member countries. This situation led to a significant increase in sovereign debt for some countries, raising concerns about default risks and impacting the stability of the single currency. The European Central Bank intervened extensively through asset purchase programs and interest rate cuts to support the economy, but these measures

raised concerns about long-term inflation and financial stability. (European Central Bank, 2021, pp. 5-38)

3.4. The Bank of England:

The Bank of England faced several challenges during the COVID-19 crisis, with one of the most prominent being the management of risks associated with historically low interest rates aimed at supporting the struggling British economy. The bank also encountered risks related to increasing public debt and liquidity pressures in financial markets. Additionally, operational risks increased due to remote work and a significant reliance on digital systems. These factors posed significant challenges for the Bank of England in maintaining financial stability during the crisis. (Bank of England, 2021, pp. 1-9)

3.5. The Swiss National Bank:

The Swiss National Bank dealt with multiple risks during the COVID-19 crisis, including pressure on the Swiss franc, which is considered a safe-haven currency, leading to continuous interventions to limit the currency's appreciation. The bank also faced challenges related to global market volatility and decreased demand for Swiss exports, which impacted growth and put pressure on the financial system. (Swiss National Bank, 2021, pp. 18-46)

3.6. The Banking Sector in China:

Chinese banks faced multiple risks during the COVID-19 crisis, with one of the most significant being a substantial increase in non-performing loans due to many small and medium-sized enterprises ceasing operations as a result of lockdowns and precautionary measures. This situation put pressure on banks to provide the necessary liquidity to cover these troubled loans. Additionally, the government intervened extensively to support the economy, which increased the burden on the banking sector, requiring it to absorb a significant portion of this load. Furthermore, banks faced risks related to sovereign debt, particularly with rising levels of public debt. (International Monetary Fund, 2021, pp. 15-32)

3.7. The Bank of Japan:

The Bank of Japan faced unique challenges related to Japan's chronic stagnation, which was exacerbated by the COVID-19 crisis. Among the risks managed by the bank were a decline in domestic spending, increased public debt, and challenges related to persistent deflation. The bank had to implement unconventional monetary policies, such as quantitative easing, to maintain stability in the face of these challenges. (Bank of Japan, 2021, pp. 1-3)

3.8. The Reserve Bank of India:

During the COVID-19 crisis, the Reserve Bank of India faced significant risks associated with a substantial decline in economic activity, leading to a slowdown in GDP growth and increased unemployment. The bank also had to manage risks related to rising government debt and deteriorating asset quality in the banking sector due to loan repayment deferrals by businesses and individuals affected by the pandemic. (Reserve Bank of India, 2021, pp. 12-13)

3.9. The Central Bank of the UAE:

During the COVID-19 crisis, the Central Bank of the UAE faced major challenges. The most prominent was the risk of liquidity shortages in the banking system, as many sectors in the country were affected by global lockdowns and a decline in oil demand, which constitutes a significant portion of the country's revenue. Local banks struggled to provide the necessary liquidity to support businesses and individuals, prompting the Central Bank to intervene by injecting additional liquidity and providing facilities to ensure business continuity. Additionally, banks faced increasing credit risks due to rising default rates among struggling companies, leading the central bank to implement stringent measures to monitor loans and prevent further deterioration in banks' financial condition. (Central Bank of the UAE, 2020, pp. 8-17)

3.10. The Central Bank of Egypt:

During the crisis, the Central Bank of Egypt had to confront several risks, most notably the increase in external and internal debts, as the government turned to local

banks to finance the budget deficit and support the economy during the lockdown period. This approach increased the debt load and impacted the stability of the banking system. Additionally, there were significant concerns about exchange rate fluctuations, especially after a decline in remittances from Egyptians abroad, which complicated the management of foreign currency and international reserves. (Central Bank of Egypt, 2020, pp. 12-16)

3.11. The Bank of Algeria:

In Algeria, the impacts of the COVID-19 crisis on the banking sector were highly noticeable, with banks suffering from increased liquidity risks due to the decline in oil prices, which are a primary source of revenue for Algeria. This decline led to a reduction in available foreign currency, affecting banks' ability to meet their external obligations and provide loans. Additionally, the country experienced a rise in non-performing loans due to the halt or reduction of business activities, adding to the burden on the banking system. (International Monetary Fund, 2021, pp. 9-10)

Consequently, based on the above, it can be said that the global banking sector faced a range of fundamental risks during the COVID-19 crisis, which significantly impacted financial stability. Among the most prominent risks were credit risks, as banks experienced a noticeable increase in non-performing loans due to declining economic activity and rising unemployment rates, affecting banks' financial stability. Banks also faced severe pressure to meet liquidity needs, as the crisis led to reduced money flows in the markets, making it difficult for banks to provide the necessary liquidity to support their daily operations. Banks suffered significant economic impacts due to the recession caused by the pandemic, including falling oil prices and rising levels of sovereign debt, which affected the long-term financial stability of banks. Operational risks increased due to the rapid shift to digital systems and remote work, raising the likelihood of technical issues and cybersecurity threats. Additionally,

difficulties in accurately assessing financial performance due to severe economic fluctuations affected the quality of auditing and financial reporting, presenting additional challenges in evaluating the financial status of banks. Overall, the COVID-19 crisis highlighted the vulnerabilities in the global banking system.

4. Measures and actions taken by banks to address the COVID-19 crisis

With the outbreak of COVID-19 and its massive impact on the global economy, central banks in various countries faced unprecedented challenges that required a swift and effective response to ensure financial stability. The global health crisis led to a severe economic contraction, increasing pressure on the banking system and necessitating emergency measures to support the economy. In this context, central banks implemented a range of strategies, including lowering interest rates, introducing quantitative easing programs, and providing credit facilities, to ensure the continuity of credit flow and enhance liquidity in financial markets. These measures aim to address the economic risks resulting from the pandemic and ensure the stability of the financial system while maintaining the ability of banks to meet the needs of the national economy.

4.1. The Federal Reserve:

The Federal Reserve took a series of bold measures to address the economic challenges posed by the COVID-19 crisis. On March 15, 2020, the Fed reduced interest rates to a range of 0% to 0.25% to stimulate the economy by lowering borrowing costs for individuals and businesses. It also launched a 700 \$ billion quantitative easing program, purchasing government assets and mortgage-backed securities, which helped increase liquidity and stabilize financial markets. Additionally, the Fed established emergency lending facilities for major corporations and programs to buy commercial paper, providing funding to both the public and private sectors. On November 3, 2021, the Fed announced a gradual reduction of its asset purchase program, reflecting improvements in the economy and achieving

the desired stability. (Federal Reserve Board, 2021, pp. 10-15)

4.2. The Bank of Canada:

In response to the crisis, the Bank of Canada reduced its key interest rate to 0.25%, providing additional support to households and businesses. To enhance liquidity, the bank expanded its quantitative easing program by purchasing government bonds and other securities to stabilize markets and stimulate economic activity. The bank also introduced special measures for deferring loan payments and providing loans to affected businesses and individuals to alleviate financial pressures. (Bank of Canada, 2020, pp. 25-30)

4.3. The European Central Bank:

The European Central Bank launched a substantial quantitative easing program to support the European economy amid the COVID-19 crisis. The program included the purchase of government and private sector bonds worth 312 € billion until the end of 2020, aimed at supporting market liquidity and enhancing financial stability. The ECB also provided a package of credit facilities to European banks, including an emergency financing program worth 750 € billion, to support banks and encourage them to extend loans. (European Central Bank, 2020)

4.4. The Bank of England:

The Bank of England took the initiative to reduce interest rates to 0.10%, the lowest historical level, to support the British economy during the crisis. It also launched quantitative easing programs to purchase government and private sector assets, contributing to injecting liquidity into financial markets. Additionally, the bank expanded its financing programs to provide favorable loans to banks, helping businesses and individuals cope with the financial pressures resulting from the pandemic. The bank also enhanced oversight of operational systems to address challenges related to remote work and increasing reliance on digital systems. (Bank of England, 2020)

4.5. The Swiss National Bank:

The Swiss National Bank intervened in the foreign exchange markets to ease pressure on the Swiss franc, which helped support exports and economic growth. Additionally, the bank expanded its quantitative easing program, including the purchase of bonds and enhancing liquidity in the markets. It also worked to bolster financial stability by supporting financial institutions in dealing with crises. (Swiss National Bank, 2020, pp. 22-27)

4.6. The People's Bank of China:

The People's Bank of China implemented a range of measures to support the economy during the COVID-19 crisis. These measures included providing credit support to small and medium-sized enterprises, deferring loan repayments to assist affected businesses, and offering substantial financial incentives to boost economic stability and growth. The bank also provided favorable loans and supported liquidity in the banking system. (The People's Bank of China, 2020, pp. 32-35)

4.7. The Bank of Japan:

The Bank of Japan relied on expanding its quantitative easing program to support the Japanese economy, purchasing government assets and stocks to enhance market stability and economic growth. The bank also lowered interest rates to very low levels to support spending and investment. Additionally, it launched lending programs for financial institutions to ensure adequate liquidity and support affected businesses and individuals. (Bank of Japan, 2020, pp. 12-18)

4.8. The Reserve Bank of India:

The Reserve Bank of India took several steps to support the economy during the crisis. These measures included lowering interest rates to stimulate spending and investment, easing reserve requirements for commercial banks to increase their lending capacity, and providing credit support programs for debt restructuring to alleviate financial pressures on businesses and individuals. (Reserve Bank of India, 2020, pp. 20-25)

4.9. The Central Bank of the UAE:

The Central Bank of the UAE reduced the mandatory reserve ratio from 14% to 7%, which helped enhance liquidity in the banking system. It also injected approximately AED 61 billion (USD 16.6 billion) to support banks in lending to various sectors. Additionally, the bank provided a stimulus package worth USD 70 billion to ensure liquidity in the banking system and support the economy. (Central Bank of the UAE, 2020, pp. 14-20)

4.10. The Central Bank of Egypt:

The Central Bank of Egypt implemented various measures to support the economy during the COVID-19 crisis. These measures included removing negative lists for individuals and businesses to alleviate pressures. The bank also provided exceptional loans to small businesses at favorable rates to support liquidity and production, and lowered interest rates to offer facilities to support businesses and the tourism sector. (International Finance Corporation, 2020, p. 2)

4.11. The Bank of Algeria:

In response to the global crisis resulting from COVID-19, the Bank of Algeria implemented a range of measures to support the national economy. The bank reduced the main interest rate to 3.0% to stimulate investment and economic activity. It also enhanced its initiatives to provide favorable loans to small and medium-sized enterprises, which were significantly impacted by the pandemic. To support liquidity in the banking system, the bank launched programs to reduce reserve requirements for commercial banks, facilitating the flow of cash. Additionally, the Bank of Algeria worked with the government to develop stimulus strategies, including deferring loan repayments for both public and private sectors and providing direct financial support to the most affected sectors. (Banque d'Algérie, 2020, pp. 20-25)

Therefore, based on the above, it can be said that the measures and actions taken by central banks during the COVID-19 crisis demonstrate the complexity and depth of the challenges faced by the global economy. By

lowering interest rates, implementing quantitative easing programs, and providing financial support to affected sectors, central banks were able to mitigate some of the crisis's impacts, enhance financial stability, and support economic recovery. Despite these emergency measures, concerns remain about future challenges, such as potential inflation and pressures on long-term financial stability. Ultimately, the response of central banks to the COVID-19 crisis represents an important case study on how to handle major economic crises and manage emergencies effectively to ensure stability and growth in the future.

5. RESULTS AND DISCUSSION

The empirical findings of this study offer a comprehensive and nuanced understanding of how banks around the globe confronted the unprecedented challenges posed by the COVID-19 pandemic. Through comparative analysis of international experiences, the study uncovers several salient patterns that reflect not only the vulnerabilities exposed by the crisis, but also the strategic resilience demonstrated by financial institutions.

5.1. Multifaceted nature of banking risks:

The study confirmed that banking risks are multidimensional and deeply interconnected. The COVID-19 crisis intensified classic financial risks namely credit, liquidity, market, and operational risks while introducing additional layers of uncertainty tied to macroeconomic volatility and digital infrastructure vulnerability. These risks were exacerbated by abrupt shifts in consumer behavior, supply chain disruptions, and heightened geopolitical tensions.

5.2. Heightened credit risk and asset quality deterioration:

One of the most striking findings was the significant surge in non-performing loans across nearly all banking systems. This was largely attributable to widespread business closures and unemployment, particularly affecting SMEs, tourism, and retail sectors. Banks that lacked diversified loan portfolios or had inadequate credit risk assessment

frameworks faced amplified balance sheet pressures.

5.3. Acute liquidity constraints and systemic stress:

Liquidity risks became a systemic threat, with banks experiencing severe pressure to meet short-term obligations amidst declining cash inflows and increasing loan forbearance. Central banks' interventions via quantitative easing, emergency programs, and reduction of reserve requirements were instrumental in averting a liquidity-driven collapse.

5.4. Operational disruption and cybersecurity exposure:

The pandemic exposed significant operational weaknesses, particularly in banks with underdeveloped digital ecosystems. The abrupt shift to remote work and reliance on digital platforms led to increased exposure to cyber threats, data breaches, and IT infrastructure failures. However, institutions that had invested in digital transformation prior to the crisis demonstrated greater adaptability and resilience.

5.5. Strategic and policy-level responses:

The findings revealed a notable alignment between central bank interventions and banking strategies, underscoring the importance of coordinated macroprudential policies. Measures such as: Interest rate cuts, Targeted asset purchases, Concessional loans, Loan payment deferrals, Foreign exchange interventions, and Enhanced supervisory oversight proved pivotal in restoring market confidence and sustaining credit flow to the real economy.

5.6. Inability to accurately assess financial performance:

The dynamic and volatile macroeconomic environment rendered traditional tools for evaluating performance and creditworthiness less effective. Financial forecasting, auditing, and loan loss provisioning became more complex, underscoring the need for adaptive risk modeling and real-time data analytics.

5.7. Institutional resilience and adaptability:

A critical differentiator among banks was the extent of their **pre-crisis preparedness**. Institutions with robust capital buffers, agile risk governance frameworks, and mature digital capabilities not only withstood the initial shock but emerged stronger. Conversely, banks operating in regulatory environments with limited fiscal space or those overly reliant on manual processes encountered prolonged recovery periods.

5.8. Emergence of a new risk management paradigm:

The study illustrates the beginning of a paradigm shift in how banks approach risk management. The crisis acted as a catalyst for embedding risk culture across all organizational layers, encouraging scenario-based planning, and elevating the role of Chief Risk Officers (CROs) in strategic decision-making.

In summary, the COVID-19 pandemic served as an inflection point in the evolution of banking risk management. The study affirmed that strategic foresight, operational agility, and regulatory coordination are indispensable for navigating systemic shocks. The diversity of responses analyzed herein offers valuable insights into best practices and policy innovations that can inform future crisis management frameworks in the global financial sector.

In conclusion, the findings confirm the study's hypotheses, revealing that banks were primarily impacted by liquidity, credit, and operational risks. The strategies employed from regulatory interventions to technological adaptation played a pivotal role in mitigating these risks.

6. CONCLUSION

This study set out to examine how banks across various international contexts managed the multifaceted risks imposed by the COVID-19 crisis. Using a descriptive and analytical approach, and by analyzing case studies from both developed and emerging economies, the study identified a diverse set of strategies shaped by local conditions yet unified by shared objectives: maintaining

financial stability, ensuring liquidity, and accelerating digital transformation.

The findings confirmed that the pandemic served as a comprehensive stress test for the global banking sector. It exposed institutions to severe credit, liquidity, and operational risks, demanding rapid and coordinated responses. Central banks played a pivotal role through monetary interventions and regulatory flexibility, while individual banks adapted by strengthening capital buffers, revising credit policies, and embracing digital tools.

This study enriches the existing literature by providing a cross-country perspective on crisis-era banking risk management. It emphasizes that resilience depends not only on capital adequacy but also on digital preparedness, effective governance, and adaptive regulatory environments. The crisis underscored the necessity of transitioning from reactive to proactive and predictive risk management systems capable of anticipating disruptions and safeguarding continuity.

Ultimately, the COVID-19 experience represents more than a temporary disruption; it marks a strategic inflection point. It provides a practical foundation for building robust, flexible, and future-oriented crisis management frameworks, relevant not only to health-related emergencies, but also to a broader spectrum of geopolitical, economic, and environmental uncertainties shaping the modern global financial landscape.

In light of these insights, the study recommends the following:

- Strengthen capital and liquidity to ensure banks' resilience during crises;
- Invest in digital technology and cybersecurity, especially in emerging markets;
- Develop risk management systems using advanced analytics and regular stress testing;
- Institutionalize crisis preparedness plans within banking governance frameworks;
- Train staff and promote a strong risk management culture across banking institutions;

- Coordinate with regulatory authorities to ensure effective crisis response;
- Enhance international cooperation to exchange expertise and best practices in crisis management;
- Leverage the COVID-19 experience to establish a reference model for future crisis management.

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