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and Finance**



**The Impact of the Interaction Between Credit Risk and Liquidity Risk
on the Stability of Banks in Palestine**

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Arab American University
Faculty of Graduate Studies
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Dissertation Approval


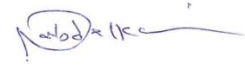

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Declaration

I declare that, except where explicit reference is made to the contribution of others, this dissertation is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institutions.

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Dedication

I dedicate this work to the soul of my late father, whose memory continues to inspire me, and to my beloved mother, whose endless prayers and encouragement have been my greatest strength.

My heartfelt gratitude goes to my husband, Majdi, for his unwavering support, patience, and belief in me throughout this journey.

I am deeply thankful to my son Jehad and his family for their love and support, and to my other children, Juana, Mohamed, and Amr, for their understanding and patience during the many challenges of this path.

Finally, I would like to remember my late brother, Maher, and to express my appreciation to my brothers Abdallah, Hatem, and Mahmoud, and my sisters Eman, Ghada, Fatima, Jihan, and Rinad, for their continuous encouragement and faith in me.

Thank you all, from the bottom of my heart.

Sana Jamil Abd Allah Sous

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To everyone, all thanks and appreciation.

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Abstract

This study aims to examine the relationship between credit risk and liquidity risk. Besides, to examine the effect of the interaction between credit risk and liquidity risk on bank stability in Palestine. The researcher used the pooled OLS, fixed effect, and random effect (GLS), Two stage least squares (2SLS) system, 2SLS regression and dynamicGMMto examine the impact of the interaction between credit risk and liquidity risk on the stability of banks in Palestineduring2012–2024.In conclusion, the results confirmed that there is a significant determinate effect of CR and LR on bank stability. On the other hand, the interaction of both CR and LR uniquely has a positive effect on BS. The greater increase in NPL clearly decreases BS, underlining the necessity for robust CR management and LLP. On the contrary, the greater liquidity improves BS and essentially decreases the negative effect of CR on BS. This result is distinctive to the Palestinian sector that holds abundance liquidity. This study also has practical implications for the board of directors of banking institutions, senior executive management, the Palestine Monetary Authority, and economic policy and decision makers to establish optimal strategies and policies to mitigate credit risk and liquidity risk management and to increase the efficiency of monitoring the liquidity of banking institutions as well as their credit risk to achieve financial stability. This study differs from previously conducted studies in that it examines the relationship between credit risk and liquidity risk in banking institutions in Palestine. Then, examining the effect of credit risk and liquidity risk on financial stability.

Keywords: credit risk. Liquidity risk, financial stability, Palestine, Basel III.

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List of Definitions of Abbreviations

1.	BI	Banking institutions
2.	CR	credit risk
3.	LR	liquidity risk
4.	IMF	The International Monetary Fund
5.	ECB	The European Central Bank
6.	CAMELS model	Capital Adequacy, Asset Quality, Management Efficiency, Earnings, Liquidity, and Sensitivity to Market Risk
7.	CAR	Capital Adequacy Ratio
8.	NPLs	Non-performing loans
9.	NSFR	Net stable funding ratio
10.	LCR	The liquidity coverage ratio
11.	COVAR	The conditional VAR () approach
12.	PCBS	Palestinian Central Bureau of Statistics
13.	SA	Standardized Approach
14.	IRB	Internal rating-based Approach
15.	LLR ratio	Loan loss provision to total loans
16.	NIM	Net interest margin
17.	INF	Inflation rate
18.	GDP	Gross Domestic Product

Chapter One: Introduction

1.1 Introduction

The financial performance, business stability, and sustainability of banks are very interesting for any country's economic stability. A stable banking sector is a system in which banking and financial institutions are in a status that can smoothly absorb real banking or financial shocks or unexpected events and occasions. Thus, the board of directors and senior executive management of banks should precisely assess and price the financial risks and manage them to survive in the market (Morgan & Pontines, 2014).

BIs have a pivotal role in the economic development and prosperity of economies (Palečková et al., 2024). Their role in supplying financial information to the economy is equally significant. The existence of highly efficient and well-functioning BIs is crucial for the continued expansion and success of BIs (Rahman & Khan, 2024). Essentially, BIs are profit-seeking institutions striving to survive and achieve business sustainability and growth. However, the success and financial stability (FS) of BIs worldwide have been threatened in the last few years due to economic and political instability, the dramatic increase in nonperforming loans, and the rapid and severe changes in interest rates. Thus, risk and return management are crucial for BIs to be profitable institutions (Isomiddinovich & Jasurbek, 2024).

Banking institutions (BIs) are exposed to several types of risks while they perform their operations, practices, and activities; for instance, they confront credit risk (CR), liquidity risk (LR), operational risk, market risk, foreign exchange risk, and interest rate

risk. BIs are about compelling and managing these risks rather than preventing them (Mendoza & Rivera, 2017).

One of the most significant risks that banking institutions face is credit risk. A substantial portion of their earnings is derived from credit facility activities, such as interest on loans. The failure of creditors and customers to meet their financial obligations can lead to credit risk, which can have a profound impact on the financial stability of these institutions.

One of the severe results of the global financial crisis that hit the world economy in the last few years was the failure and collapse of several tremendous financial institutions, either BIs, insurance institutions, mortgage, and real estate institutions, or microcredit institutions (Liu et al., 2024). The failure and collapse of BIs have affected all the other economic sectors since there is a high interconnection between this sector and the other sectors. Thus, this leads financial and banking regulators, supervisory institutions, and organizations to set efficient policies and practices to protect the interests of the depositors, as they form the essential source of the financial resources of the BIs (Sundaresan & Xiao, 2024).

So, Financial institutions, particularly banking institutions (BIs), ought to articulate and specify the different risks they may expose and the best practices and strategies to mitigate and manage these risks efficiently (Adam et al., 2023). On the other hand, there are several risks that banks confront in their activities and operations; for instance, LR refers to the failure of the BIs to meet their obligations toward customers and other BIs, mainly when there is a large and sudden withdrawal of customer deposits (Ismail & Ahmed, 2023).

CR refers to creditors' failure to repay their financial obligations and loans toward the bank (Dai et al., 2023). However, interest rate risk refers to the volatility or fluctuation of the interest rate in the country (Cherno et al., 2023); operational risk refers to the failure of the BIs and banking technology in the bank, human errors, or the burning down of the bank's buildings (Syadali et al., 2023).

CR, LR, and operational risks that are unsystematic financial risks can considerably affect the stability of the BIs. Thus, risk management assessment and mitigation are exciting tasks for supervisory organizations and financial analysts (Moez & Abdelheq, 2020).

The banks in Palestine are the most attractive economic sector in Palestine, and they are the building block and the backbone of the financial system in Palestine; the turndown of any BIs will have a damaging consequence on the banking sector as a whole, which will make the financial system inefficient and unstable economic sector (Ayyash & Jawad, 2020). Palestine Monetary Authority is highly interested in analyzing and studying the structure and procedure for identifying the bank's concerns, timing procedures, and intervention policies. Thus, through the Banking Supervision Department, the Palestine Monetary Authority constantly monitors financial and banking problems and financial risks in the banks and identifies financial and supervisory strength ratios following the applicable regulations, guidelines, and laws. Likewise, industry standards play an essential role in protecting the interests of the different stakeholders in this attractive economic sector (Iqtait, 2021).

1.2 Importance of the study

This study is essential for the following considerations:

- This Dissertation's findings are attractive to the banks' board of directors and senior executive management in Palestine as it will examine the impact of the interaction between credit risk and liquidity risk in the stability of banks in Palestine and develop efficient policies and strategies to decrease LR and CR by decreasing the size of nonperforming loans and credit facilities, increasing the financial performance and FS of their banks.
- This study will focus on several CR management practices and approaches that may play an exciting role in decreasing CR and LR and developing portfolios at risk performance.
- The findings of this study are attractive to the Palestinian government and Palestine Monetary Authority to set the appropriate and efficient credit requirements along with the control and regulation of banks in Palestine.
- This study helps to complement and add further knowledge to the existing knowledge concerning the impact of the interaction between credit risk and liquidity risk on the stability of banks in Palestine. Thus, efficient credit and risk management policies and procedures decrease the default risk and the size of non-performing loans in customers' banks. Thus, they help banks to improve their financial performance.
- This study is somewhat new since there has been a dearth of studies that have examined this topic in a Palestinian context experiencing high non-performing loans due to an unstable political and economic environment due to the Israeli war against Palestinians either in the Gaza Strip or the West Bank.

- This study references previous empirical studies that explored similar topics and had similar objectives. The impact of the interaction between credit risk and liquidity risk on the stability of banks in Palestine in different countries worldwide. However, this current Dissertation has specific differences regarding the sample selection, the period of study, crisis periods, and exploring the effect of both the external and internal variables on the FS of BIs. Thus, different study results may be obtained from this study.
- This study helps add to the existing literature in Palestine by examining the effect of CR, LR, and the interaction between LR and current risk on bank stability in Palestine. Thus, it would allow the Palestinian regulators to expect the impact of their liquidity status on the stability of banks. Thus, they can specify the optimum liquidity and credit ratio that must be maintained in banks without losing any opportunity cost on liquidity assets held in reserve. Besides, this study allows the regulators to make more efficient decisions concerning their banks, especially since previous studies found significant differences between countries concerning the effect of CR and LR on the stability of banks.
- This study's measurement of the stability of banks in Palestine differs from previous empirical studies, as the researcher will use the Z score to measure the stability of banks. Boyd and Graham (1986) presented this measurement for the first time, and then several researchers, such as Goetz (2017) and Shim (2019), used it.

1.3 Problem of the Study

Several researchers, such as Djebali and Zaghdoudi (2020) and Rupeika-apoga et al. (2020), argued that the study of the effect of CR and LR on the stability of banks in several countries as efficient LR management is an exciting instrument to improve the FS and performance of these institutions.

Although numerous studies have investigated the relationship between liquidity risk and credit risk, gaps remain, and those studies' findings are inconsistent. According to Chowdhury and Zaman (2018) and Mwangi (2017), LR hurts the stability of banks in Bangladesh and Kenya. On the other hand, Alzorqan (2014) and Tabari et al. (2013) found a positive effect of LR on the the stability of banks in Jordan and Iran. Thus, the results of empirical studies in other countries worldwide are not an efficient and accurate basis for similar findings in Palestine.

In Palestine, the unstable political and economic environment contributed to a non-performing loans ratio of 4.2% from December 2008 to March 2022. This figure is higher than in other countries such as Bahrain (3.1%), Egypt (2.6%), and Israel (1%). The non-performing loans ratio may increase further due to the ongoing conflict in the Gaza Strip, which began on October 7, 2023.

Additionally, the researcher found no studies examining the effects of credit risk (CR) and liquidity risk (LR) on the financial stability (FS) of banking institutions (BIs) in Palestine. Therefore, this study aims to analyze the interaction between liquidity risk and credit risk and their combined effect on the stability of banks in Palestine. The goal is to contribute to more effective risk management strategies for banking institutions.

1.4 Objectives of the Study

This study will achieve the following objectives:

- 1 Examining the impact of credit risk on the stability of banks in Palestine.
- 2 Examining the impact of liquidity risk on the stability of banks in Palestine.
- 3 Examining the impact of the interaction between credit risk and liquidity risk on the stability of banks in Palestine.

1.5 Questions of the Study

This study will answer the following questions:

1. What is the impact of credit risk on the stability of banks in Palestine?
2. What is the impact of liquidity risk on the stability of banks in Palestine?
3. What is the impact of the interaction between credit risk and liquidity risk on the stability of banks in Palestine?

1.6 Hypotheses of the study

1.6.1 The impact of credit risk on the stability of banks.

Loan and credit facilities are BIs' financial earnings and performance sources. Besides, they are an exciting factor influencing the bank's regulatory capital requirement. Exposure to CR is an indispensable part of credit. So, banks should manage CR efficiently to achieve stability and improve the bank's financial performance. Banks use quantitative and qualitative instruments and skills to manage CR efficiently (Choudhry, 2018).

CR refers to the potential that the customer will not return the money; thus, CR is an inherent risk in BIs. It refers to the probability or the undesirable setting in which the customer will not pay back the principal or the interest of both the principal and the interest rate when they are due (Hopkin, 2018). Meanwhile, Kamis (2022) defined CR as the

likelihood of failure by one of the customers to a financial transaction. When this takes place, the bank may suffer financial loss. Several researchers have examined the effect of CR on bank stability and financial performance. According to Ahmed, El-Halaby, and Soliman (2022), Ekinçi and Poyraz (2019) found a negative effect of CR on the financial performance of banks.

The first hypothesis:

H1: Credit risk has a negative effect on the stability of banks in Palestine.

1.6.2 The impact of the liquidity risk on the stability of banks

LR occurs when a BI encounters difficulty establishing a match between assets and liabilities' maturities. This problem was prevalent in the global financial crisis (Kim et al., 2015). A high extent of LR occurs in the banking sector when customers superfluously draw capital from the banks. Moreover, liquidity analysis is measured from the bank's financial position on the balance sheet. Banks use several quantitative instruments to measure liquidity ratios (Edem, 2017).

Banks may confront LR when there is a mismatch between bank assets and liabilities (Choudhry, 2018). LR refers to the likelihood of the bank failing to meet its financial obligations when they are due. Meanwhile, Skoglund and Chen (2015) stated that LR is a risk that takes place due to market or bank-specific occurrences. Thus, measurement and assessment of the prospective source may decrease cash inflow and increase cash outflow, and these practices are very interesting for BIs.

Several studies have documented a negative effect of LR on bank stability, such as Gadzo, Kportorgbi, and Gatsi (2019), Noman et al. (2015), and Ruziqa (2013). Likewise, Ishak et al. (2016), Ndoka and Islami (2016), and Tan, Floros, and Anchor (2017) demonstrated that the increase in illiquidity would lead to an increase in LR (Li & Zou, 2014; Menicucci & Paolucci, 2016; Ruziqa, 2013).

Dahir (2018) postulated that LR has a negative effect on BIs' FS. Furthermore, Chen et al. (2018) and Ly (2015) also found a negative effect of LR on bank FS. Similarly, Adelopo et al. (2018), Onsongo et al. (2020), and Saleh and Abu Afifa (2020) found a negative and significant effect of LR on the financial performance and FS of BIs. Marozva (2015) uncovered a negative correlation between long-term debt and FS.

The second hypothesis:

H2: Liquidity risk has a negative effect on the stability of banks in Palestine.

1.6.3 The impact of The Interaction Between credit risk and liquidity risk on the stability of banks.

Ejoh, Okpa, and Inyang (2014) found a negative effect of the integration of CR and LR on the FS of BIs in Nigeria. Furthermore, Mbierowicz and Rauch (2014) also uncovered an adverse effect of LR and CR on banks' FS, increasing the probability of default in BIs in the USA. Ghenimi, Chaibi, and Omri (2017) also demonstrated the negative effect of LR and CR on the financial performance of BIs in the MENA region. Setiawan, Sudarto, and Widiastuti (2019) also revealed a negative effect of CR and LR on the FS of BIs in Indonesia. Also, Zaghdoudi (2019) revealed a negative effect of CR, operational risk, and LR on the FS of BIs in Tunis. Eventually, Djebali and

Zaghoudi(2020) analyzed the effect of the LR and CR on banking stability in the MENA region. The study found a negative effect of the CR and LR on bank stability.

Several researchers examined the effect of the interaction between CR and liquidLR on bank stability in BIs in Palestine. These results found different results and implications. In a study performed by Diaconu and Oanea (2014), they found that CR and LR have a negative and significant effect on bank stability. Furthermore, the study results demonstrated that there is a positive and significant effect of LR on banks' financial performance in BIs. Meanwhile, they found that there is a negative and significant effect of CR on bank stability.

Setiawan et al. (2019) revealed that CR and LR significantly affect bank stability. CR negatively and significantly affects bank stability, while LR has a positive effect. However, Matey (2023) revealed liquidity's negative and significant effect on bank stability. Thus, investing in securities that earn interest is necessary to improve the bank's financial performance and increase its stability. However, CR has an insignificant and adverse effect on bank stability.

Likewise, Imbierowicz and Rauch (2024) examined the effect of liquidity and CRs on bank stability in US banks. They found that these two types of risks increase the probability of default. Likewise, Amara and Mabrouki (2019) demonstrated the significant and negative impact of CR, LR, and their interaction on bank stability. Ghenimi et al. (2017) demonstrated an insignificant correlation between CR and LR in the MENA region. However, they affect bank stability separately, and the interaction between credit and LRs leads to bank instability.

Zaghoudi (2019) investigated the effect of credit and LRs on bank stability in Tunisian-all banks. The study revealed a positive effect of LR on bank stability. On the other hand, CR has an insignificant effect on bank stability. Moreover, the interaction between credit and LRs negatively affects bank stability. Moreover, Bencharles and Nwankwo (2021) found a negative but insignificant effect of CR on bank stability in all Nigerian banks from 2009 to 2019. The researchers used non-performing loans as a proxy for CR. Likewise, Ahmad et al. (2019) revealed an insignificant effect of the interaction between liquidity and CR on bank stability in all banks in Tanzania.

Also, Al Hussaini (2019) examined the correlation between CR and banks' FS. They found that CR significantly affects a bank's FS. Moreover, Siyanbola and Adebayo (2021) study the impact of CR on banks' FS in Nigeria. The study results demonstrated a positive and significant effect of credit management on bank stability in Nigerian banks. Sang Tang My (2022) examined the effect of CR on bank stability in commercial banks in Vietnam. The study found CR's vivacious and significant impact on the bank's FS.

Ismail and Ahmed (2023) examined the impact of LR, CR, and operational risk on the FS of Jordanian commercial banks in Jordan during 2016-2021. The findings revealed that LR has an insignificant effect on the bank's FS. However, it remains an exciting determinant of banks' FS. However, CR negatively and significantly affects the bank's FS. Thus, Jordanian banks have to develop efficient liquid and credit strategies to mitigate the effect of these risks on the financial performance and stability of BIs.

The third hypothesis:

H3: The interaction between credit risk and liquidity risk has a negative effect on the stability of banks in Palestine.

1.7 Limitations of the Study

1. Locative Limitations: This study is limited to BIs in Palestine.
2. Temporal Limitations: This study covers the period 2012 -2024.
3. Topical Limitations: The impact of the interaction between credit risk and liquidity risk on the stability of banks in Palestine.

1.8 Delimitations of the Study

1. This study examines the effect of LR, CR, and the interaction between LR and CR on the stability of banks in Palestine. However, several external and internal factors influence the stability of banks. These variables will be beyond the scope of this study.
2. The researcher conducted this study on the banks in Palestine. However, it is impractical to generalize the findings to other countries and economies as they have different political and economic conditions and determinants.

1.9 Definition of Terms

- **Bank Stability:** “It refers to how effective and efficient a bank is as an intermediary in surviving internal and external sector disturbances” (Ali et al., 2019).
- **Credit risk:** “It is the likelihood of losing part or total of the loan since the customer cannot repay the loan on time” (Basel, 2000).
- **Liquidity risk:** refers to the risk when a firm cannot achieve its existing and future cash flows, thus influencing its financial condition” (Basel, 2008).

1.10 Tentative Outline

This study consists of five chapters. The First Chapter is the introductory chapter that presents the background of the study. Then, the problem of the study will be defined, especially since limited studies have examined the effect of CR and LR on the stability of banks in Palestine. Next, define the objectives, questions, and importance of the study as well as the framework of the study. The Second chapter includes the theories of the study, the literature review, the development of the study's hypotheses based on previous empirical studies, and the identification of the contribution of the existing study. The Third chapter is the research methodology, which includes the research approach and design, population and sample, data collection methods, the definition of the variables, the statistical methods and techniques that the study will use to achieve the objectives of the study, and answer its questions as well as examining the hypotheses of the study.

The Fourth chapter analyzes the variables to examine the effect of the CR, LR, and the interaction between CR and LR on the banks in Palestine. The Fifth chapter summarizes the study, discusses the results, discusses practical and theoretical implications, discusses limitations, and suggests future studies.

Chapter Two: Literature Review

2.1 Theoretical Foundations

This section presents the constructions of the study through defining the concept of the financial stability and the stability of banks, its importance and role in bank success and economic development in general, the measurement of the stability of banks. The Second, construct is the credit risk definition, measurements, determinants, and its effect on the stability of banks. The third construct is the liquidity risk definition, determinants, measurements, and its effect on the stability of banks. Then, analyzing the effect of the interaction of credit risk and liquidity risk on the stability of banks.

2.1.1 Banking Financial Stability

2.1.1.1 Definition of Banking Financial Stability

The International Monetary Fund (IMF) (2004) stated that financial stability refers to “the ability of the financial system to ease and support economic processes and functions, manage risks effectively and efficiently, and absorb shocks.” (Damane & Ho, 2024).

The European Central Bank (ECB) stated that, financial stability denotes to a state in which the financial system that consists of markets, financial intermediaries, financial institutions, and market infrastructure are able to absorb shocks and extrication financial imbalances (Gortsos, 2024).

Jahn and Thomas (2014) defined banking financial stability as “A steady and strong banking system in which banks exercise their functions effectively especially allocating existing resources, risk diversification and allocation, and distributing income”.

Meanwhile, Alber (2017) stated that financial stability refers to a persistently healthy, resilient, and strong financial system that has the ability to captivate internal as well as external shocks and disorders and endure execution its essential functions and providing its core services effectively and efficiently.

Financial stability refers to the capability of the financial system to tolerate shocks and prevent financial disorder (Bozic & Bozic, 2025). Thus, maintaining constant brokerage processes and permitting efficient distribution of savings into profitable investment opportunities (Ullah et al., 2024). This involves smoothing effective and efficient economic condition, evaluating, pricing, allocating, and managing various financial risks confirming the financial system's ability to work reliability despite a core external shocks or disturbances, reinforced by self-correcting instruments and device (Ballouk et al., 2024).

According to Olokoyo et al., (2021) stability of banks refers to the ability of banks to struggle economic shock, absorb the adverse effects of financial crises and evaluate and manage risks that banks may expose to them. Whereas, Bozic and Bozik (2025) stated that financial stability refers to a period of the absence of instability of banks, it's the ability of financial system and banks resist shocks and financial crises (Mabkhot& AL-Wesabi, 2022)

Financial stability also refers to a strong and healthy financial system of intermediaries, financial markets, and financial institutions such as insurance institutions, micro finance institutions and banks, and infrastructure that can get-out of the severe and major adverse impacts and imbalances due to shocks and crises to ensure a continuous and efficiently

functioning financial system that can preserve its core function of channeling savings towards profitable investment opportunities (Morgan & Ponines, 2014).

Based on the above definitions of the stability of banks concept, the researcher defines a stability of banks as a banks that have the ability to distribute resources effectively and efficiently, manage resources and assets efficiently as well as to evaluate financial risks, keep employment levels near to the normal rate of the economy. Furthermore, to avoid the relative price movements of actual or financial assets that will influence monetary stability or achieve a full employment.

2.1.1.2 Determinants of The stability of banks

There are several views have examined the determinants of the stability of banks that are information asymmetry that was presented by Akerlof. The competitions fragility view, and the competitions stability view (Song et al., 2024)

According to the information asymmetry view, banking customers fail to differentiate between high quality banking products and services and low quality products and services since there is inadequate information available to them (Zanfack et al., 2024). Thus, those customers ask a product a reasonable price that is the price between the high quality and low quality banking products and services. Thus, there is market price distortion led by the inability of banks to price the risk precisely that may lead to financial instability in banks. However, the competition fragility view assumes that intensive competition is an interesting factor that leads to financial stability (Bakhouché, 2024). According to this view a stable bank deserves to have less competition as financial performance works as an interesting instrument that lead to financial fragility (Beck et al., 2010). Thus, intensive and strong competition decreases profit margin by decreasing the power of the market.

Bank franchise value is thus decreasing. In this case, banks' increased risk taking is a consequence of efforts to increase earnings. Banking stability may be affected negatively and decrease by intensive banking industry competition (Thanh et al., 2024).

However, the competition stability view demonstrated that financial fragility can be caused by low competition level and focused banking structures. Banks accept more levels of risks as of increased competition (Begimkulov, 2024). The use of the banking institution of existing resources or other risk mitigating strategies permitted the banking sector to maintain stable state despite the risk level increased. A focused banking structure distorts financial stability by causing systematic instability the existence of PMA adds another level of control that significantly protect against malpractices and encourages a resilient banking system to decrease instability risk (Ahmad, 2021).

There are several factors that affect the financial stability of the country these are as follows:

Liquidity risk: Liquidity risk denotes to the insufficiency of liquidity in financial markets, as it's hard for firms and organization to get financing to achieve their daily needs or finance their investment projects. In a study performed by Pricewaterhouse Coopers, (2015) liquidity in capital market support economic development by facilitating capital flow and effective risk allocation, decreasing issuance costs for firms. Besides, it increases price discovery and effectiveness of monetary policy in the country. Eventually, there is a positive association between liquidity, return on assets, and stock price movements that demonstrated the firm value and liquidity risks.

Credit Risk: Credit risk refers to the potential that borrowers may default on meeting their contractual obligations and meeting their loan payments as they become due. Credit risk is one of the utmost significant risks that face banks, given that they are lending and financial institutions and survive on customers meeting their settlement payments.

The financial intermediation theory underscores the central role of banks in channeling short-term deposits into long-term loans. This maturity transformation is at the heart of banking, but it naturally gives rise to both liquidity and credit risk. Bryant (1980) formalized liquidity risk by showing that uncertainty about withdrawals can trigger bank runs, and that mechanisms such as deposit insurance can mitigate this risk and strengthen stability. Diamond (1983) introduced the concept of delegated monitoring, whereby banks reduce credit risk by screening and supervising borrowers on behalf of dispersed depositors, thus addressing information asymmetries. Building on this, the Monti–Klein framework (Monti, 1972; Klein, 1971) treats banks as profit-maximizing firms that set loan and deposit rates under imperfect competition, embedding default risk while assuming liquidity conditions are given. These perspectives highlight how credit and liquidity risks interact to influence bank stability. Rising credit risk reduces earnings and capital buffers, making funding more fragile and increasing the likelihood of distress. Liquidity strains, in turn, may force banks into rapid asset sales, crystallizing losses and further eroding capital—thereby amplifying credit risk. In Monti–Klein terms, shocks to default probabilities or funding costs compress intermediation margins and slow the accumulation of capital, raising failure risk. The overall implication is clear: robust capital and liquidity buffers, complemented by deposit insurance and credible lender-of-last-resort support, are essential to breaking this adverse feedback loop and ensuring the resilience of banks.

Global Impact/ Crises:It refers to a set of global economic events or environments that may considerably influence the effectiveness and efficiency of the financial system of a country for instance global financial crisis in 2008 or global economic recession (Giraldo et al., 2024).

Zugic and Fabris (2014) defined a financial crisis as a case when the financial system or any of its components such as financial markets, financial institutions such as banks, and infrastructure such as technological infrastructure confront risks that affect negatively their functions as a result of different factors. These conditions and malfunctions lead to economic recession or economic costs when the problem in banks increases it will affect negatively affect other economic sectors negatively. (Mckibbin& Stoeckel, 2010).

Operational risk: Operational risk are challenges and issues that financial firms may confront in doing their activities and operations effectively and efficiently and effortlessly for instance technology or management problems. In this regard, financial risks include complicated and uncertain positions that can lead to decreasing financial performance or achieving losses (Iqbal et al., 2024).

Whereas risk and uncertainty are usually interrelated, risk basically relates to quantifiable uncertainty. Precise measurement and evaluation of investment risks are very interesting for making good sound decisions. There is a positive correlation between understanding the bank environment and the effectiveness and efficiency of risk mitigating and risk management (Aloqab et al., 2018).

Payment System Threats: Payment system threats denotes to any threat that confront the payment system at any country for instance cyber hacking attacks or manipulation of payment methods (Pandey &Rostogi, 2010). The existence of secure payment system is

very interesting issue in E. commerce. Furthermore, Badwan and Awad (2023) found a positive effect of financial inclusion, digital financial services, total loans to SMEs, and adequate capital on the stability of banks in Palestine during 2012 -2022.

Efficiency of the Regulatory Organizations: In a study of Mwangi et al (2019) examined the determinants of financial stability in banking in situations in Kenya during 2000 -2015. A sample of (39) banks were examined. The study revealed that the most significant determinants of financial stability are bank size, bank funding, efficiency of the regulating organizations, and the efficiency of the corporate governance system and mechanisms. Likewise, Ozil (2018) examined the determinants of the stability of banks in a set of African countries during 1996- 2015. The study found a significant effect of bank effectiveness and efficiency, foreign bank presence, banking concentration, size of the banking sector, efficiency of the regulating organizations and government, political stability, quality of regulatory institutions, protection of investors and shareholders, and unemployment rate in the country

Contagion: The financial contagion refers to turbulences or emergencies expand from one financial market to another market across boarders increasing financial strains and pressure (Masno et al., 2024).

Macroeconomic environment: Changes and transformations in macroeconomic environment such as the changes in financial and economic landscape for instance new laws and regulations and innovative technology can influence the ways that financial system functions (Badwan et al., 2024).

Political instability and turmoil: Instable political environment leads to uncertain environment and significant fluctuations in financial and economic policies that affect considerably financial stability (Badwan et al., 2024).

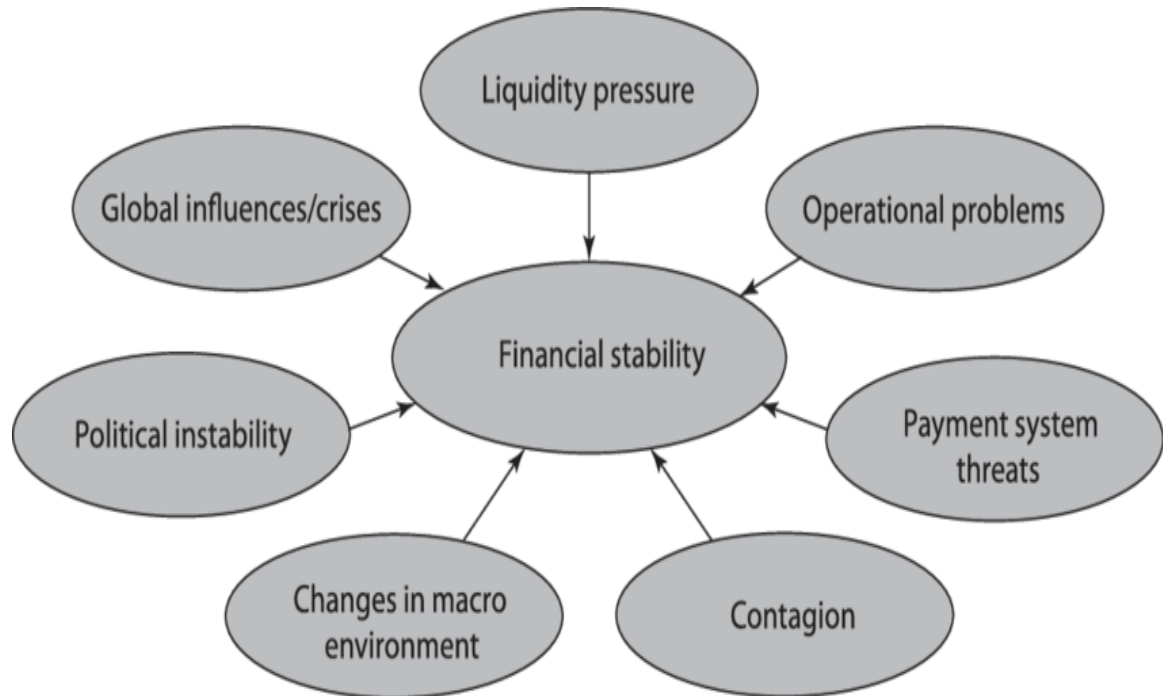


Figure 2.1 Determinants of bank stability

Source: Author

2.1.1.3 Importance of Financial Stability

The financial system acts an essential role in economic development through smoothing the transfer of funds from savers to borrowers. It is interesting to avoid economic depressions and economic decline that can affect negatively all economic sectors in the country. It demonstrates effective and efficient resource distribution and risk management. It is very interesting for sustainable development and stability of prices, objectives very interesting to a robust economy (Jameaba, 2024).

Stable financial markets decrease volatility, support strong decision making, and support economic efficiency in allocating existing resources, supporting banks and financial institutions fosters market reliability boost economic resilience. Furthermore, Alber (2019) found that financial stability is interesting to maintain the fundamental functions of a financial system of channeling funds between savers and investors, processing payments, managing risks, and pricing assets even throughout crises.

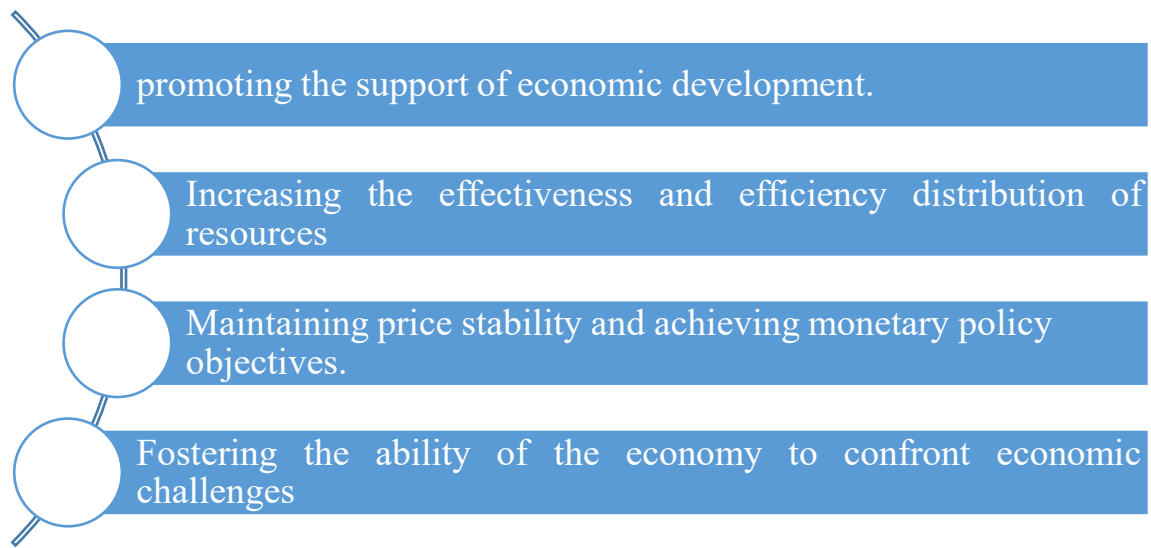


Figure 2.2 Importance of Financial stability

Source: Author

2.1.1.4 Measurement of Financial Stability

There are two general approaches of measuring the stability of banks that are: The firm level stability measures and the systematic approach of measuring financial stability.

2.1.1.4.1 Firm-Level Stability Measures

2.1.1.4.1.1 CAMELS Model

The CAMELS model is an important American financial model used to evaluate the elements of the banking system; its purpose is to identify strengths and enhancing them. Due to the efficiency and effectiveness of this financial model, most central banks around the world have adopted it to support the financial robustness of their banking sectors. The CAMELS model includes six key dimensions, with the name of the model reflecting the first letter of each dimension: Capital Adequacy, Asset Quality, Management Efficiency, Earnings, Liquidity, and Sensitivity to Market Risk(Wanke et al. 2022).

Capital Adequacy: This is used to assess the bank's solvency and represents the amount of capital that is appropriate enough so that the bank can perform its functions and activities without facing losses or liquidation. The lower the probability of the bank's insolvency, the higher its financial adequacy (Sharma et al., 2025).

Asset Quality: The quality of assets is analyzed through the risk level of loans, fixed assets, investments, and off-balance-sheet operations. The bank should have the ability to measure, monitor, and define risks to evaluate asset quality, taking into account the level of provisions for doubtful debts (Durdona, 2025).

Management Efficiency: Administrative performance is a main component in judging the bank's success in achieving its goals. This is achieved through having a highly competent and effective board of directors and executive management capable of handling

environmental and banking developments and maintaining necessary control and supervision (Sharma et al., 2025).

Bank's Earnings: The bank's income is derived from the difference between interest earned on assets and interest paid on liabilities. Therefore, attracting deposits through various competitive means (price-based and non-price-based) is a priority, as the bank invests these deposits in credit operations to generate income and profit—these are the main objectives the bank seeks to achieve (Jothr et al., 2021).

Bank Liquidity: This refers to the commercial bank's ability to meet its cash obligations, respond to credit requests, and lend new loans. It requires having liquid cash available or the ability to liquidate some assets quickly into cash, meaning converting assets into cash smoothly and with minimal loss (Wanke et al. 2022).

Sensitivity to Market Risk: This indicates the current and potential risk to profits and equity resulting from adverse movements in market rates and prices. It encompasses three areas: interest rate risk, equity price risk, and foreign exchange risk (Sharma et al., 2025)

Concept of Capital Adequacy Ratio (CAR)

It refers to the minimum capital requirements designed to reduce banking risks. Banks must maintain capital levels sensitive to the risks associated with each asset class, especially loans, according to weights linked to credit rating agencies' assessments and Basel standards. This means banks must hold capital proportional to their credit, operational, and market risks, maintaining a minimum core capital ratio of 8% of risk-weighted assets.(Jothr et al., 2021).

1. Basel I (1996): Introduced market risk, with a third capital layer (support loans with at least 2-year maturity, up to 250% of core capital). The CAR was calculated as total capital divided by risk-weighted assets, with a minimum of 8%.
2. Basel II (2004): Added operational risk, revised capital components, and included a third layer for short-term debt covering market risks.
3. Basel III: Implemented the following formula:

$$\text{CAR} = \frac{\text{Total Capital (core + supplementary)}}{(\text{Credit risk} + \text{Market risk} + \text{Operational risk})}$$

Market Risk Sensitivity

As banking activities become more complex, exposure to various risks increases—especially with technological reliance and deregulation. The banking sector faces sudden challenges due to changing economic conditions and interconnected sectors, both internationally and locally, making it highly vulnerable to market risks (Kagima & Munene, 2025).

Market Risk Concept

Market risk involves potential losses due to adverse movements in market variables such as interest rates, equity prices, and exchange rates, which can impair a bank's ability to operate effectively.

The most prevalent types of market risk are: liquidity risk, implementation risk, legal risk, collateral erosion risk, maturity risk, pricing risk, market risk (interest rate, equity, currency) (Georgios & Konstantina, 2025).

2.1.1.4.1.2 Z Score

The most common measurement of the stability of banks is the Z score. This measure compares capitalization and returns compared to risk that is the volatility of returns to evaluate solvency risk of a certain bank (Verma &Chakarwarty, 2024).

$Z \text{ score} \equiv (k+\mu)/\sigma$, where k is equity capital as a percentage of total assets, μ is returned as a percentage of total assets, and σ is the standard deviation of ROA as a measure of volatility of returns (Mawardi et al., 2025). This measure is the most common measure of the stability of banks as it has a negative correlation with the likelihood of the insolvency of the financial institution. That is the expectancy that the value of bank assets becomes lower than the value of the total debts. Thus, there is an inverse correlation between Z score and probability of insolvency (Čihák and Hesse., 2010).

There are a number of drawbacks of using Z score as a measure of the stability of banks as this measure is purely an accounting measure. Thus, it is interesting to use in accounting and auditing practices and framework. Thus, if the financial; institutions used earnings management, it will make the Z score gives optimistic image about the stability of the the stability of banks (Sattar et al., 2025). Besides, this measure function with each banking institution separately. However, it ignores the relationship among the various financial institutions that is the failure of one banks will lead to devastating impacts on other financial or banks (Tarkocin&Donduran, 2023).

2.1.1.4.1.3 Merton Model

Merton model was used by Merton in (1974). This model is usually used to evaluate the ability of the financial institution or the bank institution to meet its financial obligations when they due and calculate the probability of credit default. This model value demonstrated the way that several; standard deviations asset values (A) are greater than debt (B) and the percentage of units that went bankrupt in a one-year time with that several STD of asset values greater than (B) (Olugboyega et al., 2019).

Another name of the Merton Model is the asset value model that deals with the equity of the financial institution as a call option on its held assets, taking into consideration the volatility of the assets of the bank or the financial institution.

This model was used firstly to evaluate option pricing using a structural model to calculate the probability of default based on the propositions of different constructs of capital and liabilities. This model has the following assumptions (Valaskova&Kliestik, 2014):

- 1 Validity of the Modigliani-Miller Theorem: This means that a firm`s overall value rests unaffected by its capital structure decisions.
- 2 Nonexistence of Transaction Costs and Taxes: corporate assets are perfectly separable, and all market participants have complete and perfect information, with no taxes affecting transactions.
- 3 Likelihood of Short Selling: Investors and shareholders have the prospect to sell assets short.
- 4 Structure of Corporate Liabilities: The debt of the business consists of a single zero-coupon bond with a face value of K maturing at time T.

- 5 Fixed Debt Structure: The business's debt arrangement rests fixed over time and does not change.
- 6 Investment Risk Independence: The risk level of the investment does not rely on how close the business to default.
- 7 Bankruptcy at Maturity: The business is bankrupt just at the end of the period T, which concurs with the maturity of the zero-coupon bonds.
- 8 Persistent Risk-Free Rate: The risk-free interest rate remains unaffected over time.
- 9 Equal Lending and Borrowing Rates: The rates for lending and borrowing capital are same.
- 10 Asset Value Dynamics: The evolution of the firm's asset value follows a Brownian motion process.
- 11 No Dividends Paid: The firm does not distribute dividends to shareholders.
- 12 Lognormal Distribution of Asset Values: The firm's asset value develops according to a lognormal distribution, ensuring it cannot be negative.
- 13 Priority of Creditors & Zero Bankruptcy Costs: Creditors have absolute priority in claims, and costs associated with bankruptcy are assumed to be zero.
- 14 Market Arbitrage-Free: The market operates under the assumption that there are no arbitrage opportunities.

According to Köseoğlu (2023), Merton Model is an interesting model to measure default risk as this measure expects the opportunity of default bank during a s certain period of time. Lehar (2005) used this model to measure likelihood of default of banks and evaluate systematic risk in a sample of (149) banks in North America, Europe, Japan and other areas

in the world during 1988- 2002. The study results confirmed that default risk has decreased in North America. However, it has amplified in Europe at the same period.

2.1.1.4.2 Systemic Stability Measures

These measures of the stability of banks use the weighted average of each measure by the relative size of the firm. The main drawbacks of these approaches that they require to take into consideration the interconnectedness of financial institutions; that is, one institution's failure can be spread to other institutions.

2.1.1.4.2.1 The First-to-Default probability:

This method is used to measure systematic risk for large scale financial institutions. This approach uses risk-neutral default probabilities from credit default swap spreads. In contrast to DD measures, the probability identifies that failure to pay among a number of organizations can be associated. Nevertheless, researches concentrating on probabilities of default tend to oversee that a big firms tend to fail more than small ones (Adewumi et al. 2024).

2.1.1.4.2.2 Systemic Expected Shortfall (SES)

Acharya et (2010) and Acharya et al (2017) presented the Systematic expected shortfall and the marginal expected shortfall respectively, which measure the systematic risk contribution of each financial institution by emphasizing on their tendencies and undercapitalization within the broader system context.

This is an interesting systematic measure that evaluate contribution of each financial institution to systematic risk. This method takes into consideration the individual taking leverage and risk taking into consideration and it measures the externalities from the

banking sector to the real economy when these firms collapse. The SES model is interesting at recognizing which firms are systemically relevant and would have the largest effects, if they fail, in the broader economy (Wang et al, 2021).

2.1.1.4.2.3 Shapley Value

The core principal of the Shapley value is to allocate the entire systematic risk of the banks or financial system into individual banks or financial institution based on their unique characteristics and contributions (Grasso et al., 2023).

Tarashev et al (2018) used the Shapley value to measure the likelihood of the systematic risks at financial institutions. This method or technique was derived from the cooperative game theory as it distributes the collective payout of a game among players by taking into consideration the marginal contribution of each player in the market. Thus, the systematic risk quantifies specific contribution of each firm to the total risk of the market. Thereby Shapley values assigns a means to assess this contribution.

Cao (2013) presented a new model of systemic risk that combines the Shapely value model and the multi-COVAR method that quantify the value-at-risk (VaR) of one financial firm conditional on the VAR of others. This method of calculating systemic risk of each firm's contribution to systemic risk by evaluating its Shapley value based on the multi-COVAR measure. Besides, Granger causality tests are used to examine the directional and strength associations among various financial institutions or financial sectors, providing a clear understanding into their interconnectedness.

2.1.1.4.2.4 Principal Component Analysis with Granger Causality

Billio (2012) used principal component analysis with Granger causality to systematically analyze interconnectedness and systemic risk in the finance and insurance sectors. According to Jima and Makoni (2023) this method of default measurement is a statistical method that recognizes fundamental dynamics energetic the co-movements among financial assets, serving to discover joint risk foundations moving the whole financial system. However, Granger causality evaluates the underlying effect and the extent of interconnectedness among organizations or sectors by analyzing if past values of one variable is significantly expect another (Arebo et al., 2025).

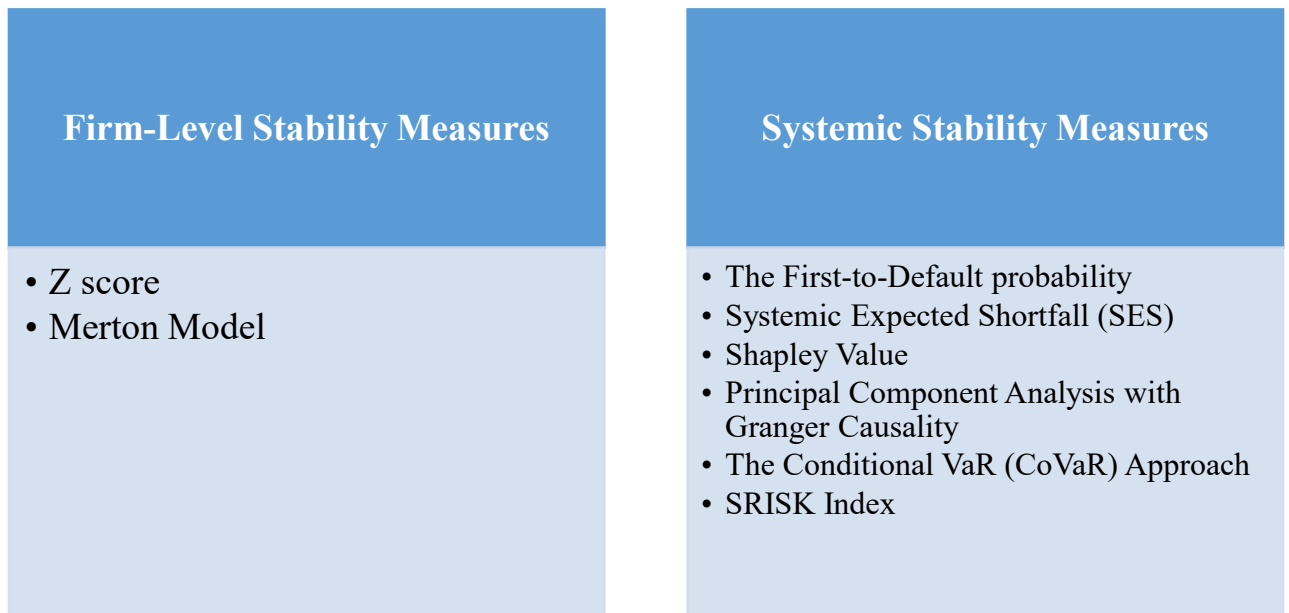
2.1.1.4.2.5 The Conditional VAR (COVAR) Approach

Adrian et al. (2016) presented the conditional VAR (COVAR) approach to measure systemic risk by calculating the VAR of the whole system conditioned on a distress of financial institutions. The conditional VAR (COVAR) approach concentrates on tail dependence, showing the degree to which a risk of financial institution is affected by severe events affecting others. MES extends COVAR by taking into consideration the mutual allocation of asset returns and evaluating the probable shortage of the system when an organization is in distress, so that taking into consideration both spillover impacts and interconnectedness (Roudgar&Zomorodian, 2025).

2.1.1.4.2.6 SRISK Index

Brownlees andEngle(2017) presented the SRISK model to measure the extent of capital required to restore a financial institution to its pre-crisis level throughout a market-wide recession, whereas accounting for its interconnectedness with the larger system. SRISK assesses the probable systemic effect of the failure of collapse of an organization, working as an entire measure of systemic risk (Gupta and Kashiramka, 2021).

Figure 2.3 Measurement of the stability of banks Models



Source: Author

The researcher will use the Z score to measure the stability of banks in Palestine as it is widely accepted and used in previous empirical studies to measure the stability of banks and bankruptcy risk of banks as it is an interesting early warning indicator that has the potential to provide a proactive measure of potential financial distress, that gives regulators and managers to detect exposures before crises take place. In addition, Z score is a comprehensive measurement that integrates several financial ratios for instance financial

performance, leverage, and liquidity—into a single metric, providing a holistic view of bank stability. Furthermore, Z score allows to conduct comparability across banks and time as standardized scoring allows comparisons among various banks and over various periods, that help to conduct benchmarking and trend analysis. Likewise, the Z-score is somewhat straightforward to compute using publicly available financial data, making it accessible for analysts and regulators. Eventually, a large number of studies have validated the Z-score's effectiveness in predicting bank failures across various contexts and regions.

2.1.1.5 Basel III Framework

The recent global crisis (2008) prompted a deep and comprehensive review of financial and banking systems and regulations at the local level in each country, as well as internationally concerning international banking standards and rules. Many official and private entities, both locally and globally, conducted extensive studies and analyses to understand the causes of the problem and to propose necessary reforms to enhance the resilience of financial and banking systems, making them less susceptible to crises. Generally, studies and analyses revealed that weaknesses included broad aspects of banking activities and practices, such as high-risk investments, complex securitization and re-securitization practices, and risk management practices. Basel III represents developments undertaken by the Basel Committee to increase capital and liquidity, which would enhance the resilience of the banks. Enhancement of Capital Quality: it is considered paramount by the Basel Committee to enhance the quality of capital to maintain the resilience in absorbing losses and ensuring continuity of credit institutions' activities. Capital components are no longer sufficient and strengthening them is required. The Basel Committee proposes increasing the minimum requirement for shareholders' equity, which

is the highest form of capital that can absorb losses, from the current 2% to 4.5%. It also suggests raising the Tier 1 Capital requirements from 4% to 6%. Additionally, the reforms introduce a new type of capital held by banks—2.5% of the minimum required capital, which should be from shareholders' equity—to ensure banks retain protective capital that can be used to absorb losses during financial and economic crises. Under the new agreement, banks will also hold a form of buffer to counteract the negative effects of economic cycle fluctuations, ranging between 0% and 2.5%, consisting of shareholders' equity. This agreement also introduces a new standard. The leverage ratio, which must not be less than 3%: $\text{Leverage Ratio} = \text{Tier 1 Capital} / \text{Total Assets}$

Liquidity According to Basel III

The most significant innovation introduced by Basel III is the inclusion of two liquidity ratios for banks, one for the short term and the other for the long term. Given the importance of bank liquidity demonstrated during the 2007 crisis, this innovation is clearly understood.

- Liquidity Coverage Ratio (LCR): To enhance short-term resilience to expected risks by ensuring the availability of sufficient high-quality liquid assets that can withstand a 30-day crisis.
- Net Stable Funding Ratio (NSFR): To enhance longer-term resilience (over a year) by aligning the structure of assets and liabilities.

Key Benefits of Basel III

The main advantages include reducing the likelihood of future financial crises, increasing banks' reserves and capital, and promoting greater transparency in the financial world.

2.1.1.6 The Situation of Financial Stability in Palestine

According to the Palestinian Central Bureau of Statistics (2024) the Palestinian economy has suffered of sever contraction in 2023 especially in the fourth quarter of 2023 as GDP in Gaza strip has decreased by more than (80%) accompanied by an increase in unemployment by 74% and 22% in West Bank with an employment rate of (29%), and the GDP in Palestine has decreased by more than 33% in that period.

The Israeli occupation aggression on Gaza Strip has significantly affected the economic conditions in Palestine either in Gaza Strip or West bank. Thus, these conditions have decreased the GDP in Palestine by more than \$1 billion that is a decrease by 6.2% compared to 2022.

There are several factors have integrated to increase economic destruction in Palestine in 2023 that included: decreased external and foreign financial support and aids, tax revenue deduction by Israeli occupation and the result of continuation of Israeli aggressions against Palestinian in Gaza Strip and West bank.

Weakened economic structure: The Zionist occupation aggression on the Gaza Strip has caused structural economic deviation that has affected the life of 2.3 million Palestinian in Gaza Strip, consumption rates and basic resources in a small highly crowded area (PCBS, 2024).

Thus, maintaining financial stability in Palestine is a complicated process due to the diversity of threats and challenges that Palestinian economy suffers such as lack of natural resources, lack of external financial supports, lack of technological infrastructure, instable economic conditions, Israeli policies and procedures against Palestinians, (Palestine Monetary Authority, 2020).

PMA suggested using three indicators to measure financial stability in Palestine that are: The bank sector index, the real economy index, and the Capital market index. According to the the stability of banks index it emphasizes on capital adequacy, leverage, non-performing loans, liquidity, financial performance, and expense management. Whereas, the real economy index focuses on budget deficit, current account deficit, and government debt. Eventually, the Capital market index focuses on capital. market health through integrating market capitalization, market volatility, and indicators of insurance sector (PMA, 2020).

According to the statistics of PMA, Palestine has a relatively stable banking sector and real economy. Unfortunately, it has somewhat volatile capital market. Thus, PNA should take policies and procedures to decrease market volatility to increase financial stability in the country.

The value of entire financial stability ranges from 0 -1. The near to (0) indicates that the financial structure of the bank is weak. However, when it is near to (1), this indicates that the financial structure of the bank has a high degree of stability.

In Palestinian case, the data shows a weak index of financial stability as it isvalue is (0.52) points in 2014 and has decreased to (0.41) in 2019 and then to (0.30) in 2020. This index is calculated based on data from banks, the Palestine capital market authority, and the insurance sector and other macroeconomic indicators. However, the highest organization to obtain data to calculate the overall index of financial stability in Palestine is from the banking department. However, The Palestine monetary authority demonstrated that the indicator of financial stability has improved during 2020 compared to 2019 as it has increased from (0.26) 2019 to (0.30) in 2020 due to improvement in liquidity. Meanwhile,

the capital adequacy ratio remained at the same level during 2019 -2020 of both local and foreign banks as the PMA asks banks in Palestine to main this percentage more than 12% compared to recommendations of Basel committee that asks banks to main a percentage at least (9%). Thus, banking sector in Palestine still has a strong and stable financial sector.

The Financial Stability Index is a supplementary tool to stress testing and early warning systems, reflecting the level of risks and volatility within the financial system. Throughout 2024, the index showed signs of fluctuation and decline amid increasing challenges that affected overall financial stability, primarily due to the Israeli aggression on Gaza and its impacts on the West Bank, along with intense economic pressures resulting from these events.

2.1.2 Credit Risk

This section provides a comprehensive overview of credit risk, including its definition, the various types of credit risk, and methods for measuring it. It also explores the approaches to assessing credit risk in accordance with Basel II standards, examines the key determinants that influence credit risk, and discusses the impact of credit risk on the stability of banks.

2.1.1.7 Credit Risk Definition

Lending is one of the core activities and functions of the banks that has an essential role of achieving customers' needs and requirements to improve the financial performance of the bank and to increase the efficient utilization of existing resources to achieve economic development (Naili & Lahrichi, 2022). Thus, banks provide customers with a wide array of credit facilities either direct facilities such as loans or overdrafts or indirect credit facilities

such as letter of credit and bank guarantees to promote internal and external foreign trade (Suyanto, 2021). These functions have a significant effect on financial performance of banks and to achieve financial stability (Ugah, 2020). From another perspective, credit functions are risk functions. Thus, there is a relationship between credit risk and the stability of banks (Saleh & Abu Afifa, 2020).

According to Basel for International Settlements (2004) credit risk refers to the likelihood that a bank institutions borrower or counterparty will fail to pay its financial obligations according to prespecified loan agreements or agreed terms and conditions.

Credit risk in banks refer to a risk that takes place when the borrower fails to pay or fulfill financial obligations toward the bank for instance failing to repay interest or principal. Thus, this exposes banks to loss due to credit risk (Rajendran, 2022). There are a number of reasons of credit risk such as acceptances, credit among banks, lending customers, financing trade transactions, commitments and contingencies, and derivative transactions (Hassan et al, 2019).

Kaharuddin (2022) defined credit risk as the likelihood that certain assets held by a financial institution particularly loans may decline in value, possibly becoming completely worthless.

According to Ahmed et al. (2022), credit risk refers to the potential financial loss that a bank may face if a borrower, also known as the counterparty, fails to repay the borrowed principal along with the accrued interest, as stipulated in the agreed-upon terms. Similarly, Omran et al. (2025) defines credit risk as the risk that a counterparty in a financial transaction might default on their obligations, which could result in financial loss to the non-defaulting party.

Xiaohui (2025) stated that credit risk refers to a customer` or count party`s inability or undesired to comply with financial obligations on time and / or in full volume that leads to violation of terms of the loans, or agreement contract, and it gives the creditor or the bank to take legal repayment procedures.

Credit risks or what is also called default risk refers to the risk that one party of the credit agreement is unable or unwilling to function. Thus, this will to loss for the other party. The credit risk takes place due to three reasons that are the existence of poor credit policy and credit procedures, and lack of follow up of creators after issuance of the credit decision (Bhatt et al., 2023). The other interesting reason is the political, social, healthy, and instable economic conditions and working under uncertain business and economic environment. The last reason of credit risk is the character of the creditor and his/her behavior and morale hazard and problems, lack of knowledge and experience, poor management of the project, and the use of the money for other purposes rather than the actual purpose of obtaining the credit (Bhatt et al., 2023).

2.1.1.8 Types of Credit Risks

Long et al (2020) classified credit risk into two categories that are: systematic risks and nonsystematic risks

2.1.1.8.1 Non-Systematic Risks

This category of credit risk is also called special risks. These are internal risks that take place in the banks due to the bank internal environment and these risks are associated to the bank`s operations, activities, and financial conditions (Donadel et al., 2021). Thus, these risks are associated with particular bank and they are not directly influenced by

external environment such as the existence of weak internal control system, poor senior management, lack of adequate financial resources, corruption, and problems with customers (Conlon et al., 2020). So that, there is a potential to manage these risks through efficient and effective risk management practices and effective internal control systems (Alkhaldeh et al., 2023).

2.1.1.8.2 Systematic Risks

System risks or what are called general risks, these are external risks that the banks confront from the external environment. Thus these risks are not related to a specific bank. However, they affect the entire banking sector in the country (Abu Salim et al., 2024). The systematic risks occur due to several macroeconomic conditions and external environment for instance instable economic and political conditions, non-compliance of borrowers with loan agreements, and natural disasters. Thus, these risks are beyond the control of a particular bank and they have a general effect on the banking sector in general (Alkhaldeh et al., 2023).



Source: Author

Figure 2.4 comparison between system risk vs. unsystematic risk.

2.1.1.9 Measurement of the Credit Risk

The measurement of credit risk is an interesting measure to banks. The measurement of the credit risks helps banks to quantify the expected losses due to credit functions. The exact amount of loss is impossible to specify with certainty. However, banks can estimate the

credit loss based on their estimation in light of their experiences (Siddique et al., 2022). Thus, there are two essential approaches to estimate credit loss that are as follows:

2.1.1.9.1 The Absolute Position or the Default-Mode Approach

This approach of credit measurement is based on the absolute position. Under the default mode approach every borrower may be set at the end of the risk horizon either default or success. Then, credit risk takes place from default of the debtor. Access to credit risk measurement via discrete models is distinctive for identical portfolio (primarily, banks' exposures to retail small clients with unified credit products)(Jumbe & Gor, 2022).

The most common methods that follow the discrete models are credit risk+, KMV Model, and Credit Portfolio View (Deng et al., 2024). These methods present the assets of the firm that is the exposed to credit risk. When providing the credit to the customers, the credit risk or expected loss, demonstrated the total amount of the loan together with accrued interest and fees, and it is expected to correct if there is the existence of quality collateral (Chang, 2024). By using this method, bank do not institute reserves and adjusting entries to the sold loans. The reserves will be in progress to practice merely when there is a break of loan agreement terms by customer as an expression of possible loss of credit (Bingzheng&Puxian, 2021).

2.1.1.9.2 The methods based on the expected rate of default on credit claims

The methods that are based on the expected rate of default on credit claims are also called market to market (Yanenkova, 2021)

Financial institutions such as banks can classify debtors across different levels of rating grades such as classifying borrowers from the best borrowers to the worst category of borrowers. In this framework, credit risk basically emerges from primarily results from the debtor's transition to a lower rating grade over time (International accounting standards board, 2014).

This methodology employs continuous models for assessing credit risk. Unlike discrete models, which simplify the debtor's situation into only two possible outcomes—either default or success—continuous models recognize multiple potential rating states that a debtor may occupy. Such an approach is particularly suitable for heterogeneous portfolios, such as large corporate loans. Typically, individual risk categories are determined based on external credit ratings, and credit migration reflects the likelihood of moving from one category to another (Han et al., 2025).

There are somewhat significant differences between Absolute Position Method and the methods based on the expected rate of default on credit claims as the first method usually has a positive outlook as it assumes that credit facilities and loans will be repaid on time and in full without any delay from the borrower (Gadou, 2025). Thus, under the absolute position method, provisions and cures are merely recognized once difficulties have previously risen. On the other hand, the second method provides a more actual perspective. They assess every loan's risk level by estimating the potential of default based on the borrower's credit evaluation, allowing the banking institution to proactively set aside reserves and remedies. The weights of expected loss are calculated based on historical experience and data and capture the relationship between a borrower's credit rating and the probability of default (Kovalová., 2019).

In reality, approaches that emphasize on the expected default rate are more extensively utilized as these approaches provide a more precise image of the credit risk the banks confronts. These models estimate both the expected losses and the probability of loss occurrence. The total potential risk—representing the maximum possible loss—is calculated as the product of the probability of default and the loss amount. Each loan is assigned to an appropriate risk category and given a corresponding risk weight, facilitating more precise risk management and provisioning (Bakshi et al., 2022).

Standardized Approach (SA)

Under the Standard Approach (SA), banks evaluate their credit risk by employing a risk-weighted framework that assigns specific risk weights to assets. These weights are determined based on the credit ratings provided by external credit rating agencies.

Internal rating-based Approach (IRB)—

IRB allows banks to use their own internal ratings of counterparties and exposures. This gives an opportunity for a greater differentiation of risk for several exposures and, henceforward, provides capital requirements that are better aligned to the extent of the risks. On the other hand, banks in India are advised to use SA to compute capital requirements for credit risk.

On the most interesting instrument to measure credit risk is the utilization of non-performing loans ratio that are the percentage of the non-performing loans to total loans. In a study of Sukma (2013) argued that banks that function with NPL below 5%, they can their functions smoothly. The greater percentage of NPL indicates a worse quality of credit that may expose banks to problematic conditions.

Another interesting measure of credit risk in banks is the volume of loss provisions that is the percentage of the total credit or loan provisions to total loans as this percentage decreases the ability of the bank to offer credit and loans facilities and so that decreasing the financial performance of banks (Farazi et al., 2011).

Loan loss provision to total loans (LLR ratio) that is the percentage of loan loss provision to total loans.

Loan loss provision to non-performing loans that is the percentage of loan loss provision to total non-performing loans.

Risk weighted assets (credit risk component): The total value of a bank's credit exposures adjusted by risk weights, serving as a basis for calculating regulatory capital requirements to safeguard against credit losses.

Credit risk ratio: It is the percentage of non-performing loans to total loans.
Impaired assets to gross loans.

2.1.1.10 Determinants of Credit Risk

2.1.1.10.1 Bank Specific Characteristics

Bank size: According to Al- Hassan et al. (2014) there is a positive correlation between bank size and the ability of the bank to decrease credit risk exposure as these banks have more potential to analyze and allocate credit risk among the offered credit volume at these banks as well as these banks have advanced technologies to help them manage credit risk and qualified credit decision makers to take the optimal credit decisions. However, Haq and Heaney (2012) found a positive relationship between bank size and credit risks as these banks accept more risks as they hold more role in enhancing economic development.

Bank Capitalization: In a study of Ghosh (2017) found a positive effect of bank capitalization and credit risk as well as loans losses as having a high capital adequacy encourages banks to accept riskier lending policies and procedures. On the other hand, Shrieves and Duhl (1992) found a negative correlation between holding large capital adequacy ratio and credit risk as banks with larger capital adequacy ratio tend to involve in rationale lending to keep high capital adequacy levels.

Bank financial performance: Louzis et al (2012) found a negative relationship between bank financial performance and credit risk and increasing credit losses as the banks that suffer of losses usually do not have efficient and effective managers as well as poor management skills and competencies. Thereby poor lending policies and procedures.

Loan Growth: Naili and Lahrichi (2022) argued there is a positive relationship between loan growth and bank non-performing loans as the excessive growth in loans was the main reason for the global financial crisis in 2008 as when banks expand in lending, loan screening and credit standard will decrease. Likewise, Al-Hassan et al (2014) found a positive relationship between loan growth and loss due to non-performing loans. However, Boudriga et al (2010) found a negative correlation between loan growth and credit loss as banks that desire to increase their amount of credit lending, are more expected to conduct appropriate loan and screening to cope with defaulters.

Bank Inefficiency: Iannotta et al. (2007) performed study encompassing a sample of (181) banks in (15) Europe during 1999- 2004, the results demonstrated a positive correlation between large ownership concentration and credit loss. Similar results have been demonstrated by other researchers, who argued that large ownership concentration can

significantly decrease credit loss levels. For instance, Shehzad et al. (2010) found that ownership concentration assists lower credit loss by supporting supervisory control and protecting investors. This, in turn, improves the watching of management and boost the capital adequacy ratio, working as a defense against excessive risk-taking.

On the other hand, a diverse body of literature advises a direct correlation between large ownership concentration and credit loss. Louzis et al. (2012) contested in concentrated ownership structures, conflicts of interest between controlling and minority shareholders increase agency matters that can lead to a higher credit loss.

Controlling shareholders may be interested to expropriate resources or involve in channeling activities for own gain, thus deteriorating agency evils and aggregate bad loans. Furthermore, large shareholders frequently effect bank supervisors to follow risky investments and involve in irresponsible lending practices, eventually boosting credit loss levels (Barclay and Holderness, 1989).

2.1.1.10.2 Macroeconomic Indicators

GDP Growth: According to Jabbouri and Naili (2019), there is a positive correlation between increasing the volume of GDP indicators under the expansionary phase of economic growth and development and the decrease in credit loss and amount of non-performing as at the borrowers have the power to repay their financial obligations for the bank. However, under recession, credit loss will increase as customers do not have the adequate resources to repay their obligations.

Inflation: Amuakwa-Mensah et al (2017) argued that under high inflation rates, the real value of revenue of borrowers will decrease, thus this restricts the borrowers' ability to repay their debts. Thus, the credit risk will increase so that credit risk will increase.

However, Gulati et al. (2019) found a negative effect of inflation on non-performing loans as well as credit risk and credit loss as in times inflation, the value of debts will decrease. Thus, this increases the ability of the borrowers to repay their loans and credit facilities given to them.

Public Debt: In a study of Reinhart and Rogoff (2011) found a positive relationship between public debt or what is called sovereign debt and the amount of non-performing loans in banks. As public debt affects negatively the revenue of the firms and amount of the household savings.

Unemployment: Researchers such as Ghosh (2015) found a negative relationship between unemployment indicators and measures and bank's loans credit quality as borrowers with low income suffer higher chance of unemployment. Thus, they will confront challenges in repayment of their obligations.

2.1.1.10.3 Banks Specific Characteristics

Interbank competition and concentration have a significant effect on credit risk in banks. There is controversial debate concerning the competitions and concentration on credit risk as some researchers such as Naili and Lahrichi (2022) who found a positive relationship between competition among banks and credit risk and this result is in line with the competition- fragility paradigm. However, Ozili (2019) contended that there is a negative correlation between interbank competition and credit risk as this would pressure banks to decrease credit interest rate, decreasing the profitability of defaults, and to adopt careful lending decisions and sufficient borrowers screening to improve credit risk management.

2.1.1.11 Impact of Credit Risk on The stability of banks

Loan and credit facilities are BIs' financial earnings and performance sources. Besides, they are an exciting factor influencing the bank's regulatory capital requirement. Exposure to CR is an indispensable part of credit. So, banks should manage CR efficiently to achieve stability and improve the bank's financial performance. Banks use quantitative and qualitative instruments and skills to manage CR efficiently (Choudhry, 2018).

CR refers to the potential that the customer will not return the money; thus, CR is an inherent risk in BIs. It refers to the probability or the undesirable setting in which the customer will not pay back the principal or the interest of both the principal and the interest rate when they are due (Hopkin, 2018). Meanwhile, Kamis (2022) defined CR as the likelihood of failure by one of the customers to a financial transaction. When this takes place, the bank may suffer financial loss. Several researchers have examined the effect of CR on the stability of banks and financial performance. According to Ahmed, El-Halaby, and Soliman (2022), Ekinici and Poyraz (2019) found a negative effect of CR on the financial performance of banks.

The most common measure of credit risk is the non-performing loans to total loans ratio as this ratio is an interesting measure of credit risk that refers to non-repayment of customers' their obligations at the required time (Irawati et al., 2019)

According to My and Quoc (2022) there is a positive relationship between credit risk management and the stability of banks as risk management decreases loan losses. thereby increasing financial stability of the bank on the long run. Whereas, Fatoni (2022) demonstrated there is direct relationship between credit risk and the stability of banks in six largest Islamic banks. on the contrary, Dewi and Saraswati, (2024);

Dwinanda and Sulistyowati, (2021); Febriani and Dewi Yuniarti, (2022) found a negative relationship between credit risk and the stability of banks. Meanwhile, Fatoni and Sidiq, (2019) found insignificant relationship between credit risk and the stability of banks.

In a study of Bencharles and Nwankwo (2021) to examine the effect of credit risk management on the stability of banks through mediating the role of the corporate governance. The data was taken from a sample of (12) banks during 2009 -2019. the researchers used NPL ratio, liquidity ratio, capital adequacy ratio, and loan loss provisioning. The the stability of banks was measured using Z- score. The study revealed a negative but insignificant effect of NPL on the stability of banks. Meanwhile there is a positive relationship between liquidity ratio, capital adequacy ratio, and loan provision loss with the stability of banks.

There are various studies that have demonstrated a negative correlation between credit risk and the stability of banks (Abdelaziz et al., 2022; Ghenimi et al., 2017).

Felix and Claudine (2020) examined the correlation between both bank financial performance and credit risk management in developing countries. the study revealed a negative relationship between credit risk and financial stability as well as there is a negative effect of credit risk on financial performance measured by ROA and ROE. Likewise, Hosna, et al (2019) investigated the correlation between credit risk management and the stability of banks in Sweden during 2000- 2008. the study revealed a positive correlation between credit risk management and the stability of banks. Likewise, the study revealed that non-performing loans ratio has a significant effect on the stability of banks more than the effect of the capital adequacy ratio.

Kithinji (2019) examined the effect of credit risk management on the financial stability of commercial banks in Kenya during 2004 -2008. the study found there is insignificant effect of NPL and amount of credit on bank financial performance. Moreover, Kargi (2018) examined the effect of credit risk on the financial stability of banks in Nigeria during 2004 -2008. the results confirmed there is a positive effect of credit risk management on the stability of banks in commercial banks in Nigeria. Furthermore, the results confirmed there is a negative effect of loans and advances on the stability of banks as well as NPL and deposits expose banks to high risk of distress and illiquidity.

Epure and Lafuente (2018) investigated the effect of credit risk on the stability of banks and bank financial performance in CostaRica during 1998 -2007. the study found that regulatory changes will improve bank financial performance and the stability of banks. Moreover, there is a significant effect of credit risk on the stability of banks. In addition, NPL has a negative effect on financial performance measured by ROA and bank efficiency. However, there is a positive correlation between capital adequacy ratio and net interest margin as a measure of the stability of banks.

2.1.2 Liquidity Risk

This section provides a comprehensive overview of liquidityrisk, including its definition, examines the key determinants that influence liquidity risk, and discusses the impact of liquidity risk on the stability of banks.

2.1.2.1 Liquidity Risk Definition

Liquidity risk refers to the inability of the bank to meet its financial obligations at the proper time of due in the absence of holding undesirable losses (Ismael & Ahmad, 2023). Thus

the liquidity risk has an inverse effect on capital of the financial institutions and its earnings power. Banks should hold adequate liquid assets to fulfill future requests from lenders and borrowers at proper rates.

IMF (2020) stated that liquidity risk refers to the probability that financial institutions such as banks cannot effectively and efficiently meet expected and unexpected current and future cash flow requirements without adversely influencing its daily activities and operations of financial condition. Likewise, IMF (2022) stated that liquidity risk refers to the potential for a banking institution of financial institutions to experience trouble in funding its asset positions or meetings obligations as they mature or fall due especially during periods of recession and market stress.

Bello et al. (2017) has defined liquidity risk as the expected amount of loss that the financial institution may incur due to its inability to meet its financial obligations. Whereas, Hacini et al (2021) stated that liquidity risk refers to the likelihood for a firm to lose money if it is unable to pay its bills on the specified time or fund assets growth when it becomes necessary without incurring unacceptably high costs or loss.

Another definition of liquidity risk is the likelihood that an institution will be unable to meet its short term financial obligations as a result of the inability to transform assets into cash promptly with material loss (Basel committee on banking supervision, 2013).
Meanwhile,

Brunnermeier and Pedersen (2021) stated that liquidity risk refers to the hazard that a financial institution will not be able to pay its obligations on time because of an inadequate market for its assets or insufficiency of cash or near cash assets.

2.1.2.2 Determinants of Liquidity Risk

There are a number of factors that influence the liquidity risk in banking or financial institutions, these factors include the following:

Financial performance: Alzoubi (2017) found a positive effect of financial performance on bank financial liquidity in Islamic banks during 1994 -2019 as banks are highly vulnerable to liquidity risks as these institutions switch their portfolios to more profitable assets to increase financial performance. Besides, he asserted there is a positive and significant correlation between financial performance and liquidity risk as a profitability is a main stream of liquidity in banks. Besides, Muchtar and Rustimulya (2019) found a positive correlation between financial performance and liquidity risk. Moreover, Effendi and Disman (2017) found a positive effect of financial performance on liquidity risk.

Capital Adequacy: capital adequacy refers to the ability of the financial institution or the bank to absorb operational expenditures and maintain fund liquidity. The regulatory requirements on the capital adequacy has a significant effect on liquidity risk. According to Tuga (2019) there is a negative correlation between capital adequacy ratio and liquidity risk. Likewise, Yimer (2016) argued that increasing capital adequacy ratio will increase the amount of liquidity thus decreasing the liquidity risk.

Credit risk: the credit risk refers to the NPO to total loans. In a study of Cai and Zhang (2017) found there is a direct relationship between credit risk and liquidity. Moreover, banks with high levels of NPL may be unable to meet depositors' withdrawal requests that could reduce cash flow and lead to a decrease in the value of loans, thereby boosting the liquidity risk.

Bank Size: Previous studies have presented two conflicting theories regarding the relationship between bank size and liquidity, both from a theoretical and practical perspective. The first view suggests that the relationship is positive: as the bank's size grows, it expands its branch network, which in turn forces the bank to maintain a high level of liquid assets on its balance sheet to meet customer requests, ranging from new loan requests to unexpected withdrawals (Antony, 2023). On the other hand, other studies demonstrate a negative relationship amongst liquidity and bank size (Naoaj, 2023).

Capital Adequacy: The first view regarding capital adequacy (financial fragility-competition for deposits) suggests that higher bank capital reduces liquidity creation. In the same manner, low capital levels tend to favor liquidity which demonstrates a negative relationship.

Deposit: Deposits form a large portion of liabilities of the bank and are basically a main source for banking to finance their activities and operations. Deposits act an essential role in determining the liquidity position of the bank. The existence of a high portion of deposit is an interesting instrument to achieve a stable and decrease funding cost of the bank as well as it supports the ability of the bank to meet its liquidity requirements. On the other hand, a lower dependence on customer deposits may signify more reliance on other funding sources that can be more volatile and costly. Thus, these instruments will increase the liquidity risk (Leykun, 2016).

2.1.2.3 Liquidity Ratios and Measurements

These ratios are some of the measures used to assess liquidity in banks, as they pertain to measuring the bank's ability to meet its short-term obligations when they are due. These ratios were selected because of their practical application in this study, which are:

$$\text{Cash Liquidity Ratio} = \text{Cash and similar items} / \text{Deposits} * 100$$

This ratio measures the extent to which the bank complies with the cash liquidity requirements imposed by the Central Bank on banks. It should not fall below the percentage set by the Central Bank. The higher this ratio, the more the bank can increase credit facilities for customers and create more deposit accounts; conversely, a lower ratio indicates less capacity to do so.

$$\text{Deposit Utilization Ratio} = \text{Loans + Investments in Securities} / \text{Total Deposits} * 100$$

Deposits of various types are the primary source of financing for banks. Banks allocate most of these deposits to their investment activities, namely loans and investments in securities, from which they earn the majority of their profits. A high ratio indicates the bank's ability to provide loans, while a low ratio suggests a decreased ability to meet customer withdrawals. This ratio reflects the relationship between the loans granted by the bank, due to its operational nature, and total deposits, indicating the extent to which the bank utilizes deposits to meet the needs of customers and institutions for loans.

Liquidity Coverage Ratio: “The LCR is an interesting measure to promote resilience to potential liquidity disturbances over a (30) day horizon. LCR will assist demonstrate that global banks have adequate creative, high quality liquid assets to offset the net cash outflows it could face under an acute short-term stress scenario. The identified scenario is constructed upon conditions experienced in the global financial crisis that started in 2007 and entails both institutions specific and systematic shocks”. (Basel 3, P. 9).

Net Stable Funding Ratio (NSFR): “It requires a minimum volume of stable sources of funding at a bank relative to the liquidity profits of the assets as well as the potential for contingent liquidity needs taking place from off balance sheet commitments over a one-

year horizon. The NSFR intends to limit over dependence on short term wholesale funding throughout periods of buoyant market liquidity and encourage better evaluation of liquidity risk across all on and off-balance items” (Basel 3, P. 9).

Loan to Deposit Ratio: That is total loans divided by total deposits of bank customers.

Liquidity Assets to Total Assets:It is a financial ratio that measures the proportion of a company's total assets that are composed of liquid assets.

2.1.2.4 Impact of Liquidity Risk on The stability of banks

LR occurs when a BI encounters difficulty establishing a match between assets and liabilities' maturities. This problem was prevalent in the global financial crisis (Kim et al., 2015). A high extent of LR occurs in the banking sector when customers superfluously draw capital from the banks. Moreover, liquidity analysis is measured from the bank's financial position on the balance sheet. Banks use several quantitative instruments to measure liquidity ratios (Edem, 2017).

Banks may confront LR when there is a mismatch between bank assets and liabilities (Choudhry, 2018). LR refers to the likelihood of the bank failing to meet its financial obligations when they are due. Meanwhile, Skoglund and Chen (2015) stated that LR is a risk that takes place due to market or bank-specific occurrences. Thus, measurement and assessment of the prospective source may decrease cash inflow and increase cash outflow, and these practices are very interesting for BIs.

Several studies have documented a negative effect of LR on the stability of banks, such as Gadzo, Kportorgbi, and Gatsi (2019), Noman et al. (2015), and Ruziqa (2013). Likewise, Ishak et al. (2016), Ndoka and Islami (2016), and Tan, Floros, and Anchor (2017)

demonstrated that the increase in illiquidity would lead to an increase in LR (Li & Zou, 2014; Menicucci & Paolucci, 2016; Ruziqa, 2013).

Dahir (2018) postulated that LR has a negative effect on BIs' FS. Furthermore, Chen et al. (2018) and Ly (2015) also found a negative effect of LR on bank FS. Similarly, Adelopo et al. (2018), Onsongo et al. (2020), and Saleh and Abu Afifa (2020) found a negative and significant effect of LR on the financial performance and FS of BIs. Marozva (2015) uncovered a negative correlation between long-term debt and FS.

Chowdhury et al (2018) found there is insignificant correlation between liquidity risk and Islamic banks financial stability in Islamic banks in Bangladesh during 2012 -2016. However, Salim and Bilal (2016) found a positive effect of liquidity risk on banks financial stability and banks financial performance in Oman during 2010 -2014. Likewise, Abbas et al (2021) investigated the effect of liquidity risk on bank financial performance and financial stability in commercial banks in USA during 2002 -2018. The study found a negative correlation between liquidity risk and the stability of banks. However, Saif-Alyousfi(2022) examined the determinants of financial stability and financial performance of banks in 47 Asian countries. The data was taken from (2446) banks during 1995 -2017. The study found there is a positive correlation between liquidity risk, capital adequacy ratio, loan-to-total assets, bank size, GDP growth, and inflation rate on banks financial stability and financial performance.

In a study of Ismail and Ahmed (2023) to investigate the effect of liquidity risk, credit risk, and operational risk on the stability of banks in Jordan during 2016 -2021. The study found that liquidity risk, operational risk, and bank size have insignificant effect on the stability of banks in Jordan.

In a study of Ghenimi et al. (2017) liquidity risk is inversely correlated with the stability of banks. Likewise, Amara and Mabrouki (2019) found a negative correlation between credit risk and the stability of banks. Furthermore, Djebali and Zaghdoudi (2020) found a negative correlation between credit risk and the stability of banks. Similarly, Rupeika-apoga et al. (2020) found an inverse relationship between liquidity risk and the stability of banks.

2.2 Hypotheses Development

2.2.1 The Impact of the Interaction Between Credit Risk and Liquidity

Risk on the Stability of Banks

Ejoh, Okpa, and Inyang (2014) found a negative effect of the integration of CR and LR on the FS of BIs in Nigeria. Furthermore, Mbierowicz and Rauch (2014) also uncovered an adverse effect of LR and CR on banks' FS, increasing the probability of default in BIs in the USA.

Ghenimi, Chaibi, and Omri (2017) also demonstrated the negative effect of LR and CR on the financial performance of BIs in the MENA region. Setiawan, Sudarto, and Widiastuti (2019) also revealed a negative effect of CR and LR on the FS of BIs in Indonesia.

Zaghdoudi (2019) revealed a negative effect of CR, operational risk, and LR on the FS of BIs in Tunis. Eventually, Djebali and Zaghdoudi (2020) analyzed the effect of the LR and CR on banking stability in the MENA region. The study found a negative effect of the CR and LR on the stability of banks.

Diaconu and Oanea (2014) demonstrated that there is a positive and significant effect of LR on banks' financial performance in BIs. Meanwhile, they found that there is a negative and significant effect of CR on the stability of banks.

Setiawan et al. (2019) revealed that CR and LR significantly affect the stability of banks. CR negatively and significantly affects the stability of banks, while LR has a positive effect. However, Matey (2023) revealed liquidity's negative and significant effect on the stability of banks. Thus, investing in securities that earn interest is necessary to improve the bank's financial performance and increase its stability. However, CR has an insignificant and adverse effect on the stability of banks.

Likewise, Imbierowicz and Rauch (2024) examined the effect of liquidity and CRs on the stability of banks in US banks. They found that these two types of risks increase the probability of default. Likewise, Amara and Mabrouki (2019) demonstrated the significant and negative impact of CR, LR, and their interaction on the stability of banks. Ghenimi et al. (2017) demonstrated an insignificant correlation between CR and LR in the MENA region. However, they affect the stability of banks separately, and the interaction between credit and LRs leads to bank instability.

Zaghdoudi (2019) investigated the effect of credit and LRs on the stability of banks in Tunisian-all banks. The study revealed a positive effect of LR on the stability of banks. On the other hand, CR has an insignificant effect on the stability of banks. Moreover, the interaction between credit and LRs negatively affects the stability of banks. Moreover, Bencharles and Nwankwo (2021) found a negative but insignificant effect of CR on the stability of banks in all Nigerian banks from 2009 to 2019. The researchers used non-performing loans as a proxy for CR. Likewise, Ahmad et al. (2019) revealed an

insignificant effect of the interaction between liquidity and CR on the stability of banks in all banks in Tanzania.

Also, Al Hussaini (2019) examined the correlation between CR and banks' FS. They found that CR significantly affects a bank's FS. Moreover, Siyanbola and Adebayo (2021) study the impact of CR on banks' FS in Nigeria. The study results demonstrated a positive and significant effect of credit management on the stability of banks in Nigerian banks. Sang Tang My (2022) examined the effect of CR on the stability of banks in commercial banks in Vietnam. The study found CR's vivacious and significant impact on the bank's FS.

Ismail and Ahmed (2023) examined the impact of LR, CR, and operational risk on the FS of Jordanian commercial banks in Jordan during 2016-2021. The findings revealed that LR has an insignificant effect on the bank's FS. However, it remains an exciting determinant of banks' FS. However, CR negatively and significantly affects the bank's FS. Thus, Jordanian banks have to develop efficient liquid and credit strategies to mitigate the effect of these risks on the financial performance and stability of BIs.

2.2.2 Explaining Theories of the Relationship Between Liquidity Risk and Credit Risk

The classical theories argued that there is a significant correlation between credit risk and liquidity risk in banks. The industrial firm models of banks for instance the Monti-Klein framework and the financial; intermediation perspective in both a Diamond and Dybvig (1983) or Bryant (1980) setting, these studies demonstrated that assets of the bank and liability structures are highly correlated basically with regard to the fund withdrawals and borrower defaults. In their financial intermediation, banks construct liquidity in the economy either from their balance sheets by financing risky investments utilizing the

customers' deposits, or from off balance sheets through opening credit lines. In light of these models, a body of literature has nowadays evolved concentrating on the interaction between liquidity risk and credit risk and their implications on the stability of banks.

Anecdotal evidence from bank failures throughout the global financial crisis supports these theoretical and empirical findings. In official reports of the FDIC and OCC revealed that most of commercial bank failure throughout the recent financial crisis is due to joint occurrence of liquidity risk and credit risk. According to Dermine (1986) liquidity risk is perceived as a profit lowering cost, a loan default boosts this liquidity risk as of the decreased cash inflow and depreciation it triggers. Thus, in light of the literature, liquidity and credit risks are directly interconnected. On the other hand, throughout the crisis, banks shifted from a risk of drying up other funding sources, basically the interbank market (Huang & Ratnovski, 2011). Conversely, because of the information asymmetries in the loan market, banks were vulnerable to credit risk (Heider et al., 2009). Thus, a mutual reinforcement between credit and liquidity risks on the soundness of banks.

This framework is an interesting section of the study as it guides empirical investigation to quantify the effect of credit risk, liquidity risk, the interaction between credit risk and liquidity risk on the stability of banks in Palestinian banking system. It concentrates on the importance of integrated risk management and policy interventions to enhance financial resilience.

In summary, the conceptual framework of this study focuses on examining how credit risk, liquidity risk, and this interaction influence the financial stability of banks operating in Palestine. To ensure reliable results, the model also accounts for important control

variables such as GDP growth, inflation, capital adequacy, and bank efficiency. Including these variables helps isolate the actual impact of control and liquidity risk .

This framework serves as a foundation for empirical testing and the modify approach detailed in the next chapter.

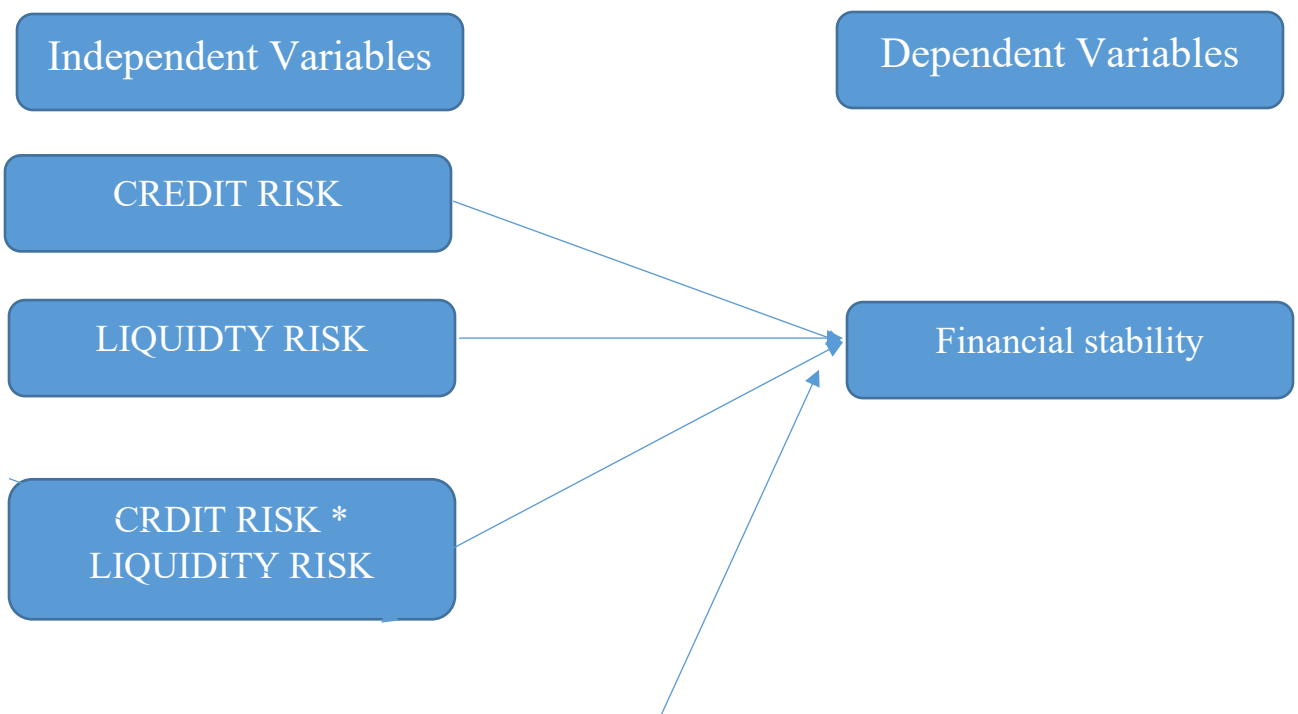
Based on the theoretical framework and literature review, these hypotheses were developed:

H1: Credit risk has a negative effect on the stability of banks in Palestine.

H2: liquidity risk has a negative effect on the stability of banks in Palestine.

H3: The interaction between credit risk and liquidity risk has a negative effect on the stability of banks in Palestine.

Macroeconomic and bank specific factors such as inflation, GDP, capital adequacy, and efficiency will be included as control variables to isolate the effects of the main risk interactions on banks stability.



Source: Author



Control variables

.Figure 2.5 Theoretical Framework.

2.3 Knowledge Gap

2.3.1 Identifying Gap in Previous Studies

- 1 There is a dearth of studies that have examined the effect of the interaction between credit risk and liquidity risk on the stability of banks in banks in Palestine. On contrast to Western countries that have a tremendous number of studies and researches that have explored this topic intensively due to its importance to set the required policies, procedures and regulation to construct a stable financial and banking system to achieve the economic development.
- 2 There is a few empirical evidence concerning the interrelationship between credit risk and liquidity risk in Palestinian banking sector as most of previous studies have concentrated on liquidity risk, credit risk, or the stability of banks separately. Thus, the interaction between credit risk and liquidity is still examination.
- 3 A large number of previous studies have used a cross-sectional data to examine the effect of the interaction of credit risk and liquidity risk on the stability of banks especially during instable economic and political environment.
- 4 Shortage utilization of advanced econometric methods as most of previous studies have used basic techniques with limited use of sophisticated models such as structural equation modeling and panel data analysis that have the potential to capture better

understanding of the interaction between credit risk and liquidity and their effect on the stability of banks.

- 5 Most of previous studies have neglected the effect of the macroeconomic factors such as inflation, unemployment, and gross domestic product (GDP) as control variables, also this Dissertation take into consideration Basel III and Gaza war as dummy variables, analyzing the effect of the interaction between credit risk and liquidity risk on the stability of banks that are crucial to understand the pattern and behavior of these risks.

2.3.2 Contribution of the Current Study

- 1 This study contributes to the existing studies to understand the effect of the interconnection between credit risk and current risk on the stability of banks in Palestinian context. As well this study provides significant empirical evidence on the effect of these two critical risk dimensions' interaction on the stability of banks in the unique turbulent and instable political and economic conditions and uncertain environment that complicates the risk management in banks and the banking system as a whole.
- 2 This study contributes practically to policy makers such as the PMA, board of directors, senior managers, regulatory and supervisory organizations to set the required and efficient policies, procedures and regulations, and disciplines to mitigate the effect of credit risk and liquidity risk on the stability of banks.
- 3 The research fills a gap in the existing literature by focusing on Palestinian banks, a context that has been underrepresented in global studies on bank risk interactions.

- 4 This study develops our understanding and recognition of importance and determinants of the stability of banks in the Palestinian banking sector by investigating the dynamic interaction between credit risk and liquidity risk.
- 5 Filling a geographical and contextual gap in the existing literature by focusing on Palestinian banks, thus contributing to regional financial stability studies.
- 6 Providing a foundation for future research on risk interdependencies in emerging and developing banking sectors within the Middle East and similar contexts.

Chapter Three: Research Methodology

3.1 Introduction

The Dissertation aims to examine the effect of the interaction of credit risk and liquidity on the stability of banks in Palestine.

This chapter outlines the methodological approach adopted to explore how credit risk, liquidity risk, and their interaction impact the stability of banks in Palestine. Given the characteristics of our dataset—specifically, an unbalanced panel and a relatively small sample—the methodology was selected with care to ensure the robustness and validity of the results. We employ advanced panel data techniques including Dynamic Generalized Method of Moments (GMM), Two-Stage Least Squares (2SLS), to examine the dynamics thoroughly.

This section presents the research methodology and design that the study follows to objective the specified objectives and examining the validity of the specified hypotheses. Firstly, this section presents the research approach and design. Then, presenting, the population and sample of the study, data collection methods, and the variables measurements. Eventually, presenting the model of the study as well as data analysis tools and techniques.

3.2 Research Design

The research design refers to a particular scheme for the entire study; it shows the approach and procedures that the researcher will conduct to achieve the objectives of the

study and answer its questions (Copper& Schindler, 2011). This study follows the quantitative research approach as the researcher will use and manage secondary data to answer the questions of the study and achieve the desired objectives through using financial data that the researcher will take from the annual reports of banks in Palestine. Moreover, this Dissertation will follow the panel design through obtaining the required data throughout the period 2012- 2024 for all banks. Furthermore, this study is an explanatory study as its involved in estimating the effect of the interaction between credit risk and liquidity risk on banks financial stability.

3.3 Data and Sampling

The data will be taken from secondary sources, including the yearly reports of all working banks in Palestine, which are 13 banks. The macroeconomic indicators, inflation, and GDP will be taken from the Palestinian Central Bureau of Statistics. All data will cover the period 2012–2024. The researcher will examine the effect of CR and LR on banks' stability in Palestine since most previous studies found that these types of risks significantly affect bank stability. The researcher will utilize microeconomic indicators, firm-specific characteristics, external or macroeconomic indicators.

The researcher used the annual reports of banks in Palestine as they are the legal documents where the required data exist. Besides, the annual reports of banks are easy to access and they are valuable sources of information (Baroma, 2013).

The study uses annual data from 13 banks, covering the period from 2012 to 2024. Due to differences in data availability across banks and years, the panel is unbalanced. Data sources include audited financial statements, the Palestine Monetary Authority (PMA), and the Palestine Exchange (PEX).

3.4 Variables Measurement and Description

Dependent Variable:

The dependent variable in this study is the log Z score, which represents bank stability and refers to the extent to which the bank is distant from insolvency. This measurement, as presented by Roy (1952), is the z-score, which has a negative relationship with the probability of default. It is usually used as a research measure for stability.

The following formula measures the Z score:

$$Z = (U_{it} + K_{it}) / \sigma_i.$$

Where U_{it} denotes to the performance of the assets owned by the bank (ROA) at time t , K_{it} is the equity divided by the size of the assets taken in a total value at time t , and σ_i is the standard deviation of ROA as a measure of the return's unpredictability for a certain bank during the total period. When the Z score increases, this indicates that the likelihood of the bank's bankruptcy will decrease.

The researcher applies the logarithm to the Z-score and also include its one-year lag to reflect persistence in bank stability over time.

Independent Variables:

Credit Risk (CR): Measured as loan loss provisions divided by total loans

Liquidity Risk (LR): Measured as the ratio of liquid assets to total assets.

Interaction Term ($CR \times LR$): Designed to capture the joint influence of both types of risks (CR and LR) on stability.

Control Variables:

Net Interest Margin (NIM): measured as Net interest income to earning assets.

Capital Adequacy Ratio (CAR): measured as shareholder's equity to total assets.

Loan Growth: net loans to total assets.

Bank Size: log of total assets.

Bank Efficiency: The cost-to-income ratio.

Inflation Rate: measured as consumer price index.

GDP: measured as Real GDP

To account for structural and geopolitical disruptions during the study period, we incorporate two binary (dummy) variables:

Basel III Dummy: Takes the value of 1 for years 2019 and onward to reflect the adoption of Basel III regulatory standards for some banks, and value of zero otherwise.

Gaza War Dummy: Assigned the value of 1 for 2023 and 2024 to capture potential effects from Gaza War, and value of zero otherwise.

Table 3.1 Measurements of the Variables

Variable	Symbol	Measures	Authors
Dependent variable			
Bank stability	Log (Z-score)	Log((ROA_{it}+ ROE_{it}) /Standard deviation of ROA_i)	Setiawan et al (2021); Naili, &Lahrichi, (2022)
Independent variables			
Credit risk	CR	Loans loss provision/ total loans	Ejoh, Okpa, and Inyang (2014) Ghenimi, Chaibi, and Omri (2017) Diaconu and Oanea (2014)
Liquidity Risk	LR	liquid assets / total assets	Ismail & Ahmed (2023); Setiawan et al (2021)
Interaction between credit risk and liquidity risk	CR*LR	Multiplication CR by LR	Genimi et al. (2017)
Control variables			
Net interest margin	NIM	Net interest income to earning assets	López-Penabad, et al (2021); Chen et al (2021)

Capital adequacy ratio	CAR	Shareholders' equity / total assets	
Assets growth	Loans growth	net loans to total assets	Pasaribu (2017) Sanchez-Teba et al. (2021) Phan and Duong (2021), Herli et al. (2021)
Size	SIZE	Log of total assets	Chakroun et al. (2019), Acabado et al., 2020
Efficiency	Efficiency	Cost-to-income ratio	Ayinuola & Gumel, 2023);
Inflation rate	INF	Consumer price index	Akoku et al (2023); Kwashie (2022); Abdesslem et al (2022)
Gross Domestic Product	GDP	real GDP	Musau et al. (2018), Mpofu & Mpofu, T. R., & Nikolaidou, E. (2018).
Basel 3	D1	Takes the value of 1 for years 2019 and onward to reflect the adoption of Basel III regulatory standards, and value of zero otherwise	
Gaza War	D2	Assigned the value of 1 for 2023 and 2024 to capture potential effects from Gaza War, and value of zero otherwise	

Source: Author

3.5 Model Specification

3.5.1 GMM (Dynamic Panel Model)

To address potential endogeneity and account for the dynamic nature of bank performance, we employ the GMM estimator. This method is well-suited for panel data that include a lagged dependent variable and potential correlation between regressors and the error term.

The base model is expressed as:

Equation (1)

$$\log(Z_{it}) = \alpha + \beta_1 \log(Z_{it-1}) + \beta_2 CRISK_{it} + \beta_3 LRISK_{it} + \beta_4 (CRISK \times LRISK)_{it} + \sum \theta_j Bank_{jit} + \sum \lambda_l Macro_{lt} + \varepsilon_{it}$$

3.5.2 Two-Stage Least Squares (2SLS)

To better understand the causal direction between credit and liquidity risks, we apply a simultaneous equation model using 2SLS. This allows us to control for potential endogeneity and observe reciprocal effects. The model includes two equations:

Equation (2a)

$$CR_{i,t} = C + \beta_1 CR_{i,t-1} + \beta_2 LR_{i,t} + \sum_{j=1}^J \beta_j Bank_{j,i,t} + \sum_{l=1}^L \beta_l Macro_{l,t} + \varepsilon_{i,t}$$

Equation (2b)

$$LR_{i,t} = C + \beta_1 LR_{i,t-1} + \beta_2 CR_{i,t} + \sum_{p=1}^P \beta_p Bank_{p,i,t} + \sum_{q=1}^Q \beta_q Macro_{q,t} +$$

3.5.3 Z-Score Stability Model

For consistency with earlier research such as Imbierowicz and Rauch (2014), we also estimate the following equation:

Equation (3)

$$Z_{it} = \beta_0 + \beta_1 Z_{it-1} + \beta_2 LRISK_{it} + \beta_3 CRISK_{it} + \beta_4 (LRISK \times CRISK)_{it} + \sum \varphi_p Bank_{pit} + \sum \psi_q Macro_{qt} + \varepsilon_{it}$$

3.6 Diagnostic Tests and Corrections for Small Sample

We applied a set of diagnostic tests to ensure model validity and robustness, tailored for unbalanced panel data and small sample size.

GMM Diagnostics:

- Arellano-Bond AR (1) and AR (2).
- Hansen J-Test
- 2SLS Diagnostics:
- Durbin-Wu-Hausman Test.
- First-stage F-statistic.
- Sargan/Hansen Tests.

Justification for the use of GMM

The choice of estimator is crucial in a study of bank stability, especially when the data and the nature of the problem present several econometric challenges. Bank stability, as measured by the *Z*-score, is highly persistent over time: a bank that is stable today is likely to remain so tomorrow, and vice versa. To capture this dynamic behavior, the model includes the lagged *Z*-score as an explanatory variable. However, including a lagged dependent variable creates bias in conventional panel methods, such as pooled OLS or fixed effects, because the lagged term is correlated with the unobserved bank-specific effects.

In addition, our main explanatory variables—credit risk, liquidity risk, and their interaction—are not strictly exogenous. Stability can influence risk (for example, weaker banks may experience more loan defaults or deposit withdrawals), just as risk can undermine stability. These two-way relationships, combined with possible omitted factors such as management quality or macroeconomic shocks, mean that endogeneity is a serious concern.

Simpler estimators cannot deal with these issues. OLS produces upward-biased estimates of persistence, while fixed effects produce downward-biased ones (the so-called Nickell bias). Difference GMM, proposed by Arellano and Bond, improves consistency by using lagged levels of the variables as instruments for their changes. However, in small samples and with highly persistent series such as stability or risk ratios, lagged levels are weak instruments, leading to imprecise and biased estimates.

System GMM, introduced by Blundell and Bond, addresses these weaknesses by combining the equations in differences with equations in levels, using lagged differences

as additional instruments. This strengthens the instrument set, improves efficiency, and yields more reliable estimates of persistence and the effects of endogenous regressors. It also eliminates the bias from unobserved bank-specific effects and allows formal tests for autocorrelation and instrument validity.

The use of System GMM is consistent with prior research. For example, Ghenimi et al. (2017) applied dynamic GMM methods to examine the combined effect of credit and liquidity risks on bank stability in MENA banks. They showed that ignoring dynamics and endogeneity leads to misleading conclusions, while the GMM framework captures the persistence of stability and the interplay of risks more accurately.

Given the dynamic nature of stability, the endogeneity of risk variables, and the limitations of alternative estimators, System GMM is the most appropriate method for this study. It allows us to exploit the panel structure of the data, handle the specific econometric problems at hand, and produce robust and credible estimates of how credit risk, liquidity risk, and their interaction affect the stability of Palestinian banks.

3.7 Summary

This methodology chapter lays out a rigorous, carefully adapted empirical strategy to examine the effects of credit and liquidity risks on bank stability in Palestine. By combining dynamic panel models with appropriate diagnostics and adjusting for the limitations of small, unbalanced samples, the study ensures reliable findings that form the basis for subsequent analysis.

Chapter 4: Empirical Results

4.1 Introduction

This section of the study presents the analysis of the effect of CR, LR, and the interaction between them that is CR* LR on bank stability in banking sector in Palestine during 2012 -2024. This study has three types of variables that are: dependent variable Bank Stability(BS). Independent variables Credit risk (CR) liquidity risk(LR) and the interaction between credit risk and liquidity risk (CR* LR). Whereas the control variables are net interest margin(NIM), capital adequacy ratio (CAR), net loans to total Assets, bank size, bank efficiency (EFF) inflation (INF), gross domestic product (GDP). Besides, there are two dummy variables that are the Israeli war on Gaza Strip after 7/10/2023, and Basel III implementation in 2019. The Dissertation manipulated both static methods which are ordinary least square (OLS), fixed effect (FE) and random effect(RE) also dynamic methods structural equations(2SLS) instrumental variables and system GMM.

4.2 Descriptive Statistics

Table 4.1 shows the descriptive analysis of the examined variables during 2012 -2024. The analysis presents the means, standard deviation, maximum, and minimum values of each variable. The examined variables are liquidity risk, credit risk, stability of banks, financial performance, capitalization, efficiency, macroeconomic indicators. However, the researcher excluded the dummy variables from the descriptive analysis that are regulatory change and conflict periods because they are meaningless in this type of analysis. The missing data was excluded that are cleaned from the analysis. Thus, the analysis presents merely the valid observations related to the examined variables.

Table 4.1 Descriptive Statistics of Core Variables (2012–2024)

Variable	Mean	Std	Min	Max
Log (Z score)	2.894	1.013	-2.817	4.529
CR	0.01	0.012	-0.001	0.066
LR	2.824	0.655	1.265	4.668
CR*LR	0.026	0.037	-0.003	0.272
NIM	0.04	0.013	0.004	0.087
CAR	0.145	0.087	0.069	0.837
Net loans to total assets	0.482	0.107	0.054	0.702
Size	8.924	0.412	7.94	9.922
EFF	0.856	0.928	0.431	12.529
INF	1.897	1.285	0.21	4.2
GDP	1.479	5.266	-11.5	9.9

Source: The researcher based on the statistical analysis of the data.

The section discusses the results of the descriptive analysis and then compare the results with the previous empirical studies performed in Palestine, MENA region, and neighboring countries.

Table1. shows the log- transformed Z score has a mean of 2.894 and STD is 1.013. This result is in line with Selmi (2025) who revealed that banking sector has a high extent of stability. Besides, Badwan et al. (2023) also confirmed that banking sector in Palestine has a high resilient solvency. These results show that even though the unstable political and economic conditions in Palestine. Banking sector enjoys a high level of stability compared to Jordanian banking sector based on indicators of Central Bank of Jordan (2023).

The first examined independent variable is the credit risk that has a mean of 1% that is a very low ratio. This result is somewhat less than the indicators of Palestine Monetary Authority that has announced that the non-performing ratio in banking sector in Palestine is in the range of 3% - 4%. Thus, the obtained data in our study may understate the credit risk in banking sector in Palestine as the period of the study is different also the measurement is different. This result supports the findings that were presented by Saher Aqel (2024) who declared that banking sector in Palestine has a better quality assets compared to Jordanian banking sector that has a NPL ratio (5%) in 2023 based on the reports of the Jordanian Central Bank. However, the MENA region has a NPL approximately in range of 7 – 10% (Ghenimi et al., 2017). Meanwhile, Djebali and Zaghdoudi (2020) found a mean of credit risk in MENA region banking sector was (8.7%). However, Badwan et al. (2023) found the mean of credit risk in both Jordanian banks and Palestinian banks during 2008 – 2019 is 2.59%.

According to the other examined risk variable that is the liquid risk that is the percentage of liquid assets to total assets. It has scored a mean of 2.824 and a STD is 0.655. This means that banking institutions has a very strong liquidity position compared to international standards and recommendations. PMA has reported that banking sector in Palestine has liquidity buffers in range of 35%- 40% of total assets. The existence of a very strong liquidity position supports the stability of banking sector in Palestine. This liquidity buffer in Palestine is greater than the liquidity buffer in MENA region as it was approximately 30% (Ghenimi et al., 2017). Meanwhile, it was (25% -30%) globally (World Bank, 2020). However, according to Badwan et al. (2023) LR has a mean of (33%) Whereas, Hassan et al (2019) has a mean of (15.5%).

The interaction between credit risk and liquidity risk has scored a mean of (0.026). This variable measures the overlap between both credit risk and liquidity risk in banking sector. This variable is the core of this study as it indicates whether the liquidity risk diminishes or magnifies the effect of credit risk on stability in banking sector.

According to the financial performance or profitability, the researcher used the net interest margin that is a book value measure to estimate the banking sector profitability during the examined period. The results presented that the mean of the net interest margin in banking sector during 2012 -2024 was approximately 4%. This result is in line with the net profit margin ratios that was reported by both the PMA and Jordanian Central Banks that demonstrated that banking sector in both countries has a mean in range of (3%-5%).

Capital Adequacy is also an interesting measure of liquidity in banking sector it has scored a mean of 14.5%. This result is in consistent with the announced by the PMA that confirmed banking sector has a CAR approximately 16%. This ratio has increased after the implementation of Basel III in banking sector as PMA enforced banking institutions to increase their capitalization to be in consistent with Basel III requirements since 2019. Meanwhile, this ratio was 11.6% in MENA region banking sector (Djebali&Zaghdoudi, 2020). However, Kabir et al (2015) found the mean of CAR was (2%). Whereas, Badwan et al. (2023) found it has a mean of (15.09%).

The Average of loans to total assets was 47% this indicates almost half of banking assets are directed to loans. Thus, it is the main stream of banking revenues and financial performance in banking sector in Palestine. This demonstrates that banking institutions adopt a conservative policy in lending loans and other credit facilities due to harsh and unstable political and economic environment and conditions. However, the ratio of credit

to total assets in banking sector in Jordan was 55% - 60% according to the reports of the Jordanian Central Bank. This ratio may indicate that banking sector in Palestine has a high volume of deposits compared to adopting conservative credit policies.

According to efficiency it has a scored a mean of (0.856). This percentage is better than the efficiency in Jordan and MENA region banking sectors that have scored 50% and 70% respectively that have a greater operating expenses (Saleh, 2022). This also supports the net interest margin in banking sector in Palestine.

Eventually, according to the macroeconomic indicators the inflation in Palestine was 1.897 during 2012 – 2024 based on the statistics of Palestine Bureau of Statistics that is the official source of macroeconomic indicators in Palestine. Saleh (2023) found a mean of inflation (109.2688).

Meanwhile, Palestine has an average 1.479% growth in GDP. Whereas, Saleh (2023) found mean value of GDP (3.7505). However, the revision of these macroeconomic indicators over the period 2012 -2024 shows there was a high fluctuations and volatility associated to occurrence of COVID- 19 and political crises in Palestine.

Generally, the descriptive analysis indicates that banking sector in Palestine has a strong liquidity position, high capitalization ratio, and has a low level of credit risk compared to MENA and Jordanian banking sectors. Furthermore, the commitment in implementing Basel III in banking sector in Palestine has improved the conservative policies even though the unstable political and economic conditions in Palestine due the Israeli war on Gaza Strip and the aggressive Israeli polices against Palestinian in West Bank during the last few years.

4.3 The Static Models

The analysis under the static results confirmed that both CR and LR have insignificant effect on bank stability in Palestine. Furthermore, the interaction between them has insignificant effect on bank stability. The results also confirmed that cost efficiency has a negative effect on bank stability under the three models. Hausman supports FE over RE. D1 and D2 included.

Dependent variable: log Z- score.

Table 4.2 OLS, FE and RE Estimates for Bank Stability – Coefficients (t-statistics)

Variable	OLS	FE	RE
Credit Risk (CR)	-0.842 (-1.30)	-0.655 (-0.39)	-0.811 (-1.17)
Liquidity (LR)	+0.512 (+0.44)	+0.833 (+0.99)	+0.610 (+0.56)
Interaction (CR×LR)	-1.255 (-1.66)	-0.175 (-0.31)	-1.004 (-1.45)
Net Interest Margin	+4.621 (+0.52)	+6.513 (+0.95)	+5.208 (+0.61)
Capital Adequacy (CAR)	-7.450*** (-4.80)	+0.160 (+0.10)	-3.982* (-2.11)
Loan Growth (Loans/Assets)	-0.561 (-0.68)	+0.595 (+0.74)	-0.084 (-0.10)
Size (Log Assets)	+0.112 (+0.47)	+0.510 (+1.40)	+0.208 (+0.81)
Cost Efficiency (Cost/Income)	-2.866*** (-5.17)	-2.718*** (-5.26)	-2.774*** (-5.08)
Inflation	-0.078 (-1.58)	-0.055 (-1.55)	-0.067 (-1.60)
GDP Growth	+0.024 (+1.94)	+0.011 (+1.24)	+0.018 (+1.64)
Constant	5.000 (1.85)	4.3(1.6)	4.321 (1.61)

Observations	146	146	146
R-squared (within)	0.631	0.428	0.445

Note: Significance levels denoted by $p < 0.01^{***}$, $p < 0.05^{**}$, $p < 0.1^*$.

4.4 Effect of CR, LR, And Their Interaction on Bank Stability

The study manipulated the three static models (OLS, FE, RE) to estimate the effect of CR, LR, and the interaction between them on bank stability. The study results supported the results of previous empirical studies that have examined the effect of these variables on BS as the results of the current study confirmed CR has a negative effect on BS. However, it also confirmed that bank liquidity has a positive effect on BS. Whereas, the results of the effect of their interaction were as follows under the manipulated three models.

4.5 Pooled OLS (Baseline regression)

The OLS or what is called the baseline regression refers to a simple regression that is without controlling for bank fixed effects or endogeneity. The OLS found a positive effect of CR* LR on bank stability at (10% level). This indicates that there is a mitigating effect of the interaction of CR and LR on BS. This means that liquidly buffers decrease the effect of CR. On the other hand, the main explanation of this result that OLS suffers of bias (omitted variables and reverse causality). Practically, more BS tends to main greater liquidity and decreases NPLs, expectedly, biasing the OLS interaction estimate ascending. So that, the weak direct interaction in OLS is not actually robust once the researcher control for endogeneity and undetected heterogeneity.

4.6 Fixed Effects

The fixed effects panel model that is controlling for time- invariant bank attributes does not demonstrate a significant effect of interaction between CR and LR on BS as the analysis shows that the coefficient of CR*LR almost (0). And there is insignificant effect of their interaction on BS. However, the fixed effect panel model shows the individual CR effect also decreases. This assumes that there are differences among banking institutions that affect the results of OLS regression model. The differences in CR and LR of each bank affect adversely the reliability of the estimation of CR* LR on BS when taking into consideration the effect of each bank specific characteristics. In fixed effect model, just the control variables such as efficiency of the bank and Gaza war as dummy variables have a significant effect on BS as the results confirmed that this dummy variable had a negative effect on BS in all banking sector.

The main explanation for the existence of insignificant effect of CR* LR on BS emphasizes the significance of unobserved bank characteristics – several banking institutions constantly have both lower risks and higher BS. Thus, this leads to a positive interaction of CR* LR on BS in banking sector in Palestine.

4.7 Random Effects (GLS)

This model usually produces results between OLS and FE. Under the RE model the results confirmed there is insignificant effect of the interaction between CR * LR on BS. The results of this model is in consistent with FE model that yields slightly adverse or null, supporting that once we give an opportunity for bank specific characteristics intercepts (assumed random), there is weak evidence of a positive interaction. However, Hausmann tests support the FE specification in our analysis. Assuming there is a correlation between

both regressors and bank effects. Thus, the random effect model estimates are less reliable here.

4.8 Two-Stage Least Squares (2SLS) System

The researcher estimated a simultaneous equations system for CR and LR to validate the effect of the interaction of CR * LR on the BS. In this two-equation setup CR and LR are manipulated as hypothetically endogenous and tolerable to effect each other, whereas proper instruments (lagged stability and macroeconomic variables, among others) are manipulated to recognize causal effects. Through doing that, we can notice any **reciprocal relationship** between both CR and LR and demonstrate that the results of the main interaction are not affected highly by endogeneity or collinearity matters.

Table 1.3 2SLS System: CR and LR Equations (2012–2024). Coefficients (robust SE).

Variable	CR Eqn (dep: CR)	Liquidity Eqn (dep: L)
L (Liquidity lag)		+0.326(1.68)
CR (Credit lag)	+0.27(1.83)	
$\log(Z)_{t-1}$	-0.010** (0.004)	+0.021** (0.008)
Loans/Assets	+0.087*** (0.022)	-0.504*** (0.061)
Net Interest Margin	+0.015 (0.019)	-0.43(0.33)
Cost Efficiency	-0.77(0.43)	-0.073 (0.050)
Capital Adequacy (CAR)	-0.045 (0.037)	-0.021 (0.046)
GDP Growth	-0.0025** (0.0012)	+0.013(1.32)
Inflation	-0.065(-1.25)	-0.0031* (0.0017)
D1 (Basel III)	-0.0011 (0.0009)	+0.0028* (0.0015)

D2 (Gaza War)	+0.0034*** (0.0008)	-0.0087*** (0.0020)
Constant	+0.021 (0.015)	+0.217*** (0.054)
R-squared	0.39	0.52

Note: Significance levels denoted by $p < 0.01^*$, $p < 0.05$, $p < 0.1$. Robust standard errors in parentheses.

Instruments per Chapter 3; robust SEs; D1=2019+, D2=2023–24.

2SLS system (CR and LR): no strong reciprocal simultaneous effects; lagged Z decreases CR and increases LR; Loans/Assets increases CR and pull down LR; GDP growth decreases CR; inflation decreases LR; D1 modestly increases LR; D2 increases CR and decreases LR.

4.9 2SLS Regression Results for CR and LR Equations

The table presents the analysis of the 2SLS estimation findings for the system of equations (2a) and (2b). Equation (2a) manipulates CR as dependent variable. Whereas equation (2b) deals with LR as dependent variable. Every equation includes the other risk as an explanatory variable to check for simultaneity together with the instrumented control variables that were specified previously in this study. Furthermore, the study included two dummy variables that are the implementation of Basel III that was introduced in actual implementation in banking sector in Palestine in 2019 and the war on Gaza Strip after October 2023. In the two mentioned equations to control for structural regulatory variations and conflict disturbances. The used instruments included one year lagged BS (log Z-score lagged) and macroeconomics variables that included both GDP and inflation that are pre-specified and theoretically risk disturbances and other bank specific characteristics as NIM,

CAR, loan to asset ratio, and cost efficiency as control variables were included or served as excluded instruments as proper, in consistent with the identification strategy.

The results of the 2SLS presents that neither risk has a significant effect on the other risk. The analysis shows that there is a negative coefficient on LR in the CR equation, but it is very small and insignificant. At the same time, there is a negative coefficient on CR in the liquidity equation that means there is an inverse relationship between the two variables. However, it is insignificant effect that means after instrumenting for endogeneity, the results did not show strong evidence that greater CR leads to low liquidity or vice versa in the same period. This result is in consistent with Ghenimi et al (2017) who revealed there is insignificant reciprocal relationship between CR and LR in MENA region banking sector. Thus, the results of the current study demonstrate that in Palestinian banking sector, CR and LR do not significantly Granger-cause each other in the short run. Thus, this result indicates that CR and LR can be considered as considerably independent variables in the BS model, reinforcing the validity of including their interaction term.

Reviewing the analysis of the control variables, the estimates have a reasonable results and relations. According to the lagged Z score that is the log of BS enters significantly in both equations with contrasting signs: a greater BS in the previous year decreases current CR that is negative coefficient in the CR equation and increases current liquidity as there is a positive coefficient under LR equation. This means that historically BS tends to have less NPL and better liquidity position in line with persistence in wise management.

According to the loan to total asset ratio, it is a significant determinant for both CR and LR as banks that assign a greater portion of assets to loans practice greater CR (significantly positive effect on CR) and lesser liquidity ratios (significantly negative effect on LR), as

anticipated. This mirrors the central trade-off between lending that upsurges default risk and decreases liquid asset and liquidity management.

According to the macroeconomic indicators that are GDP and inflation, they act a significant role as GDP growth that was manipulated as an instrument in the CR equation has a significant and negative effect on CR as when the country is in economic growth, CR decreases since creditors` financial health will improve and thus NPL will decrease. On the contrary, inflation that was manipulated also as instrument in the LR equation demonstrates a slightly significant negative effect on bank liquidity. Thus, increasing inflation rate will decrease the buffers of liquidity of the bank due to increasing cash demand or uncertainty that lead customers and depositors to withdraw their deposits from the bank. In so doing, the liquidity of banks will decrease. The GDP and inflation effects are in line with theory and they act an interesting role in validating the instrument choice: GDP growth mostly affects CR and loan performance. However, inflation can exercise pressure on liquidity position of banking sector.

The first dummy variable that is Basel III and the other dummy variable that is Gaza war have the expected directional effects. According to Basel III implementation since 2019 is associated with a decrease in CR that is a negative coefficient in the CR equation. However, it is not considerably significant and a small improvement in liquidity ratios that is a positive in the LR equation, ($p < 0.10$). This assumes that the implementation of Basel III has affected positively on the risk profile of banking sector in Palestine as banks held somewhat greater liquid assets and conceivably more conservative credit policies – even though the effect of Basel III is moderate in these results. However, The Gaza war that was occurred after 7/10/2023 demonstrates a significant decrease of risk measures: the war as

dummy variable is considerably significant in increasing CR that is greater loan loss provisions due to conflict associated to economic distress and considerably decreases liquidity ratios as banks expected confronted deposits withdrawals or held less cash amid instability. Thus, these dummy variables ensure that the model is capturing real world crises and shocks: a geopolitical crisis can instantaneously confound credit losses and straining liquidity, while novel policies and procedures tend to improve both risk dimensions humbly.

4.10 Interpretation and Implications for the Interaction Model

In general, the 2SLS system ensures that CR and LR are considerably independent risk variables contemporaneously, with no indication of one considerably leading the other after controlling for shared determining factors. This result is interesting for the explanation of the interaction term of the main model. It indicates that significant interaction effect of CR *LR on BS is not product of multi-collinearity or one risk proxy modestly disguising the other; pretty, it captures an honest joint effect on BS. Practically, if we notice a positive interaction effect in the GMM stability model confirming that significant liquidity buffers soften the undermining effect of CR. Thus, we can be more assured that this outcome reveals a real interaction between two different types of risk, not a fake correlation because of CR and LR moving jointly or one endogenous to the other. Moreover, the instrument validity in the 2SLS is supported by diagnostic tests as follows:

First Stage F Statistics

- The omitted instruments are together significant in each first-stage regression. For example, lagged $\log(Z)$ and macroeconomic indicators variables demonstrate resilient predictive effect for the endogenous risk measures (with first-stage F-statistics well

above the common threshold of 10 in each equation), demonstrating that our instruments are related (not weak).

- **Over-Identification Test:** A Hansen J-test (Sargan test) for over-identifying restrictions yields a p-value above 0.10, signifying that the instruments as a group are valid that is uncorrelated with the error terms. This supports the **exogeneity** postulation of our instruments.
- **Endogeneity Test (Durbin–Wu–Hausman):** the researcher manipulated a DWH test to examine if dealing with CR and LR as exogenous would considerably change the findings. The test was insignificant, indicating that we cannot reject the null that CR and LR are exogenous in these equations. This means, any simultaneity between CR and LR is insignificant. This additional strengthens the assumption that 2SLS system is appropriately stated and that OLS prejudice from endogeneity is not a key issue here.

Given these diagnostics, the 2SLS robustness check supports the confidence in the validity of the interaction term. The nonexistence of a straight causal relationship between CR and LR indicates that the positive interaction effect revealed in the stability model is catching something actual about the way that CR and LR together affect BS, instead of showing feedback loops between the risks themselves. Thus, the existence of positive effect of the interaction of CR and LR in Palestinian banking sector seems to be a genuine phenomenon: high liquidity buffers the effect of CR on BS, rather than high CR and high LR modestly taking place together because of some conjoint reason.

Dependent: $\log(z\text{-score})$

Table 4.4 GMM for Stability

Variable	Coef. (SE)
Lagged Stability (Z_{t-1})	0.583*** (0.115)
Credit Risk (CR)	-2.104** (0.842)
Liquidity (L)	+1.337* (0.712)
Interaction (CR×LR)	+3.890** (1.268)
Cost Efficiency	-1.887*** (0.450)
Capital Adequacy (CAR)	-1.205 (0.881)
Loan Growth (Loans/Assets)	-0.076 (0.159)
Size (Log Assets)	-0.214 (0.194)
AR(1) p / AR(2) p	0.003 / 0.289
Hansen J p	0.428

Notes: Two-step system GMM with robust standard errors (in parentheses). // signify significance at 1%, 5%, 10% levels. Time dummies included. AR(1) and AR(2) are Arellano–Bond tests for first and second-order serial correlation in the first-differenced residuals (null: no serial correlation). Hansen J-test checks the overidentifying restrictions (null: instruments are valid).

Whereas the 2SLS method identifies concurrent endogeneity, it fails to entirely detect the dynamic nature of bank stability. Bank stability (Z-score) is greatly insistent over time – a stable bank last year is expected to stay stable this current year. To explain this inertia, we use the dynamic panel model expected through the GMM method. This is our ideal specification for apprehending the development of stability, as it integrates the lagged dependent variable and controls for both unobserved heterogeneity and endogeneity in an

incorporated framework. Table 4.4 shows the system GMM valuation results, counting for major diagnostic tests for model validity.

The system GMM outputs in Table 4.3 shows many interesting observations. Firstly, the lagged stability term is positively and greatly significant (coefficient 0.583, $p < 0.001$). This demonstrates that bank stability is meaningfully insistent year-to-year: approximately talking, approximately 58% of the nonconformity from a bank's long-run stability carries over into the next year. This inertia emphasizes that a dynamic model is crucial – failing to embrace the lagged dependent variable (as in the previous static models) would neglect a significant factor of existing stability and expected prejudice the risk factor estimations. The amount of 0.58, between 0 and 1, proposes a modest speediness of correction: surprises to stability disintegrate over time nonetheless not instantly (for example, a bank that practices a descent in Z-score will improve merely progressively, other things unchanged). The implication of this term explains the practice of GMM, as OLS would over-estimate it (OLS inclines to produce an upward-biased expected near to the simple correlation 0.8, while FE would under-estimate it because of Nickell bias; our GMM estimate lies in a plausible range.

According to the risk variables, the results confirmed that the qualitative effects of credit risk and liquidity in the dynamic model are in line with the 2SLS findings, however despite more obvious in impact. Credit risk (CR) holds an adverse and significant coefficient (-2.104 , $p \approx 0.02$). The effect size at this time is a little minor compared to the 2SLS (that was -3.27), probable since some of the influence of CR demonstrates over time (and the lagged Z-score term arrests part of the perseverance of shocks). Nonetheless, the proof is resilient that high NPL ratios weaken stability in the Palestinian banking sector. This outcome is

instinctive and supports several researches that highpoint asset quality as an important support of bank reliability. Moreover, it is in line with the narrative that whereas Palestinian banks generally experienced small NPLs (frequently below 3-4% for most of the time), times of increasing NPLs (such as throughout economic decline) had solid adverse effects on stability metrics.

The GMM model also shows that there is a positive effect of L on BS, about +1.337, and it is slightly significant ($p \approx 0.08$). This advocates that greater liquidity quiet increases BS, even though the impact is somewhat fragile than in the 2SLS. The explanation when lagged stability is comprised, portion of the effect of CR on BS occurs with a lag as well (for example, a liquidity gap might upset a bank over several years, not directly). However, the positive sign strengthens the significance of liquidity management: a bank with a greater liquid asset ratio inclines to be more strong. It deserves saying that Palestinian banks typically, have upheld very high liquidity safeguards – e.g., the system-wide loan-to-deposit ratio was merely ~66% by 2016 (implying approximately (33%) of customers' deposits were not borrowed nonetheless held in liquid), up from approximately 33% in 2007. This restrained liquidity bearing, heartened by the PMA and instinctive of working in a risky environment, has factually supported the stability of banks. Our results: sufficient liquidity increases bank's stability.

Significantly, the GMM model also demonstrated there is a positive and significant effect of the interaction of CR and LR on BS (+3.890, $p \approx 0.004$). This approves, in a dynamic model, the previous IV result that L considerably diminishes the effect of CR on BS. This means the integration of great CR and great L is linked to greater BS (a greater Z-score) in comparison to what the CR only would expect. This is a vital outcome of our study – and

it is remarkably reverse in sign to what Ghenimi et al. (2017) revealed for MENA region banks, where a negative interaction specified that instantaneously high CR and LR were destabilizing. In Palestinian banking sector, the positive interaction indicates a kind of insurance effect: a bank with solid liquidity can absorb the storm of bad loans far better. For instance, assume two banks with so great NPL ratios; the bank with a liquidity ratio 10% indicates greater will, agreeing to our estimations, have a log Z-score approximately $3.890 \times 0.10 = 0.389$ greater than the less liquid bank (all other things are equal). Over time, that gap is considerable – it could indicate the dissimilarity between a bank outstanding solvent or deteriorating into suffering when credit losses mount. Whereas utmost banks in our sample have liquidness ratios in the range of 30–50%, this calculation demonstrates the mitigating role of liquidity. In fact, it indicates that banking institutions with liquidity in, say, the top quartile of the distribution is much less sensitive to credit shocks than those with average or below-average liquidity. This positive interaction is an original result in the setting of the literature – it proposes that in an insubstantial economy such Palestine, where banks usually go wrong on the side of liquidity (partially because of the ambiguous political and economic circumstances), liquidity can counteract or even opposite the destabilizing effect of CR. Bank managers and supervisors in Palestine have subconsciously proceeded on this principle, upholding high liquidity as a shield, and our empirical finding confirm that strategy.

The results of the GMM model also demonstrated that the results of the coefficients of the control variables are in line with the findings of the other previous models, thus some miss importance when dynamics are accounted for. Cost efficiency rests an important driver: it has a coefficient -1.887 ($p < 0.01$), indicating that greater operating expenses

(ineffectiveness) lead to minor stability even in the dynamic framework. This strong effect proposes that refining managerial efficiency and cost control is a practical way to support bank stability – a fact that the PMA and banks ought to notice. The capital ratio (CAR) in the GMM is negative but not statistically significant, suggesting that when we account for previous stability and other dynamics, capital adequacy by itself doesn't have a strong instant influence on the Z-score. This could be because of the above-mentioned explanations (great capital is pervasive in the system, or its influence works through decreasing NPLs and such, instead of directly affecting Z-scores in the short run).

Loan growth and size persist trivial, with size displaying a small negative coefficient here (-0.214) that is not significant. The negative sign on size (although insignificant) bring into line with Selmi (2025) who revealed that large scale banks have less Z-scores[4], probably since the large scale banks in Palestine take on somewhat greater risk or confront greater competition reducing their margins, nonetheless our indication is else fragile to draw a firm conclusion on size. The macroeconomic controls (not reported in Table 4.3 for shortness) were comprised through time dummies in the GMM setup; together, year effects were substantial (arresting actions such as the 2014 war, 2020 COVID shock, etc.), nonetheless there was no insistent influence of inflation or GDP growth on stability beyond those year-specific shocks.

It is intuitive to compare the results of this study with other empirical studies. Ghenimi et al. (2017) found that CR and LR separately effect BS and their interaction acts a significant role bank instability in MENA region banking sectors. In the MENA region CR and LR jointly has a compounding inverse effect on BS interestingly a detrimental interaction.

The results of banking sector in Palestine confirm the contradictory direction: the interaction term was revealed to be positive, assuming that the CR and LR offset each other to some extent in this context. The main explanation of this result that the behavior of preserving further liquidity as a buffer when CR is increasing, or other risk management policies unique to local banking system in Palestine.

The positive interaction result indicates that a well-capitalized or highly liquid banks can confront periods of increased CR as liquidity acts as a moderating variable rather than intensifying factor. Even though the positive interaction in 2SLS and GMM models is not constantly extremely significant, its reliably positive direction is significant and works opposing to the undermining interaction revealed in broader MENA studies. Besides, we explain this result as confirmation that the Palestinian banking sector, possibly because of its conservative regulatory environment or risk culture, practices a state where solid liquidity positions improve resilience offsetting credit shocks.

In conclusion, the 2SLS two equation system gives a robust check that support the findings of the study. The lack of significant reciprocal effects between CR and LR explains our finding of CR, LR, and their interaction in the stability model without issue of endogeneity bias from simultaneity. The instruments manipulated are deal with in theory and pass validity examinations, giving credibility to the causal explanation of the coefficients. Predominantly, the consequences for the interaction term are that our former findings of a beneficial interaction (CR×LR) holds – if anything, the 2SLS analysis underlines that this interaction effect is not compelled by one risk intrinsically triggering the other, nonetheless

by the joint effect of the two separate risks on BS. Therefore, despite after taking into consideration latent endogeneity, the researcher revealed that the combined management of CR and LR is very important: banking institutions that can maintain both CR minimal and liquidity high instantaneously are considerably more steady. This robustness check strengthens the policy intuition that warranting sufficient liquidity buffers together with CR controls can support BS, a result basically prominent in the Palestinian banking sector where liquidity seems to act a shielding role against CR. Furthermore, it confirms the validity of the dynamic GMM results as the positive interaction effect of CR and LR on BS is genuine and robust, opposing with the adverse interaction eminent in other markets, and emphasizing a possibly distinctive dynamic in Palestinian banking that merits consideration in risk management strategies

The diagnostic tests at the bottom of Table 4.3 show that the GMM model is well-specified. The Arellano–Bond test for first-order serial correlation (AR(1)) is significant ($p = 0.003$), as estimated, as the residuals in the first-differenced equation ought to be successively connected of order 1. More prominently, the test for second-order serial correlation AR (2) produces a p-value of 0.289, showing no evidence of second-order autocorrelation in the differenced residuals. This content is an important requirement for the validity of the GMM instruments (if AR (2) were significant, it would denote that the lagged instruments are correlated with the error term). Furthermore, the Hansen J-test for over identifying limitations has a p-value of 0.428, indicating we do not reject the null that the instruments are valid. The Hansen test result, integrated with a somewhat few number of instruments (we cautiously limited lags used, given just 13 banks), assumes that our GMM instruments

are not overfitting the model and are practically exogenous. Overall, the diagnostic checks give us evidence that the system GMM outputs are reliable and the model is properly stated.

4.11 Comparison and Conclusion

In general, the analysis revealed CR that is a greater NPL or increasing loan provisions decreases BS and high amount of liquidity supports BS. Thus, this result is in line with previous empirical results and the associated hypotheses. Likewise, the interaction of CR *LR has a significant effect on BS under the dynamic and the instrumental variable models. This means that combined effect of the CR and LR on decreasing BS is greater than the effect of each risk when they appear separately.

Practically, a bank that suffers of decreasing loan quality that is an increase in NPL will leads to decrease in BS severally. Thus, this could be an alarm scenario for banking regulators and managers. This result is in consistent with the results of several empirical studies that confirmed there is a negative effect of CR * LR on BS such as (Imbierowicz& Rauch, 2014) and (Ghenimi et al., 2017) who found a negative and significant effect of the interation of CR * LR on BS in MENA region banking sectors.

Moreover, the results demonstrated that both CR and LR are interacted together to affect negatively BS in banking sector in Palestine. However, there were a differences among the different estimation methods and techniques regarding the effect of the interaction of CR * LQ on BS as simple estimation models such as OLS can miss it or even misstate its direction. However, more complicated and advanced estimation models that take into consideration persistence and endogeneity such as GMM and 2SLS models yield a more accurate result concerning the effect of the interaction of CR * LR on BS. Thus, these two models (GMM and 2SLS models) results confirmed there is a significant and negative

effect on the interaction of CR * LR on bank stability. However, OLS, fixed effect, and random effect as robustness checks did not robustly demonstrate this negative and significant effect of the interaction of CR * LR on BS.

The researcher conducted a robustness check to sample period. These results understate the significance of the joint risk management policies and procedures that merely specific CR or LR separately may disregard their combined effect on BS. Thus the support that CR * LR interaction term is significant under the preferred models that validates the stated hypothesis that there is a negative and significant effect of the interaction of CR * LR on BS in Palestine. This result is in consistent with most empirical studies that confirmed banks are most fragile when they confront increase in NPL and funding pressure simultaneously.

Using a panel of all banking institutions in Palestine throughout the period 2012 -2024 and regressing BS on CR, LR and the interaction of CR * LR, and related control variables such as NIM, CAR, Loan growth, Bank size, bank efficiency, and period dummies. The entire sample results are summarized as follows:

CR: The results confirmed there is a negative effect of CR on BS. This indicates that increasing CR will deteriorate BS as expected. This effect of CR on BS is significant effect statistically or marginally in most used models and specifications. For instance, in the full sample the CR coefficient was approximately (-33), with P value is (0.07). This confirms a sizable adverse effect. In a linear Z Score model, the CR impact is highly significant (P = 0.001) and negative sign That means the increase in NPL ratio will decrease BS in Palestine.

LR: The LR has a negative effect on BS in Palestine. This means that greater LR that is lower liquidity buffers will decrease the BS. In the analysis of the full sample, there is not very strong effect of LR on BS in Palestine as P. value is greater than (0.1%). However, the direction of the effect of LR on BS is in the hypothesized direction that is an increase in LR (1/LR) decreases the BS by approximately (0.09). This is in consistent with the concept that increasing liquid banks are usually more stable. Thus, in our full sample analysis of the effect of LR on BS, the effect was insignificant statistically. On the other hand, when emphasizing on local banks and omitting foreign banks, LR has a significant effect on BS for local banks in Palestine. Thus, a greater LR has a negative effect on BS as coefficient is (0.25) and P value is (0.049) in that sample.

The interaction of CR * LR: interestingly, the new interaction term presents a direct coefficient in all models. However, in contrast to the negative interaction specified in the MENA banking sectors. In full sample regression, the coefficient of the effect of the interaction of CR * LR on BS is around (+7.6) (in the log Z model). This positive direction demonstrates that decreasing LR diminishes the effect of CR on bank instability. This means, banks with greater liquidity buffers suffers less effect of CR on their BS that is instinctively acceptable as sufficient liquidity can absorb shocks from increasing NPL. Thus, this result is in consistent with the stated hypothesis in this study. However, in Palestine, the buffers of bank liquidity support resilience offset CR rather than the CR and LR collectively decreasing BS. Thus, the interaction of CR and LR is insignificant statistically at conventional levels in the full sample as P value was (0.17). The positive direction is nevertheless noteworthy, assuming a moderating effect of liquidity, despite the study cannot demonstrate it with high reliability given the size of the sample.

Control Variables

The analysis of the control variables effect on BS in Palestine, the results confirmed there is a positive and significant effect of NIM on BS as increasing NIM will improve BS. However, cost efficiency that is an expense measure ratio has a significant and negative effect on BS as inefficient banks suffer of lack of BS. Meanwhile, CAR has insignificant effect on BS in Palestine as all banking institutions keep somewhat strong capital levels.

According to the bank size, there is a mixed results concerning its effect on BS in Palestine. According to the results of the full sample there was insignificant effect of bank size on BS. However, when excluding the two banks with incomplete data for the period 2012-2024. The results confirmed there is a positive effect of bank size on BS. This means that larger banks are more stable. This is in contrast to some previously performed studies such as Ghenimi et al (2017) who found that bank size had a negative effect on BS during 2013-2023. The main explanation for the existence of positive and significant effect of bank size on bank stability, that some large banks are the dominance in some studies.

Eventually, the study found that there is a negative effect of War on Gaza and the COVID-19 on bank stability in Palestine.

In General, for the full sample during 2012 -2024, the results revealed that CR and LR individually decrease BS. This result is in consistent with previous studies. More significantly, the interaction of CR * LR is positive, in line with the concept that greater liquidity that is low LR supports banks to offset the destabilizing effect of CR. The existence of positive interaction is the contrasting of what was revealed for MENA region (where CR and LR jointly act an essential role in affecting BS. In Palestine, the findings assume that well liquefied banking institutions can better absorb credit shocks and the

increase in NPL ratio. A result that even though does not statistically proved robust in this study aligns with the hypothesis concerning a various dynamic in the Palestinian banking sector.

Chapter Five: Discussion: Comparing Findings and Implications

5.1 Discussion of Results

Based on the manipulation of a number of estimation methods, the study revealed several key findings concerning CR, LR, and BS in banking sector in Palestine.

- **Credit risk has a negative effect on BS**

The adverse effect of CR on BS has exaggerated after accounting for endogeneity and dynamics. Whereas a simple static model might distort one to consider NPLs don't matter (as in the FE results, resonating Badwan et al. (2023) threshold model that revealed nonlinear effect, the used 2SLS and GMM findings definitely found that increasing NPL ratios considerably decrease the BS. This result is in consistent with basic banking theory and confirmation from other banking sectors around the world: asset quality is vital for reliability. This result is in consistent with Ghenimi et al. (2017) that revealed CR decreases BS in MENA region banking sectors. Furthermore, this result is in consistent with the observations of PMA in Annual Financial Stability Reports that have demonstrated CR still an essential concern that requires constant monitoring for instance PMA (2024) reports assured an increase in NPLs throughout economic depression can impend stability if not controlled.

This result is in consistent with Abdelaziz et al., 2022; Bougatef, 2017, Ghenimi et al., 2017; Hamdi et al., 2017; Zaghoudi, 2019; Ahmed, El-Halaby, and Soliman (2022), Dewi and Saraswati, (2024); Dwinanda and Sulistyowati, (2021); Febriani and Dewi Yuniarti, (2022); Ekinici and Poyraz (2019); Fatoni (2022) who found a negative effect of CR on the stability of banks. How, this result is in contrast to Kithinji (2019) who

found there is insignificant effect of NPL and amount of credit on bank financial performance.

- **Liquidity is a critical stabilizer in banking sector in Palestine**

The results revealed that banks with greater liquidity ratios have a better BS. This result is instinctive and echoes with both supervisory standards and the exceptional Palestinian context. Banking sector in Palestine has traditionally held excess liquidity usually they invest in low-risk assets or surplus cash because of inadequate local loaning prospects and vigilant and high conservative policies and regulations. For example, despite in the mid-2010s, approximately a third of customer deposits were not lent out, and liquidity ratios have stayed well beyond worldwide standards. This study results rationalize this vigilant approach: upholding abundant liquidity considerably bolsters banks against shocks, donating definitely to the Z-score. This result in line with the argument that LR management is a vital as CAR in an unstable banking environment. Furthermore, it supports empirical studies such as Ghenimi et al. (2017) who revealed there is a negative effect of LR on BS in MENA region. However, this result is in contrast with Selmi (2025) who found there is insignificant effect of LR on BS in a simpler model.

- **The Interaction of CR and LR has a positive effect on BS in banking sector in Palestine:**

Differentiating the results of this study from the previous empirical results of previous studies in the region. As this study result is in contrast to Amara and Mabrouki (2019); Diaconu and Oanea (2014); Djebali and Zaghdoudi (2020); Ejoh, Okpa, and Inyang (2014); Ghenimi, Chaibi, and Omri (2017); Matey (2023); Mbierowicz and Rauch (2014); Zaghdoudi (2019) who demonstrated there is a significant and negative impact of the interaction between CR and LR on the stability of banks.

This result could be the new result of this study. Whereas, Ghenimi et al (2017) found that the interaction of CR and LR intensified instability that is there is a negative effect of this interaction on BS in Istanbul. On the contrary this study results revealed the opposite as there is a positive effect of CR* LR on BS according to the results of this study. This indicates a basically diverse dynamic at play. In MENA banks, the situation of simultaneous great CR and LR expected to decrease BS as lack of liquidity magnify the issues and problems created by increasing NPL. For instance, banking institutions may be enforced into fire sales or they cannot meet customers' withdrawals when the quality of assets decreases thus this situation creates a vicious cycle.

On the contrary, in banking sector in Palestine, a greater level of bank liquidity acts as a buffer for CR. The main explanation of the positive interaction that the conservative liquidity behavior of banking sector in Palestine pays off in terms of BS. In an unstable political and economic environment such as the case of Palestine that is characterized by the existence of a fragile context, restricted monetary policy due to nonexistence of national currency, several economic shocks, banking sector has learned to hold surplus liquidity as a form of self-insurance strategy (Hamed, 2017).

The holding of surplus liquidity strategy indicates that when CR upsurge due to an economic recession, banking sector in Palestine is not concurrently scrambling for liquidity. However, banking institutions have the required cash to absorb losses or meet customers' withdrawals. Thus, this mitigates the effect of CR on bank stability in Palestine and decreasing destabilization and banking institutions are able to maintain lending even though the increase in NPL. Thus, liquidity supports continues operations of the banking sector in Palestine in harsh times.

Thus, there is a positive effect of the interaction of CR * LR on bank stability as liquidity buffers also give banks the opportunity to tolerate greater CR without suffering distress. This is a very important and efficient policy insight. It assumes that PMA and Palestinian regulators ought to stay to put into effect strict liquidity requirements through the implementation of Basel III such as increasing liquidity coverage ratio and net stable funding ratio, where banking sector in Palestine significantly exceed minima as those liquidity buffers support BS, predominantly when CR is high. Furthermore, it indicates that analyses of BS in unstable political and economic conditions combined with weak economies ought not to merely import conclusions and experiences from other regions around the world as the analysis shows that common risk interactions can manifest in a different way under exceptional conditions of surplus liquidity and reserved lending.

- **Operational Efficiency**

The analysis confirmed there is a significant effect of operational efficiency that reflects the cost management on BS in Palestinian banking sector. This results supports the argument that banks suffer of weak operational efficiency have lower levels of financial performance and profitability as well as weaker shock absorbers and strengthens references for banking sector to improve cost-to-income ratios as an interesting instrument of increasing BS.

- **Bank Size**

The results confirmed there is a negative effect of bank size on BS in Palestinian banking sector (notwithstanding not always significant). This result is in consistent with Selmi (2025) who found a negative effect of bank size on BS. The main explanation of this result that large scale banks in Palestine that have wide operations or greater risk exposures ten to have lower BS due to adopting a more risk taking policy or competitive

pressure on margins for larger banks such as BoP or Arab Bank. This phenomenon needs further investigation but is different from the scope of this study.

- **Macroeconomic Indicators**

The results confirmed there is insignificant effect of macroeconomic indicators on BS in Palestine. However, this result does not mean that these variables are not important for BS. On the contrary, the existence of insignificant effect of macroeconomic indicators on BS in banking sector in Palestine may show that system-wide shocks knockout all banks in the same way (captured by year dummies) and that cross-sectional differences in stability are more compelled by bank-specific characteristics than by, say that bank works more in the West Bank vs Gaza (surely, all banking sector has affected in downturns, and the PMA's interferences helped evade any bank failures throughout our sample period).

From a practical view, the **dynamic system GMM arises as the favorite specification.**

The explanation of this result that this model fits the data well as supported by the significant lag term and greater explanatory power of the examined variables. Besides, it has passed all diagnostic tests (no AR(2), Hansen test $p=0.43$), signifying it is producing reliable and efficient estimations. Through comprising the lagged stability, GMM captures the solid perseverance in BS that the static models could not. Moreover, the dynamic system GMM has accounted at the same time for endogeneity of regressors through manipulating internal instruments. The reliability of main coefficient signs and significance between the 2SLS and GMM gives us further assurance in the results – both of them, accounting for endogeneity in diverse means, approve the principal role of CR, LR, and their interaction. Thus, the dynamic system GMM results are more reliable and

policy-relevant estimates. Practically, if one is interested to estimate BS in Palestine, this model is the best as it accounts for past BS and interaction of CR and LR factors.

in comparison of this study results with previous empirical results, this study results contribute a nuanced perspective. Ghenimi et al. (2017) had supported for shared management of CR and LR as they found that there is a negative effect of the interaction of them on BS basically advising banks that **the combination** of these risks is risky. Furthermore, our findings also support the necessity of common risk management for both CR and LR in Palestinian context, but for several reasons: The researcher demonstrated that with cautious liquidity management, banking sector can *tolerate* greater CR. This indicates that **liquidity can be an essential instrument to mitigate credit risk**- a message that bank managers in Palestine seem to have adopted, as demonstrated by their liquidity hoarding behavior. This does not disaffirm Ghenimi et al.'s insight for MENA banks mostly, but proposes that the result of the credit–liquidity link can vary by context. The dissimilarity expected takes place from the reality that banking sector in Palestine works under a reserved lending environment because lack of geopolitical and economic stability, restricted lending prospects and banks frequently end up with surplus liquidity (some of which is even stuck as cash because of Israeli restrictions (USA Department of state, 2024).

So that, different from other banks around the world that may use liquidity aggressively till it becomes a risk, banking sector in Palestine maintain a buffer of liquidity that works as a protective shield when the quality of credit decreases. Thus, this result is in consistent with the observations of PMA in their recent reports that even though periodic upsurge in CR that is during COVID-19 in 2020 or Gaza war after 7/10/2023, no bank in Palestine has suffered of stability crisis due to lack of liquidity and capital buffers (PMA Financial

Stability Report, 2023). Actually, the banking sector in Palestine has remained stable in confronting several severe shocks, achieving somewhat high BS compared to international norms and standards (Selmi, 2025).

5.2 Conclusion of Empirical Analysis

In conclusion, the results of the for the panel data during 2012 -2024 in banking sector in Palestine Confirmed that there is a significant determinate effect of CR and LR on bank stability. On the other hand, the interaction of both CR and LR uniquely has a positive effect on BS. The greater increase in NPL clearly decreases BS, underlining the necessity for robust CR management and LLP. On the contrary, the greater liquidity improves BS and essentially decreases the negative effect of CR on BS. This result is distinctive to the Palestinian sector that holds an abundance liquidity.

These results support the validity of the declaration and notices of PMA on high liquidity and capital standards, and assume that banks` practice of holding surplus liquidity is a rational reaction to working in a high risk environment, uncertain political and economic environment.

The preferred system GMM summarizes these dynamics, giving an ample view that former stability, present risk-taking, and risk interactions together form the reliability of banks.

Policy-wise, the implication is that supervisors such as PMA ought to **stay supporting common risk management**: policies that motivate banks to increase asset quality (decrease NPLs) and at the same time embrace abundant liquid assets will pay dividends in terms of financial stability. Banking institutions, for their part, ought to recognize that **liquidity is not idle money rather an insurance against credit declines** – our quantitative

findings indicate that this insurance has actual value in protective stability. Lastly, the positive interaction of CR and LR on BS calls additional study into if there is an ideal level of liquidity beyond which returns (in terms of stability) decrease. Whereas too greater liquidity can affect negatively financial performance and profitability, our results confirmed it evidently improves BS when CR occurs – a trade-off that bank management and policymakers in Palestine should cautiously balance going forward.

In general, empirical results provide a detailed description of the determinants of BS in banking sector in Palestine, interesting evidence that, in a delicate banking system, **provident liquidity management can essentially change the effect of CR on BS**, revolving a possibly negative spiral into a controllable challenge. This intuition distinguishes BS dynamics of banking sector in Palestine from those witnessed in more developed or more credit-intensive banking systems, and underlines the significance of fitting risk management strategies to the local context.

5.3 Academic Implications

The study adds to the literature by providing a more comprehensive understanding of how credit risk and liquidity risk influence bank stability when interacting in the context of the high-risk, under-researched Palestinian economy. The study finds that high credit risk undermines stability but stronger liquidity supports it. The results show that higher liquidity acts as a buffer against the negative impact of credit risk on the economy, which offers insights that challenge the prior studies done in stable environments. Using GMM strengthens the findings of the study and emphasizes the need for context-specific risk models. Given the results of the study, it was found that there are contradictions to prior research done in the MENA region. This emphasizes the necessity that future research

should focus more on analysis done per country as studies on MENA regions might not be representative of what would otherwise be found in each country separately.

5.4 Practical Implications

The study supports the maintenance and potential increase of liquidity requirements by regulatory agencies in Palestine, the PMA, in an attempt to enhance resilience giving the nature of the economy. In the context of banks, liquidity should be viewed as a strategic protection rather than idle money especially in this Palestinian environment. The results of the study support the integration of credit and liquidity risk within management and urges the policymakers to create standards that balance the liquidity and lending for stability and economic boom long-term.

5.5 Future Research

Future studies should focus on, among other things, the interactions between other risks like market and operational risk, conducting studies in other emerging and mid-crises economies, and understanding optimal liquidity levels that harness against credit risk without negatively affecting stability.

5.6 Limitations of the Study

The study focuses on Palestine within a time frame from 2012 to 2024 which limits generalizability. It also focuses on credit and liquidity risks only. The use of proxies may cause some risk dimensions to go missed. The findings of the study are most applicable to similar emerging and fragile economic systems.

References

Abbas, F., Ali, S., Yousaf, I., & Wong, W. K. (2021). Dynamics of Funding Liquidity and Risk-Taking: Evidence from Commercial Banks. *Journal of Risk and Financial Management*, 14(6), 281-297.

Abdelaziz, H., Rim, B., & Helmi, H. (2022). The Interactional Relationships Between Credit Risk, Liquidity Risk and Bank Profitability in MENA Region. *Global Business Review*, 23(3), 561-583.

Abdelaziz, S., & Francis, M. W. (2022). Financial Stability and Supervisory Cooperation (SSM in Eurozone–Banking Supervisory Cooperation in Egypt). *Review of Economics and Political Science*, 7(1), 22-33.

Abdeslem, R. B., Chkir, I., & Dabbou, H. (2022). Is Managerial Ability a Moderator? The Effect of Credit Risk and Liquidity Risk On the Likelihood of Bank Default. *International Review of Financial Analysis*, 80, 102044.

Abu Salim, S. I. M. A., Rababah, L. M., Saleh, M. M., Bani-Khair, B., Rababah, M. A., Wolor, C. W., & Hani, M. G. B. (2024). The Impacts of Credit Risks On the Financial Stability of Jordanian Commercial Banks Between 2010 And 2020. *Финансы: Теория И Практика*, 28(6), 98-108.

Acabado, D. R., Branca, A. S., Catalão-Lopes, M., & Pina, J. P. (2020). Do Distinct CSR Categories Have Distinct Determinants? The Roles of Market Structure and Firm Size. *European Management Review*, 17(1), 5-17.

Acharya, V. V., Pedersen, L. H., Philippon, T., & Richardson, M. (2017). Measuring Systemic Risk. *The Review of Financial Studies*, 30(1), 2-47.

Acharya, V., Pedersen, L., Philippe, T., And Richardson, M. (2010). Measuring Systemic Risk. Technical Report, Department of Finance, NYU.

Adam, M., Soliman, A. M., & Mahtab, N. (2023). Measuring Enterprise Risk Management Implementation: A Multifaceted Approach for The Banking Sector. *The Quarterly Review of Economics and Finance*, 87, 244-256.

Adegbie, F., & Adebajo, S. F. (2020). Credit Risk Management and Financial Stability in Quoted Deposit Money Banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research (EJAAGR)*, 8(8), 1-20

Adelopo, I., Lloydking, R., & Tauringana, V. (2018). Determinants of Bank Profitability Before, During, And After the Financial Crisis. *International Journal of Managerial Finance*, 14(4), 378-398.

Adewumi, A., Ewim, S. E., Sam-Bulya, N. J., & Ajani, O. B. (2024). Advancing Business Performance Through Data-Driven Process Automation: A Case Study of Digital Transformation in The Banking Sector. *International Journal of Multidisciplinary Research Updates*, 8(2), 12-22.

Adrian, T., Grinberg, F., Liang, N., Malik, S., & Yu, J. (2022). The Term Structure of Growth-At-Risk. *American Economic Journal: Macroeconomics*, 14(3), 283-323.

Ahmad, I., Salam, S., Ahmad, A., & Abbas, S. (2019). The Nexus Between CR and LR and Their Impact on Banks Financial Performance: Evidence from Pakistan. *Sarhad Journal of Management Sciences*, 5(1), 67-86.

Ahmad, S., Ahmad, W., Marhaini, W., & Shaharuddin, S. S. (2022). Is Excess of Everything Bad? Ramifications of Excess Liquidity On Bank Stability: Evidence from The

Dual Banking System. *Bursa Istanbul Review*, 22, S92-S107. Doi:10.1016/J.Bir.2022.09.008

Ahmed, H. M., El-Halaby, S. I., & Soliman, H. A. (2022). The Consequence of the Credit Risk On the Financial Performance in Light of COVID-19: Evidence from Islamic Versus Conventional Banks Across MEA Region. *Future Business Journal*, 8(1), 21-43.

Al Hussaini, A. N. (2019). CR and Financial Stability Under Controlling Effect of Financial Sector Development: A Study from Banking Sector of GCC Members. *International Journal of Asian Social Science*, 9(1), 122-138.

Alber, N. (2017, June). Banking Efficiency and Financial Stability: Which Causes Which? A Panel Analysis. In *Advances in Applied Economic Research: Proceedings of The 2016 International Conference On Applied Economics (ICOAE)* (Pp. 91-98). Cham: Springer International Publishing.

Alber, N. (2019). Financial Inclusion, Stability, Integrity and Protection (I-SIP). *Stability, Integrity and Protection (I-SIP)* (February 16, 2019).

Alhassan, A. L., Andoh, C., & Kyereboah-Coleman, A. (2014). Asset Quality in A Crisis Period: An Empirical Examination of Ghanaian Banks. *Review of Development Finance*, 4(1), 50-62.

Ali, M., & Puah, C. H. (2019). The Internal Determinants of Bank Profitability and Stability. *Management Research Review*. <https://doi.org/10.1108/JMLC-03-2018-0019>.

Alkhaldeh, B., Alhawamdeh, H., Al-Afeef, M., Al-Smadi, A., Almarshad, M., Fraihat, B., ... & Alaa, A. A. (2023). The Effect of Financial Technology on Financial Performance in Jordanian SMEs: The Role of Financial Satisfaction. *Uncertain Supply Chain Management*, 11(3), 1019-1030.

Aloqab, A., Alobaidi, F., &Raweh, B. (2018). Operational Risk Management in Financial Institutions: An Overview. *Business and Economic Research*, 8(2), 11-32.

Alzorqan, S. (2014). Bank Liquidity Risk and Performance: An Empirical Study of the Banking System in Jordan. *Research Journal of Finance and Accounting*, 5 (12): 155, 64.

Alzoubi, T. (2017). Determinants of Liquidity Risk in Islamic Banks. *Banks & Bank Systems*, (12, № 3), 142-148.

Amara, T., &Mabrouki, M. (2019). The Impact of Liquidity and Credit Risks On the Bank Stability. *Journal of Smart Economic Growth*, 4(2), 97-116.

Amuakwa-Mensah, F., Marbuah, G., & Ani-Asamoah Marbuah, D. (2017). Re-Examining The Determinants of Non-Performing Loans in Ghana's Banking Industry: Role of The 2007–2009 Financial Crisis. *Journal of African Business*, 18(3), 357-379.

Antony, T. M. (2023). Determinants of Liquidity Risk: Empirical Evidence from Indian Commercial Banks. *Banks and Bank Systems*, 18(3), 101- 111

Arebo, M., Hando, F., & Mekonnen, A. (2025). Financial Inclusion and Stability in Ethiopia Using Bank-Level Data: A Two-Step System GMM Estimation. *F1000Research*, 13, 1369.

Ayinuola, T. F., & Gumel, B. I. (2023). The Nexus Between Liquidity and Credit Risks and Their Impact On Bank Stability. *Asian Journal of Economics, Business and Accounting*, 23(11), 15-27.

Ayyash, I., & Jawad, Y. A. L. A. (2020). The Competitiveness in the Banking Industry in Palestine. *International Journal of Economics and Financial Issues*, 10(1), 201-208.

Badwan, N., & Awad, A. W. (2023). The Influence of Corona Pandemic on Stock Returns of Companies Listed on the Palestine Stock Exchange. *Review of Accounting and Finance*, 22(4), 466-488.

Badwan, N., Saleh, B., & Hamdan, M. (2024). Factors and Determinants Affecting Banking Sector Stability: Empirical Evidence from Conventional and Islamic Banks Listed on the Palestine Stock Exchange. *Journal of Financial Regulation and Compliance*, 32(1), 118-150.

Bakhouché, A. (2024). Competition, Stability and The Efficiency Channel in The Tunisian Banking System. *International Journal of Accounting, Auditing and Performance Evaluation*, 20(1-2), 121-154.

Bakshi, G., Gao, X., & Zhong, Z. (2022). Decoding Default Risk: A Review of Modeling Approaches, Findings, And Estimation Methods. *Annual Review of Financial Economics*, 14(1), 391-413.

Ballouk, H., Jabeur, S. B., Challita, S., & Chen, C. (2024). Financial Stability: A Scientometric Analysis and Research Agenda. *Research in International Business and Finance*, 70, 102294.

Barclay, M. J., & Holderness, C. G. (1989). Private Benefits from Control of Public Corporations. *Journal of Financial Economics*, 25(2), 371-395.

Baroma, B. (2013). The Impact of Structure-Related Variables On Forward-Looking Disclosures in The Annual Reports of Non-Financial Egyptian Companies. *Corporate Ownership and Control*, 11(1), 111-125.

Basel Committee on Banking Supervision, & Bank for International Settlements. (2000). Principles for the Management of Credit Risk. Bank for International Settlements. <https://www.bis.org/publ/bcbs75.pdf>

Basel Committee On Banking Supervision, 2004, “International Convergence of Capital Measurement and Capital Standards: A Revised Framework,” Basel.

Basel Committee. (2008). Principles for Sound Liquidity Risk Management and Supervision. BIS, Basel. <https://www.bis.org/publ/bcbs144.pdf>.

Basel III, B. C. B. S. (2013). The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools. *Bank for International Settlements*.

Beck, T., Cull, R., Fuchs, M. J., Getenga, J., Gatere, P. K., Randa, J., & Trandafir, M. (2010). Banking Sector Stability, Efficiency, And Outreach in Kenya. *World Bank Policy Research Working Paper*, (5442).

Begimkulov, E. (2024). The Empirical Measurement of Competition and Digitalization for The Banking Sector of Kyrgyzstan: Impacts of Efficiency, Profitability, And Stability. *Journal of Eastern European and Central Asian Research (JEECAR)*, 11(5), 956-967.

Bello, N., Hasan, A., & Saiti, B. (2017). The Mitigation of Liquidity Risk in Islamic Banking Operations. *Banks & Bank Systems*, (12, № 3 (Cont.)), 154-165.

Ben Khediri, K., & Ben-Khedhiri, H. (2011). Determinants of Bank Net Interest Margin in Tunisia: A Panel Data Model. *Applied Economics Letters*, 18(13), 1267-1271.

Bencharles, K. O., & Nwankwo, C. D. (2021). CR Management and Deposit Money Banks Stability in Nigeria: Does Good Corporate Governance Matter? *Research Journal of Finance and Accounting*, 12(16), 1-14

Bhatt, T. K., Ahmed, N., Iqbal, M. B., & Ullah, M. (2023). Examining The Determinants of Credit Risk Management and Their Relationship with The Performance of Commercial Banks in Nepal. *Journal of Risk and Financial Management*, 16(4), 235.-246.

Billio, M., Getmansky, M., Lo, A. W., & Pelizzon, L. (2012). Econometric Measures of Connectedness and Systemic Risk in The Finance and Insurance Sectors. *Journal of Financial Economics*, 104(3), 535-559.

Bingzheng, Y., & Puxian, B. (2021). Research On Credit Risk Assessment of Commercial Banks Based On KMV Model. *Social Sciences*, 10(5), 204-217.

Boudriga, A., Taktak, N. B., & Jellouli, S. (2010, September). Bank Specific, Business and Institutional Environment Determinants of Banks Nonperforming Loans: Evidence from Mena Countries. In *Economic Research Forum, Working Paper*. 547, 1-28

Bougatef, K. (2017). Determinants of Bank Profitability in Tunisia: Does Corruption Matter? *Journal of Money Laundering Control*, 20(1), 70-78.

Bougatef, K. (2017). Determinants of Bank Profitability in Tunisia: Does Corruption Matter? *Journal of Money Laundering Control*, 20(1), 70-78.

Boyd, J. H., & Graham, S. L. (1986). Risk, Regulation, And Bank Holding Company Expansion into Nonbanking. *Quarterly Review*, 10(Spring), 2-17.

Bozic, I., & Bozic, A. (2025). Commercial Banking and Financial Stability: Evaluating Internal and External Determinants. *Journal of Business and Economic Options*, 8(1), 1-14.

Brownlees, C., & Engle, R. F. (2017). SRISK: A Conditional Capital Shortfall Measure of Systemic Risk. *The Review of Financial Studies*, 30(1), 48-79.

Brunnermeier, M.K. And L.H. Pedersen (2009), “Market Liquidity and Funding Liquidity”, *Review of Financial Studies*, 22, 2201-2238.

Bryant, J. (1980). A Model of Reserves, Bank Runs, And Deposit Insurance. *Journal of Banking & Finance*, 4(4), 335-344.

Cai, R., & Zhang, M. (2017). How Does Credit Risk Influence Liquidity Risk? Evidence from Ukrainian Banks. *Visnyk of The National Bank of Ukraine*, (241), 21-33.

Cao, Z. (2013). *Systemic Risk Measures, Banking Supervision and Financial Stability* (Doctoral Dissertation).

Chakroun, S., Salhi, B., Ben Amar, A., & Jarboui, A. (2019). The Impact of ISO 26000 Social Responsibility Standard Adoption On Firm Financial Performance: Evidence from France. *Management Research Review*, 43(5), 545-571.

Chang, V., Xu, Q. A., Akinloye, S. H., Benson, V., & Hall, K. (2024). Prediction of Bank Credit Worthiness Through Credit Risk Analysis: An Explainable Machine Learning Study. *Annals of Operations Research*, 1-25.

Chen, C., Lin, K., Rudin, C., Shaposhnik, Y., Wang, S., & Wang, T. (2018). An Interpretable Model with Globally Consistent Explanations for Credit Risk. *Arxiv Preprint Arxiv:1811.12615*.

Chen, Y., Wang, M., & Yang, J. (2021). Measuring Chinese Bank Performance with Undesirable Outputs: A Slack-Based Two-Stage Network DEA Approach. In *Data-Enabled Analytics: DEA for Big Data* (Pp. 299-326). Cham: Springer International Publishing.

Chen, Z., Matousek, R., & Wanke, P. (2018). Chinese Bank Efficiency During the Global Financial Crisis: A Combined Approach Using Satisficing DEA and Support Vector Machines☆. *The North American Journal Of Economics And Finance*, 43, 71-86.

Chernov, M., Creal, D., & Hördahl, P. (2023). Sovereign Credit and Exchange Rate Risks: Evidence from Asia-Pacific Local Currency Bonds. *Journal of International Economics*, 140, 103692.

Choudhry, M. (2018). *An Introduction to Banking: Principles, Strategy and Risk Management*. John Wiley & Sons.

Chowdhury, M. A. I., Uddin, M. S., Ahmmed, M., Hassan, M. R., & Kabir, M. J. (2023). Potential Risks of Liquidity and Credit Affecting the Efficiency of Islamic Banks in Bangladesh. *Cogent Economics & Finance*, 11(1), 2209950.

Chowdhury, M. M., & Zaman, S. (2018). Effect of Liquidity Risk on Performance of Islamic Banks in Bangladesh. *IOSR Journal of Economics and Finance*, 9(4), 01-09.

Čihák, M., & Hesse, H. (2010). Islamic Banks and Financial Stability: An Empirical Analysis. *Journal of Financial Services Research*, 38(2), 95-113.

Conlon, T., Huan, X., & Ongena, S. (2020). Basel II and Operational Risk. *Swiss Finance Institute Research Paper*, (20-55), 20-10.

Cooper, D.R. And Schindler, P.S. (2011). *Business Research Methods*, 11th Edition.

Dahir, A. M., Mahat, F. B., & Ali, N. A. B. (2018). Funding Liquidity Risk and Bank Risk-Taking in Brics Countries: An Application of System GMM Approach. *International Journal of Emerging Markets*, 13(1), 231-248

Dai, J., Hu, N., Huang, R., & Yan, Y. (2023). How Does CR Affect Cost Management Strategies? Evidence on the Initiation of Credit Default Swap and Sticky Cost Behavior. *Journal of Corporate Finance*, 80, 102401.

Damane, M., & Ho, S. Y. (2024). The Impact of Financial Inclusion On Financial Stability: Review of Theories and International Evidence. *Development Studies Research*, 11(1), 2373459.

Deng, L., Li, W., Liu, J., & Ouyang, Y. (2024). Credit Risk of China's Commercial Banks Based On The KMV Model—Taking 18 Listed Commercial Banks as an Example. *Journal of Computational Methods in Sciences and Engineering*, 24(6), 3446-3454.

Dermine, J. (1986). Deposit Rates, Credit Rates and Bank Capital: The Klein-Monti Model Revisited. *Journal of Banking & Finance*, 10(1), 99-114.

Dewi, J. S., & Saraswati, B. D. (2024). Determinan Stabilitas Perbankan Di Indonesia: Pendekatan Makro Dan Mikro Prudensial. *Journal of Business & Banking*, 13(2), 305–320. <https://doi.org/10.14414/jbb.v13i2.4470>

Diaconu, R. I., & Oanea, D. C. (2014). The Main Determinants of Bank's Stability. Evidence from Romanian Banking Sector. *Procedia Economics and Finance*, 16(5), 329-335.

Diamond, D. W., & Dybvig, P. H. (1983). Bank Runs, Deposit Insurance, And Liquidity. *Journal of Political Economy*, 91(3), 401-419.

Djebali, N., & Zaghdoudi, K. (2020). Threshold Effects of Liquidity Risk and Credit Risk On Bank Stability in The MENA Region. *Journal of Policy Modeling*, 42(5), 1049-1063.

Donadel, M., Stanescu, A., Pistol, A., Stewart, B., Butu, C., Jankovic, D., ... & Zimmerman, L. (2021). Risk Factors for Measles Deaths Among Children During A Nationwide Measles Outbreak–Romania, 2016–2018. *BMC Infectious Diseases*, 21(1), 279.

Durdona, M. (2025, April). Credit Risk Assessment Based On Financial Statements. In *International Scientific Research Conference*. 3(33), 43-47.

Dwinanda, I. Z., & Sulistyowati, C. (2021). The Effect of Credit Risk and Liquidity Risk On Bank Stability. *Jurnal Ilmu Ekonomi Terapan*, 6(2), 255.- 266.

Edem, D. B. (2017). Liquidity Management and Performance of Deposit Money Banks in Nigeria (1986–2011): An Investigation. *International Journal of Economics, Finance and Management Sciences*, 5(3), 146-161.

Effendi, K. A., & Disman, D. (2017). Liquidity Risk: Comparison Between Islamic and Conventional Banking. *European Research Studies Journal*. 20(2A). 308 -318.

Ejoh, N., Okpa, I., & Inyang, E. (2014). The Relationship and Effect of Credit and Liquidity Risk On Bank Default Risk Among Deposit Money Banks in Nigeria. *Research Journal of Finance and Accounting*, 5(16), 142-150.

Ekinci, R., & Poyraz, G. (2019). The Effect of Credit Risk On Financial Performance of Deposit Banks in Turkey. *Procedia Computer Science*, 158, 979-987.

Epure, M., & Lafuente, E. (2015). Monitoring Bank Performance in The Presence of Risk. *Journal of Productivity Analysis*, 44(3), 265-281.

European Central Bank. (2010). Beyond ROE –How To Measure Bank Performance. The Report On EU Banking Structures. Page 43

Farazi, S., Fayan, E., & Rocha, R. (2011). Bank Ownership and Performance in Middle East and North Africa. Policy Research Working Paper 5620.

<http://dx.doi.org/10.1596/1813-9450-5620>

Fatoni, A. (2022). Pengaruh Kebijakan Restrukturasi Pembiayaan Terhadap Stabilitas Perbankan Syariah Di Indonesia: Bukti Empiris Di Tengah Pandemi Covid 19. *J-MAS (Jurnal Manajemen Dan Sains)*, 7(2), 1272-1277.

Fatoni, A., & Sidiq, S. (2019). Analisis Perbandingan Stabilitas Sistem Perbankan Syariah Dan Konvensional Di Indonesia. *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan, Dan Akuntansi*, 11(2), 179-198.

Febriani, D., & Yuniarti, R. D. (2022). Pengaruh NPL Dan Indikasi FFR Terhadap Stabilitas Perbankan Pada Masa Pandemi Covid-19. *Jurnal Riset Akuntansi Dan Keuangan*, 10(3), 503-518

Felix, A. T., & Claudine, T. N. (2008). Bank Performance and Credit Risk Management. *Unpublished Masters Dissertation in Finance, University of Skovde*, 12-46.

Gadou, L. M. (2025). The Factors Affecting Solvency and Credit Risks in MENA Banks. *Journal Of Corporate Finance Management And Banking System*. 5(2), 25-37.

Gadzo, S. G., Kportorgbi, H. K., & Gatsi, J. G. (2019). Credit Risk and Operational Risk on Financial Performance of Universal Banks in Ghana: A Partial Least Squared Structural Equation Model (PLS SEM) Approach. *Cogent Economics & Finance*.

Georgios, K., & Konstantina, K. (2025). Mergers & Acquisitions of Banks. An Evaluation Analysis of Financial Soundness During & Post The Event Including the Pandemic. Evidence from Greece. *Economic Alternatives*, (2), 295-323.

Ghenimi, A., Chaibi, H., & Omri, M. A. B. (2017). The effects of liquidity risk and credit risk on bank stability: Evidence from the MENA region. *Borsa Istanbul Review*, 17(4), 238-248.

Ghosh, A. (2015). Banking-Industry Specific and Regional Economic Determinants of Non-Performing Loans: Evidence from US States. *Journal of Financial Stability*, 20, 93-104.

Ghosh, A. (2017). Impact of Non-Performing Loans On US Product and Labor Markets. *Journal of Financial Economic Policy*, 9(3), 302-323.

Giraldo, C., Giraldo, I., Gomez-Gonzalez, J. E., & Uribe, J. M. (2024). High Frequency Monitoring of Credit Creation: A New Tool for Central Banks in Emerging Market Economies. *The Quarterly Review of Economics and Finance*, 97, 101893.

Goetz, M. R. (2017). Competition and Bank Stability. *Journal of Financial Intermediation* 35, 57–69.

Grasso, E., Fortugno, F., & Cheng, L. (2023). Early Warning Signals of Bank Distress: Machine Learning Techniques and Shapley Values Analysis.

Gulati, R., Goswami, A., & Kumar, S. (2019). What Drives Credit Risk in The Indian Banking Industry? An Empirical Investigation. *Economic Systems*, 43(1), 42-62.

Gupta, J., & Kashiramka, S. (2021). Identification of Systemically Important Banks in India Using SRISK. *Journal of Financial Regulation and Compliance*, 29(4), 387-408.

Hacini, I., Boulenfad, A., & Dahou, K., (2021). The Impact of Liquidity Risk Management on the Financial Performance Of Saudi Arabian Banks. *Emerging Markets Journal*. 11(1), 67-75. DOI 10.5195/Emaj.2021.221

Hakimi, A., &Zaghdoudi, K. (2017). Liquidity Risk and Bank Performance: An Empirical Test for Tunisian Banks. *Business and Economic Research*, 7(1), 46-57.

Hamdi, H., Hakimi, A., &Zaghdoudi, K. (2017). Diversification, Bank Performance and Risk: Have Tunisian Banks Adopted the New Business Model? *Financial Innovation*, 3(1), 03-22.

Hamed, O. (2017). Government Borrowing and Liquidity and The Stability of the Palestinian Banking System. *Palestine Economic Policy Research Institute (MAS) Discussion Paper*.

Han, Q., Tang, P., Wang, X., & Dong, R. (2025). Predicting Credit Default Risk Crisis of Government Implicit Debt: An Interpretable Machine Learning Approach: P. Tang Et Al. *Computational Economics*, 1-44.

Haq, M., & Heaney, R. (2012). Factors Determining European Bank Risk. *Journal of International Financial Markets, Institutions and Money*, 22(4), 696-718.

Hassan, M. K., Khan, A., & Paltrinieri, A. (2019). Liquidity Risk, Credit Risk and Stability in Islamic and Conventional Banks. *Research in International Business and Finance*, 48, 17-31.

Hassan, M. K., Unsal, O., & Tamer, H. E. (2016). Risk Management and Capital Adequacy in Turkish Participation and Conventional Banks: A Comparative Stress Testing Analysis. *Borsa Istanbul Review*, 16(2), 72-81.

Heider, F, Hoerova, M & Holthausen, C 2009 'Liquidity Hoarding and Interbank Market Spreads: The Role of Counterparty Risk' Center Discussion Paper, Vol. 2009-40 S, Finance, Tilburg.

Herli, M., Tjahjadi, B., & Hafidhah, H. (2021). Gender Diversity On Board of Directors and Intellectual Capital Disclosure in Indonesia. *The Journal of Asian Finance, Economics and Business (JAFEB)*, 8(1), 135-144.

Hopkin, P. (2018). *Fundamentals of Risk Management: Understanding, Evaluating and Implementing Effective Risk Management*. Kogan Page Publishers.

Hosna, A., Manzura, B., & Juanjuan, S. (2009). Credit Risk Management and Financial Stability in Commercial Banks in Sweden. Rapport NR.: Master's Degree Project 2009: 36.

Huang, R., & Ratnovski, L. (2011). The Dark Side of Bank Wholesale Funding. *Journal of Financial Intermediation*, 20(2), 248-263.

Huang, R., & Ratnovski, L. (2011). The Dark Side of Bank Wholesale Funding. *Journal Of Financial Intermediation*, 20(2), 248-263.

Iannotta, G., Nocera, G., & Sironi, A. (2007). Ownership Structure, Risk and Performance in The European Banking Industry. *Journal of Banking & Finance*, 31(7), 2127-2149.

Imbierowicz, B., & Rauch, C. (2014). The Relationship Between Liquidity Risk and Credit Risk in Banks. *Journal of Banking & Finance*, 40, 242-256.

Indicators, W. G. (2020). World Bank. *Washington, DC*.

International Monetary Fund. (2004). Global Financial Stability Report, September (Washington: International Monetary Fund).

International Monetary Fund. (2004). Liquidity Management, SM/04/149, April (Washington: International Monetary Fund).

Iqbal, A., Iqbal, M. S., Fatima, A., Ghori, M. A., & Tahir, S. (2024). Optimizing Resilience: Impact of Credit Risk Management On Financial Performance in Islamic Banking. *Zakariya Journal of Social Science*, 4(1), 01-16.

Iqtait, A. (2021). The Palestinian Authority Political Economy: The Architecture of Fiscal Control. In *Political Economy of Palestine: Critical, Interdisciplinary, And Decolonial Perspectives* (pp. 249-270). Cham: Springer International Publishing.

Irawati, N., Maksum, A., Sadalia, I., & Muda, I. (2019). Financial Performance of Indonesian's Banking Industry: The Role of Good Corporate Governance, Capital Adequacy Ratio, Non-Performing Loan and Size. *International Journal of Scientific and Technology Research*, 8(4), 22-26.

Ishak, I., Ismail, N., Razali, N. A., Bakar, R., & Ramlan, H. (2016). Credit Risk Management and Profitability of Bank Listed On Bursa Malaysia. In *International Symposium & Exhibition On Business and Accounting* (Pp. 1-7).

Ismail, S. & Ahmed, E (2023). The Impact of LR, CR, And Operational Risk on Financial Stability in Conventional Banks in Jordan. *Uncertain Supply Chain Management*, 11(2), 433-442

Isomiddinovich, A. A., & Jasurbek, N. (2024). Improvement of Risk Management System in Commercial Banks. *Excellencia: International Multi-disciplinary Journal of Education (2994-9521)*, 2(3), 166-170.

Jabbouri, I., & Naili, M. (2019). Determinants of Nonperforming Loans in Emerging Markets: Evidence from The MENA Region. *Review of Pacific Basin Financial Markets and Policies*, 22(04), 1950026.

Jahn, N., & Thomas, K. (2014). Early Warning Indicators for The German Banking System: A Macroprudential Analysis. *Credit and Capital Markets*, 47 (1), 5-47.

Jameaba, M. S. (2024). Financial Inclusion, Poverty Incidence and Financial Stability. *Poverty Incidence and Financial Stability (August 23, 2024)*.

Jima, M. D., & Makoni, P. L. (2023). Determinants of Sustainable Financial Inclusion in Sub-Saharan Africa: A System GMM Approach. *Prague Economic Papers*, 32(6). 699-723.

Jothr, O. A., Hameed, A. A., & Mohaisen, H. A. (2021). CAMELS Model and Its Impact On the Evaluation of Banking Performance a literature review. *مجلة الإدارة والاقتصاد*, 46(129) , 533-543.

Joudeh, N., & Aqel, S. (2024). Do Audit Firm and Audit Committee Characteristics Influence the Reporting of Key Audit Matters? Evidence from Palestine. *Cogent Business & Management*, 11(1), 2396537.

Jumbe, G., & Gor, R. (2022). Modeling of Default Risk by Jump Diffusion Process. *IOSR Journal of Mathematics (IOSR-JM)*, 18(3), 41-47.

Kabir, M. N., Worthington, A., & Gupta, R. (2015). Comparative Credit Risk in Islamic and Conventional Bank. *Pacific-Basin Finance Journal*, 34, 327-353.

Kagima, J. W., & Munene, R. (2025). Evaluation of Operational Risk Management Practice and Financial Performance of Commercial Banks in Kenya. *International Journal of Research and Innovation in Social Science*, 9(5), 1033-1043.

Kaharuddin, K., & Yusuf, M. (2022). The Impact of Liquidity Risk Optimization On the Stability of Islamic Commercial Banks in Indonesia. In *Proceeding of the International Conference On Economics and Business*. 1(2), 671-688.

Kamis, N. S., Mohd Isa, M., & Md Noor, N. S. (2022). Can Muslim inherit bitcoin? Discovering the continuity of digital asset in Perlis. *International Journal of Islamic Business (IJIB)*, 7(2), 44-51. <https://doi.org/10.32890/ijib2022.7.2.3>

Kamis, R., Ismail, S., & Abd Rahman, N. H. (2022). Go Cashless: A Proposed Conceptual Framework for E-Wallet Acceptance. *International Journal of Academic Research in Business and Social Sciences*, 12(11), 1797-1808.

Kargi, H. S. (2011). Credit Risk and The Performance of Nigerian Banks. Ahmadu Bello University, Zaria.

Kim, B. H., Kim, H., & Lee, B. S. (2015). Spillover Effects of The US Financial Crisis On Financial Markets in Emerging Asian Countries. *International Review of Economics & Finance*, 39, 192-210.

Kithinji, A. M. (2020). The Influence of Public Debt on Economic Growth in Kenyan Government. *International Journal of Business Management and Economic Review*, 3(1), 120-125.

Klein, M. A. (1971). A Theory of the Banking Firm. *Journal of Money, Credit and Banking*, 3(2), 205-218.

Köseoğlu, S. (2023). Understanding Systemic Risk Dynamics and Economic Growth: Evidence from The Turkish Banking System. *Sustainability*, 15(19), 14209.

Kovalová, E. (2019). Predictive Models of Corporate Insolvency Risks. In *Proceedings of The 13th International Management Conference "Management Strategies for High Performance"*, October (Vol. 31, Pp. 989-995).

Kwashie, A. A., Baidoo, S. T., & Ayesu, E. K. (2022). Investigating The Impact of Credit Risk On Financial Performance of Commercial Banks in Ghana. *Cogent Economics & Finance*, 10(1), 2109281.

Lehar, A. (2005). Measuring Systemic Risk: A Risk Management Approach. *Journal of Banking & Finance*, 29(10), 2577-2603.

Leykun, F. (2016). Factors Affecting the Net Interest Margin of Commercial Bank of Ethiopia. *International Journal of Scientific and Research Publications*, 6(6), 150-161.

Li, F. & Zou, Y., (2014). The Impact of Credit Risk Management on Profitability of Commercial Banks: A Study of Europe.

Liu, C. C., Ryan, S. G., & Wu, S. J. (2024). Impact of The Financial Crisis and Banks' Capital Adequacy on Their Approval of Low-Versus High-Risk Mortgages. *Available at SSRN 4683334*.

Long, J., Jiang, C., Dimitrov, S., & Wang, Z. (2022). Clues from Networks: Quantifying Relational Risk for Credit Risk Evaluation of Smes. *Financial Innovation*, 8(1), 91.

López-Penabad, M. C., Iglesias-Casal, A., & Neto, J. F. S. (2021). Competition and Financial Stability in The European Listed Banks. *Sage Open*, 11(3), 21582440211032645.

Louzis, D. P., Vouldis, A. T., & Metaxas, V. L. (2012). Macroeconomic and Bank-Specific Determinants of Non-Performing Loans in Greece: A Comparative Study of Mortgage, Business and Consumer Loan Portfolios. *Journal of Banking & Finance*, 36(4), 1012-1027.

Ly, K. C. (2015). Liquidity Risk, Regulation and Bank Performance: Evidence from European Banks. *Global Economy and Finance Journal*, 8(1), 11-33.

Mabkhot, H., & Al-Wesabi, H. A. H. (2022). Banks' Financial Stability and Macroeconomic Key Factors in GCC Countries. *Sustainability*, 14(23), 15999.

Marozva, G. (2015). Liquidity and Bank Performance. *The International Business & Economics Research Journal (Online)*, 14(3), 453.

Masno, S., Sampurnaningsih, S. R., Dewi, S. K. S., Sunanto, J. A., & Supratikta, H. (2024). The Role of Governance in Mitigating the Effect of Financial Contagion On Bank Bankruptcies: An Empirical Study of ASEAN Banks. *Journal of System and Management Sciences*, 14(11), 492-519.

Matey, J. (2023). Bank LR and Bank CR: Implication on Bank Stability in Ghana. *International Journal of Scientific Research in Multidisciplinary Studies*, 7(4), 01–09.

Mawardi I, Risyad MH, Al Mustofa MU (2025;), "Assessing The Impact of Economic Uncertainty On Indonesia's Rural Bank Stability". *Journal of Islamic Accounting and Business Research*, Vol. Ahead-Of-Print No. Ahead-Of-Print. <https://doi.org/10.1108/JIABR-05-2024-0175>

Mckibbin, W. J., & Stoeckel, A. (2010). The Global Financial Crisis: Causes and Consequences. *Asian Economic Papers*, 9(1), 54-86.

Mendoza, R. R., & Rivera, J. P. R. (2017). The Effect of Credit Risk and Capital Adequacy on the Profitability of Rural Banks in the Philippines. *Scientific Annals of Economics and Business*, 64(1), 83-96.

Menicucci, E., & Paolucci, G. (2016). The Determinants of Bank Profitability: Empirical Evidence from European Banking Sector. *Journal of Financial Reporting and Accounting*, 14(1), 86-115.

Merton, R. C. (1974). On The Pricing of Corporate Debt: The Risk Structure of Interest Rates. *The Journal of Finance*, 29, 449–70.

Moez, D., & Abdelheq, L. (2020). Does Unsystematic Risk Management Affect the Relationship Between Banks' performance and the Objectives of Saudi Arabia Economic Vision 2030? *Academy of Accounting and Financial Studies Journal*, 24(4), 1-15

Monti, M. (1972). Deposit, Credit, And Interest Rate Determination Under Alternative Bank Objectives. *Mathematical Methods in Investment and Finance*, 431-454.

Morgan, P., and V. Pontines. (2014). Financial Stability and Financial Inclusion. ADBI Working Paper 488. Tokyo: Asian Development Bank Institute. Available:

Mpofu, T. R., & Nikolaidou, E. (2018). Determinants of Credit Risk in The Banking System in Sub-Saharan Africa. *Review of Development Finance*, 8(2), 141-153.

Muchtar, S., & Rustimulya, G. S. (2019). Determinants of Liquidity Risk in Banking Sector On the Indonesia Stock Exchange. *Jurnal Manajemen*, 23(3), 461-480.

Musau, S., Muathe, S., & Mwangi, L. (2018). Financial Inclusion, Bank Competitiveness and Credit Risk of Commercial Banks in Kenya. *International Journal of Financial Research*, 9(1), 203-218.

Mwangi, L. W., Kiemo, S. M., Olweny, T. O., Muturi, W. M., & (2019). Bank-Specific Determinants of Commercial Banks Financial Stability in Kenya. *Journal of Applied Finance and Banking*, 9(1), 119-145.

Mwangi, M. (2017). Effects of Underwriting and Claims Management On Performance of Property and Casualty Insurance Companies in East Africa. *doi: http://dx.doi.org/10.19044/esj, v13n13p358*

My, S. T., Quoc, A. N., & (2022). Bank Capital and Bank Profitability of Vietnam Commercial Banks. *International Journal of Business and Society, 24(1), 2023, 56-65*

Naili, M., & Lahrichi, Y. (2022). The Determinants of Banks' Credit Risk: Review of The Literature and Future Research Agenda. *International Journal of Finance & Economics, 27(1), 334-360.*

Naoaj, M. S. (2023). Measuring Liquidity Risk and Its Determinants in Commercial Banks of Bangladesh: An Empirical Investigation. *European Journal of Business and Management Research, 8(2), 250-254.*

Ndoka, S., & Islami, M. (2016). The Impact of Credit Risk Management in the Profitability of Albanian Commercial Banks During the Period 2005-2015. *European Journal of Sustainable Development, 5(3), 445-445.*

Noman, A. H. M., Pervin, S., Chowdhury, M. M., & Banna, H. (2015). The Effect of Credit Risk on the Banking Profitability: A Case on Bangladesh. *Global Journal of Management and Business Research, 15(3), 41-48.*

Olokoyo, F. O., Fapetu, O., Ucheaga, E. G., Adu, O., & Oluwole, F. (2021). Impact of External Reserves Shocks On Selected Macroeconomic Indicators in Nigeria: Implication for Sustainable Economic Growth. *African Journal of Business & Economic Research.*

Olugboye, K. S., Babatunji, A. S., Jayeola, O. L. A. B. I. S. I., & Tobi, B. A. (2019). Effect of Credit Risk Management On Financial Performance of Nigerian Listed

Deposit Money Banks. *Scholedge International Journal of Business Policy & Governance*, 5(6), 53-62.

Omran, A. A., Xiao, M., & Menshawy, I. M. (2025). Banks Stability in Islamic and Conventional Banks: The Role of Credit and Liquidity Risks—An Applied Study On Banks Operating in Middle East. In *Digitalization and Management Innovation III* (Pp. 677-684). IOS Press.

Onsongo, S. K., Muathe, S. M., & Mwangi, L. W. (2020). Financial Risk and Financial Performance: Evidence and Insights from Commercial and Services Listed Companies in Nairobi Securities Exchange, Kenya. *International Journal of Financial Studies*, 8(3), 51.

Ozili, P. K. (2019). Non-Performing Loans and Financial Development: New Evidence. *The Journal of Risk Finance*, 20(1), 59-81.

Ozili, P.K. (2018). Banking Stability Determinants in Africa. *International Journal of Managerial Finance*, 14(4), 462-483.

Palečková, I., Přečková, L., & Hlawiczka, R. (2024). The Contribution of Financial Institutions to Economic Growth. In *Modeling Economic Growth in Contemporary Czechia* (pp. 251-263). Emerald Publishing Limited.

Palestine Monetary Authority (PMA). (2020). Financial Stability Report (FSR).

Palestine Monetary Authority (PMA). (2024). Financial Stability Report (FSR).

Palestine Monetary Authority (PMA). (2025). Financial Stability Report (FSR).

Palestine Monetary Authority. (2024). Financial Stability Report, 2023. Research and Monetary Policy Department.

Palestinian Central Bureau of Statistics. (2024). The Performance of the Palestinian Economy During 2023. <https://www.pcbs.gov.ps/post.aspx?lang=en&itemid=4674> (Accessed 19 May2025)

Palestinian Monetary Authority. (2020). Financial Stability, Research and Monetary Policy Department.

Palestinian Monetary Authority. (2024). Financial Stability. <https://www.pma.ps/en/financialstability> (accessed 19 May2025)

Pandey, D., & Rastogi, A. (2010). A Critical Research On Threats and Security Technology Related to Payment System On E-Commerce Network. *International Journal of Computer Applications*, 975, 8887.

Pasaribu, D. (2017). AnalisisPengaruhStruktur Modal, Profitabilitas, KebijakanDividen Dan Ukuran Perusahaan Terhadap Nilai Perusahaan Pada Perusahaan Farmasi Yang TerdaftarDi Bursa Efek Indonesia. *Methosika: JurnalAkuntansi Dan Keuangan Methodist*, 1(1), 32-44.

Phan, T. A., & Duong, L. H. (2021). The Effects of Corporate Governance Mechanisms On Firm Performance: Empirical Evidence from Vietnam. *The Journal of Asian Finance, Economics and Business (JAFEB)*, 8(4), 369-379.

Pricewaterhousecoopers (2015), 'Global Financial Markets Liquidity Study', August.

Rahman, A., & Khan, M. A. (2024). The Relationship between Financial Development and Economic Growth: New Insights Using Quadruple and Quintuple Helix Innovation Framework and Way Forward. *Journal of the Knowledge Economy*, 15(2), 5939-5964.

Rajendran, R., & Shilpa, M. (2022). Impact of Basel Accord on Corporate Governance in Risk Management. *Special Education, 1*(43), 1728 – 1748.

Reinhart, C. M., & Rogoff, K. S. (2011). From Financial Crash to Debt Crisis. *American Economic Review, 101*(5), 1676-1706.

Roudgar, A., Zomorodian, G. R. (2025). Modified Systemic Risk Model with Δ COVAR Approach in Banking System with an Emphasis on Bank Indicators. *International Journal of Finance & Managerial Accounting, 10*(38), 73-86.

Roy, A. D. (1952). Safety First and The Holding of Assets. *Econometrica: Journal of The Econometric Society, 431-449*.

Rupeika-Apoga, R., Romānova, I., & Grima, S. (2020). The Determinants of Bank's Stability: Evidence from Latvia, A Small Post-Transition Economy. In *Contemporary Issues in Business Economics and Finance*. 104, 235-253. Emerald Publishing Limited.

Ruziq, A. (2013). The Impact of Credit and Liquidity Risk on Bank Financial Performance: The Case of Indonesian Conventional Bank with Total Asset Above 10 Trillion Rupiah. *International Journal of Economic Policy in Emerging Economies, 6*(2), 93-106.

Saif-Alyousfi, A. Y. (2022). Determinants of Bank Profitability: Evidence from 47 Asian Countries. *Journal of Economic Studies, 49*(1), 44-60.

Saleh, I., & Abu Afifa, M. (2020). The Effect of Credit Risk, Liquidity Risk and Bank Capital on Bank Profitability: Evidence from an Emerging Market. *Cogent Economics & Finance, 8*(1), 1814509.

Saleh, M. (2022). Indonesian Banking Performance of Pre and Post of Mergers and Acquisitions. *Trikonomika: Jurnal Ekonomi*, 21(1), 1-7.

Salim, B. F., & Bilal, Z. O. (2016). The Impact of Liquidity Management on Financial Performance in Omani Banking Sector. *International Journal of Accounting, Business and Economic Research*, 14(1), 545-565.

Sánchez-Teba, E. M., Benítez-Márquez, M. D., Bermúdez González, G., & Luna-Pereira, M. D. M. (2021). Mapping The Knowledge of CSR and Sustainability. *Sustainability*, 13(18), 10106.

Sang Tang My ANQ. (2022). The Relationship Between Credit Risk and Bank Financial Stability: The Mediating Role of Bank Profitability. *Journal of Hunan University Natural Sciences*. 2022;49(1), 264 -271.

Sattar, H., Iqbal, K., & Kamran, K. (2025). Implementing The Z-Score to Examine the Financial Stability of Insurance Companies in Pakistan. *UW Journal of Management Sciences*, 9(1). 1-20.

Selmi, A. (2025). The Determinants of Financial Stability of Palestinian Banks. *An-Najah University Journal for Law and Economics*, 2(2), 1-14.

Setiawan, A., Sudarto, S., & Widiastuti, E. (2021). The Influence of Credit Risk and Liquidity Risk On Bank Stability. *Icore*, 5(1). 1169-1177.

Setiawan, B.; Puspitasari, R.; Manurung, T. Marlin S. (2021). “The Existence of Islamic Banking in Indonesia from Non-Muslim Perceptions.” *ASEAN Marketing Journal*, 7(2), 1-3. DOI: 10.1080/14697688.2023.2270495

Sharma, S., Prasanna, S., & Dar, A. A. (2025). Performance Analysis of Indian Private Sector Banks: Insights from CAMELS and Statistical Technique. *Edelweiss Applied Science and Technology*, 9(5), 2355-2371.

Shehzad, C. T., De Haan, J., & Scholtens, B. (2010). The Impact of Bank Ownership Concentration On Impaired Loans and Capital Adequacy. *Journal of Banking & Finance*, 34(2), 399-408.

Shim, J. (2019). Loan Portfolio Diversification, Market Structure and Bank Stability. *Journal of Banking & Finance*, 104, 103-115.

Shrieves, R. E., & Dahl, D. (1992). The Relationship Between Risk and Capital in Commercial Banks. *Journal of Banking & Finance*, 16(2), 439-457.

Siddique, A., Khan, M. A., & Khan, Z. (2022). The Effect of Credit Risk Management and Bank-Specific Factors On the Financial Performance of the South Asian Commercial Banks. *Asian Journal of Accounting Research*, 7(2), 182-194.

Siyanbola, T. T., & Adebayo, K. K. (2021). CR Management and Financial Sustainability of Listed Deposit Money Banks in Nigeria. *Quest Journal of Research in Business and Management*, 9(6), 64-77.

Skoglund, J., & Chen, W. (2015). *Financial Risk Management: Applications in Market, Credit, Asset and Liability Management and Firm Wide Risk*. John Wiley & Sons

Song, W., Zafar, M. G. R., Alvi, M. A., Wu, Q., & Ahmad, M. (2024). Do Financial Inclusion and Bank Competition Matter for Banks' Stability in Asia? *Technological and Economic Development of Economy*, 30(5), 1457-1485.

Sukma, Y. L. (2013). Pengaruh Dana Pihak Ketiga, Kecukupan Modal Dan Risiko Kredit Terhadap Profitabilitas (Perusahaan Perbankan Yang Terdaftar Di BEI). *Jurnal Akuntansi*, 1(2), 1–25.

Sundareshan, S., & Xiao, K. (2024). Liquidity Regulation and Banks: Theory and Evidence. *Journal of Financial Economics*, 151, 103747.

Suyanto, S. (2021). Cek Plagiat: The Effect of Bad Credit and Liquidity on Bank Performance in Indonesia. *Journal of Asian Finance, Economics and Business*. 8(3), 451-458.

Syadali, M. R. A., Segaf, S., & Parmujianto, P. (2023). Risk Management Strategy for the Problem of Borrowing Money for Islamic Commercial Banks. *Enrichment: Journal of Management*, 13(2), 1227-1236.

Tabari, N.A., M. Ahmadi and M. Emami, (2013). The Effect of Liquidity Risk on the Performance of Commercial Banks. *International Research Journal of Applied and Basic Sciences*, 4(6): 1624-1631

Tan, Y., Floros, C., & Anchor, J. (2017). The Profitability of Chinese Banks: Impacts of Risk, Competition and Efficiency. *Review of Accounting and Finance*, 16(1), 86-105.

Tarashev, N., C. Borio and K. Tsatsaronis (2010) ‘Attributing Systemic Risk to Individual Institutions’, BIS Working Paper, No. 308.

Tarkocin, C., & Donduran, M. (2023). Bank Stability and Systemic Risk Measurement: Application of Z-Score Variations to The Turkish Banking Sector. *International Journal of Finance & Banking Studies*, 12(1). 63-83.

Thanh, L. P., Gholipour, H. F., &Arjomandi, A. (2024). Navigating Banking Transitions: Insights into Competition and Stability from Vietnam’s Experience. *Post-Communist Economies*, 1–18. <https://doi.org/10.1080/14631377.2024.2329392>

Tuga, K. (2019). Determinants of Liquidity Risk: Evidence from Ethiopian Private Commercial Banks. Master of Science in Accounting and Finance. Addis Ababa, Ethiopia.

Ugah, J. (2020). Financial Risks Management and Bank Profitability in Nigeria: Case of Access Bank of Nigeria Plc. *International Journal of Research, And Innovation in Social Science*, 183-90.

Ullah, S., Ullah, A., & Zaman, M. (2024). Nexus of Governance, Macroeconomic Conditions, And Financial Stability of Banks: A Comparison of Developed and Emerging Countries. *Financial Innovation*, 10(1), 30- 68.

Valášková, K., &Klieštík, T. (2014). Assessing Credit Risk by Merton Model. In *Proceedings of ICMEBIS 2014 International Conference On Management, Education, Business, And Information Science, Shanghai, China, Edugait Press, Canada* (Pp. 27-30).

Verma, D., &Chakarwarty, Y. (2024). Impact of Bank Competition On Financial Stability-A Study On Indian Banks. *Competitiveness Review: An International Business Journal*, 34(2), 277-304.

Wang, R., Liu, J., & Luo, H. (2021). Fintech Development and Bank Risk Taking in China. *The European Journal of Finance*, 27(4-5), 397-418.

Wanke, P., Azad, M. A. K., Yazdi, A. K., Birau, F. R., &Spulbar, C. M. (2022). Revisiting Camels Rating System and The Performance of Asian Banks: A Comprehensive MCDM/Z-Numbers Approach. *IEEE Access*, 10, 54098-54109.

Xiaohui, L. (2025). Credit Risk. In *Dictionary of Contemporary Chinese Economics* (Pp. 1675-1675). Singapore: Springer Nature Singapore.

Yanenkova, I., Nehoda, Y., Drobyazko, S., Zavorodnii, A., & Berezovska, L. (2021). Modeling of Bank Credit Risk Management Using the Cost Risk Model. *Journal of Risk and Financial Management*, 14(5), 211.

Yimer, M. S. (2016). Determinants of Liquidity in Commercial Banks of Ethiopia: The Case of Selected Private Banks. *Addis Ababa, Ethiopia: Master of Science in Accounting and Finance*.

Zaghdoudi, K. (2019). The Effects of Risks on The Stability of Tunisian Conventional Banks. *Asian Economic and Financial Review*, 9(3), 389.-401.

Zanfack, L. T., Ngounou, B. A., Domguia, E. N., & Tebeng, E. X. P. (2024). Financial Stability in Sub-Saharan Africa: Does Monetary Policy Matter? *Heliyon*, 10(15).

Žugić, R., & Fabris, N. (2014). Framework for Preserving Financial Stability in Montenegro. *Journal of Central Banking Theory and Practice*, 3(1), 27-41.

أثر التفاعل بين مخاطر الائتمان ومخاطر السيولة على استقرار البنوك في فلسطين

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ملخص

تهدف هذه الدراسة إلى إيجاد اثر كل من مخاطر الائتمان ومخاطر السيولة على استقرار البنوك في فلسطين بالإضافة دراسة تأثير التفاعل بين مخاطر الائتمان ومخاطر السيولة على استقرار البنوك في فلسطين. استخدم الباحث المربعات الصغرى العادية المجمعة، والتأثير الثابت، والتأثير العشوائي (GLS)، ونظام المربعات الصغرى ثنائية المرحلة (2SLS)، وانحدار SLS2، ونموذج المتغير العام الديناميكي (GMM) لدراسة تأثير التفاعل بين مخاطر الائتمان ومخاطر السيولة على استقرار البنوك في فلسطين خلال الفترة 2012-2024. أشارت النتائج إلى تأثير محدد كبير لكل من نسبة مخاطر الائتمان ومخاطر السيولة على استقرار البنوك. من ناحية أخرى، التفاعل بين مخاطر الائتمان ومخاطر السيولة له تأثير إيجابي على استقرار البنوك. الزيادة الكبيرة في القروض المتعثرة (NPL) تقلل بشكل واضح من استقرار البنوك، مما يؤكد على ضرورة وجود إدارة قوية مخاطر الائتمان على العكس من ذلك، فإن زيادة السيولة تعمل على تحسين استقرار البنوك وتقلل بشكل أساسي من التأثير السلبي لنسبة مخاطر الائتمان (CR) على استقرار البنوك هذه النتيجة مميزة للقطاع الفلسطيني الذي يتمتع بوفرة من السيولة. لهذه الدراسة أيضًا انعكاسات عملية على مجالس إدارة المؤسسات المصرفية، والإدارة

التنفيذية العليا، وسلطة النقد الفلسطينية، وصانعي السياسات والقرارات الاقتصادية، لوضع استراتيجيات وسياسات مثلى للحد من مخاطر الائتمان وإدارة مخاطر السيولة، وزيادة كفاءة مراقبة سيولة المؤسسات المصرفية ومخاطر الائتمان لديها، بما يحقق الاستقرار المالي. وتختلف هذه الدراسة عن الدراسات السابقة في أنها تبحث في العلاقة بين مخاطر الائتمان ومخاطر السيولة في المؤسسات المصرفية في فلسطين، وأثر مخاطر الائتمان ومخاطر السيولة على الاستقرار المالي.

الكلمات المفتاحية: المخاطر الائتمانية- مخاطر السيولة - الاستقرار المالي - فلسطين- بازل 3