



**An-Najah National University**  
**Faculty of Graduate Studies**

**THE IMPACT OF CREDIT RISK ON BANKS FINANCIAL  
PERFORMANCE AND THE MODERATING ROLE OF  
GOVERNANCE LEVEL: A STUDY ON BANKS LISTED IN  
PALESTINE AND AMMAN STOCK EXCHANGE**

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## **Dedication**

I dedicate this thesis to my dear parents, who, with their prayers, illuminated the path of difficulties. My thanks to my husband, "Nazzal", who endured so much and eased my difficulties. Without him, I would not have reached this place. To my children Muhammad, Mu'min, Muthanna, and Mubin. To the people of credit, to my professors and doctors who enriched this thesis with their valuable guidance and advice. To all of them, I dedicate this work, asking God Almighty to benefit us with it.

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"He who does not thank people does not thank God."

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Reem Mahmoud Shamasni

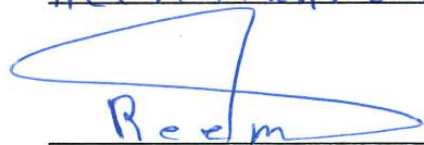
## Declaration

I, the undersigned, declare that I submitted the thesis entitled:

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I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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27/07/2022

## Table of Contents

Dedication .....	ii
Acknowledgments .....	iv
Declaration.....	v
Table of Contents.....	vi
List of Tables .....	viii
List of Figures.....	ix
List of Appendices .....	x
Abstract.....	xi
<b>Chapter One: General Framework.....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Research Problem .....	2
1.3 Research Objectives.....	4
1.4 Research Importance.....	4
1.5 Structure of Research.....	5
<b>Chapter Two: Literature Review and Hypotheses Development.....</b>	<b>6</b>
2.1 Introduction.....	6
2.2 Definition of Concepts.....	6
2.2.1 Credit Risk .....	6
2.2.2 Financial Performance .....	7
2.2.3 Corporate Governance .....	8
2.2.5 Palestine Securities' Exchange.....	12
2.2.6 Amman Securities' Exchange .....	13
2.3 Credit risk and Financial Performance .....	13
2.4 Theories related to CG .....	15
2.4.1 Agency Theory .....	16
2.4.2 Stakeholder Theory .....	17
2.4.3 Stewardship Theory .....	18
2.4.4 Resource-Dependence Theory .....	19
2.5 Corporate Governance, Financial Performance and Credit Risk.....	20
2.6 Hypotheses Development .....	24
2.6.1 The relationship between CRs and FP .....	24
2.6.2 Interaction between CR, FP, and CG.....	25

2.7 Conceptual model of the study .....	26
<b>Chapter Three: Research Methodology .....</b>	<b>27</b>
3.1 Introduction.....	27
3.2 Research Sample.....	27
3.3 Data Collection .....	28
3.4 Variable Measurement.....	28
3.4.1 Independent variable.....	29
3.4.2 Dependent variable .....	29
3.4.3 Moderating variable: CG .....	30
3.4.4 Control variables.....	31
3.5 Statistical methods used to analyze data.....	32
3.6 Research models .....	32
<b>Chapter Four: Results and Discussion.....</b>	<b>34</b>
4.1 Introduction.....	34
4.2 Descriptive statistics of variables .....	34
4.3 Correlation Matrix .....	35
4.4 Estimation Result.....	37
4.4 Testing of hypotheses and discussion of results .....	43
<b>Chapter Five: Conclusion and Recommendations .....</b>	<b>47</b>
5.1 Overview.....	47
5.2 Conclusion .....	47
5.3 Recommendations.....	48
5.4 Limitations of the study .....	49
5.5 Recommendations for future research .....	49
List of Abbreviations .....	50
References.....	51
Appendices.....	69
الملخص .....	ب

## List of Tables

Table (1): Measurement of CRs indicators that were relied upon in the study .....	29
Table (2): Measurement of the control variables that were used in the study .....	32
Table (3): The study abbreviation and operational definition variables .....	33
Table (4): Descriptive statistics of the study variables .....	35
Table (5): Pair wise correlation matrix between variables .....	36
Table (6): Multicollinearity test VIF .....	37
Table (7): Regression results (fixed effect estimation) for the model with TOBINS Q as a dependent variable .....	38
Table (8): Regression results (fixed effect estimation) for the model with ROE as a dependent variable.....	38
Table (9): Regression results (fixed effect estimation) for the model with ROA as a dependent variable.....	39
Table (10): estimation results for the model with TOBINSQ as a dependent variable and CG as a moderator variable .....	41
Table (11): Estimation results for the model with ROE as a dependent variable and CG as a moderator variable .....	72
Table (12): Estimation results for the model with ROA as a dependent variable and CG as a moderator variable .....	73
Table (13): Summary of the relationships from the study findings .....	74



## **List of Figures**

Figure (1): Agency theory framework .....	16
Figure (2): Stakeholder Theory framework .....	17
Figure (3): Stewardship Theory framework .....	19
Figure (4): Resource-Dependence Theory framework .....	20
Figure (5): The conceptual model of the study .....	26

## **List of Appendices**

Appendix (A): Sample 2009-2019.....	69
Appendix (B): Corporate Governance Index.....	70
Appendix (C): Tables .....	72

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## **Abstract**

This study aims to investigate the moderating role of Corporate Governance (CG) on the relationship between Credit Risk (CRs) and Financial Performance (FP) of banks listed in the Palestine Securities' Exchange (PEX) and Amman Securities' Exchange (ASE) between 2009 and 2019.

The study sample comprised twenty-one banks distributed between the two stock exchanges. Secondary data, annual reports, and disclosures were used to analyze and draw conclusions and recommendations. A multiple linear regression model was used to deduce the effect of CRs on the performance of banks. Tobin's Q, Return on Assets (ROA), and Return on Equity (ROE) were used to measure the performance of banks. The ratio of Non-Performing Loans to total loans (NPLs) and loans to total assets (LTA) were used to measure CRs. CG was measured using an index based on the extent of literature and prevailing circumstances in the Palestinian and Jordanian environments.

The regression results showed mixed results regarding the impact of CRs on the FP of banks. LTA has a significant and positive effect on TOBINS Q and ROE, but an insignificant and positive effect on ROA. On the other hand, NPLs has a significant and negative effect on ROA, whereas NPLs has a significant and positive effect on TOBINS Q.

The findings stated that NPLs has an insignificant and positive effect on ROE. Moreover, the results demonstrated that CG moderated the relationship between CRs and FP of banks.

This means that the high competence of CG rules decreases the negative effect of CRs on FP. In light of these results, the study suggests the following set of recommendations: importance of paying attention to bank loans; implementing more effective credit processes and banking policies; assuring that the credit of the potential borrower is appropriately assessed; Deconcentration of credit in particular sector; constant reviewing of CG codes and learning from the experiences of developed countries in corporate and bank governance; directing companies to pay attention to CG practices through laws and legislation that require companies to follow CG practices; and conducting workshops on CG and its significance in the presence of company management and decision-makers.

**Keywords:** Credit Risk, Financial Performance, Corporate Governance, Palestine Securities' Exchange, Amman Securities' Exchange

# **Chapter One**

## **General Framework**

### **1.1 Introduction**

The granting of credit is an important objective of banks. Loans constitute an important source of income for banks, but this activity entails high risks for both the lender and borrower (Kargi, 2011). The high Credit Risk and high percentage of Non-Performing Loans expose banks to the risk of bankruptcy. Thus, the phenomenon of (NLPs) has recently escalated, as a result of developments in countries, whether economic, political, or social, and this has increased the possibility of banks being exposed to a lot of risks (Hurk, 2017).

Numerous efforts have joined forces at the local and international levels, especially after the Basel Committee issued its first draft in 1988; one of its most important objectives to issue a set of rules to enhance cooperation between countries to achieve control over the activities of various banks, especially concerning the effects of default and its effect on the Financial Performance of banks. Despite all the efforts, the countries continued to suffer from an imbalance in their banking systems, which led to the convening of the Basel Conference in 2001. Its most important recommendation was that banks have a certain level of capital to be able to face the possibility of CRs, (Basel, 2001).

Palestinian Monetary Authority (2019) is a supervisory body in charge of bank credit although it does not have the authority to grant credit. Rather, it encourages banks to diversify repayment sources, such that the concentration of loans in a particular sector does not exceed 20% of the loan portion. On the other hand, banks were required to inform or operate their equivalents in those other currencies to maintain a capital adequacy ratio of at least 8%. It obliges banks to deduct 15% of their annual net profits, which is called cash fluctuation reserve, so that this deduction will continue until the balance of this reserve reaches 20% of the paid-up capital. The data issued by the PMA for the year 2019 indicates an increase in the net non-performing facilities after deducting the provisions to the core capital of 5.7%, compared to 2% for the year 2018, which is an indicator that measures the ability of the capital to withstand expected losses.

The Palestinian banking sector data indicates that default rates reached 4% at the end of 2019. CRs are considered a vital risk faced by the Palestinian banks, as they are one of the most important channels for financial granting in the Palestine due to their impact on the political and security conditions that affect the performance and profit of banks, (PMA, 2019).

However, several banks in developing countries, such as Jordan, still view CRs as a secondary activity. A main reason for banking problems in Jordanian banks involves the lack of control of CRs management and credit requirements for banks (Al-Eitan & Bani-Khalid, 2019). These problems correlate to the deterioration in the credit situation of Jordanian banks, thus resulting in an increase in the percentage of non-performing loans and interest rates on loans given. Additionally, the Jordanian banking sector still faces multiple risks that affect its FP (The Central Bank of Jordan, 2017). The banks' ability to grant credit approval significantly decreased between 2014 and 2016 (Central Bank of Jordan, 2017).

Given the importance of NLPs and banking profitability, this study was conducted to investigate the effects of CRs on the FP of banks listed on the Palestine Securities' Exchange and Amman Securities' Exchange between 2009 and 2019.

## **1.2 Research Problem**

Non-performing loans are considered a significant challenge faced by banks (Tefera, 2011). The banking sector, specifically banks, is crucial sector subject to risks, especially with regard to granting credit. Since deposits constitute about 85 percent of the bank's liabilities, the bank uses these deposits to extend credit to borrowers. According to Saunders and Cornett (2009), CRs and liquidity have a negative effect on a bank's profitability and performance. The amount of credit facilities increased from 2009 to 2012, it reached to 30.9% in the Palestinian banking sector and 8.2% in the Jordanian banking sector in 2011 (Bayydon & Sayyed, 2015). PMA showed an increase of 4.7% in the amount of credit granted to public sector employees to reach about 1,607 million dollars, thus comprising 17.8% of the total credit portfolio. For the credit granted to public sector employees, about 86.4% of the bill wages and salaries were due during the year 2019. As of the end of 2019, the credit granted to the government and public employees constituted about 35.0% of the total credit granted at the end of the

year 2019. This implies that more than a third of the credit granted by the banking sector is subject to aggressive developments in the government's finances. Further, this proportion is higher if the credit granted to private sector companies that deal with the government is taken into account. Such a high level of exposure undoubtedly has repercussions on clearing revenues, grants, and external assistance. An important indicator that reflects the amount of public sector risks is the high percentage of credit granted to the government and public sector employees; this constitutes about 158.5% of banks' equity, compared to 148.6% in 2018. As a result, the direct and indirect amount of government-related facilitation outweighs the banks' total equity.

In developing countries such as Palestine and Jordan, several banks still regard CR as a secondary activity. These issues directly relate to the poor credit conditions of Jordanian banks, which has resulted in an increase in the rate of non-performing loans and interest rates on loans granted (Central Bank of Jordan, 2017). However, the previous studies that examined the relationship between CRs and FP in Palestinian and Jordanian contexts failed to consider some of the variables such as age, ownership concentration, and the big four according to the researcher's knowledge. This study fills the gap with respect of the variables considered in the study.

In 1990, the Basel Committee on International Banking Supervision issued a set of rules and guidelines for Corporate Governance some of which are as follows: the creation of a system that ensures the functions of internal and external audits; dependency management; implementation of justice and equality; incentive distribution; and creation of a certain kind of control for risk centres, major shareholders, and senior management (Basel Committee on Banking Supervision, 1990). Banks listed in PEX and ASE have lacked the benefit of CG implementation. From this point, this study supposes that good CG reduces the negative effect of CRs on FP.

Although several studies have examined the relationship between CRs and FP in developed and developing countries, the results have been mixed. On the other hand, few research examined the moderating role of CG in association with CRs and FP around the world (Ko et al., 2019). According to the researcher's knowledge, till date, no study in the Palestinian and Jordanian context has examined the moderating role of CG in the relationship between CRs and FP. Against this background, the researcher

believes that it is necessary to conduct this study to bridge the existing gap. The implementation of CG in the banking sector can be said to reduce the negative impact of CRs on the performance of banks listed on the PEX and ASE. Based on the above, the following research questions can be formulated:

Q1. Does CRs affect the FP of banks listed on the PEX and ASE for the period between 2009 and 2019?

Q2. Does CG affect the association between CRs and the FP of banks listed on the PEX and ASE for the period between 2009 and 2019?

### **1.3 Research Objectives**

PMA and Central bank of Jordan (CBOJ), the supervisory body that regulates the work of Palestinian and Jordanian banks. The financial stability in Palestinian and Jordanian banks reflects the situation in which the flow of funds occurs in a yearly manner to all groups and segments of society, and consequently, the financial instability is reflected through the failure of the banks, as well as the indebtedness, credit growth, and lack of liquidity.

The Palestinian Code of Governance Rules, issued in 2009, and the Jordanian Governance Rules Guide, issued in 2017, guarantee the rights of shareholders. Experience has shown that companies that implement CG rules attract a larger percentage of investors than those companies that do not apply CG rules (Brown & Cylor, 2004). Its presence implies reaching high levels of performance and profitability (Black, 2001). This study has two main objectives to follow:

OB1: To investigate the impact of CRs on the FP of the banks listed on the PEX and the ASE.

OB2: To investigate the moderating role of CG on the association between CRs and the FP of banks on the PEX and ASE.

### **1.4 Research Importance**

The significance of the study arises from the subject itself, which is concerned with evaluating and analyzing the relationship between financial risks in banks and their profitability. The granting of credit is an essential financial decision in the banking



industry, as the banking industry is an important economic sector in Palestine and Jordan. This study is expected to enable the responsible authorities in these institutions make better decisions. Additionally, the empirical results would provide a general indicator of CG for the regulators and decision-makers, thus improving the FP of banks through the adoption of the results and recommendations of the study and increase the confidence of customers, investors, and shareholders in commercial banks.

Additionally, this study is an extension of previous studies that demonstrate the role of CG in the relationship between CRs and FP, which hasn't been investigated in the Palestinian and Jordanian contexts according the researcher knowledge. Thus, this study works to enrich the scientific library theoretically, such that other researchers and academics can depend on the findings of this study for developing future research.

### **1.5 Structure of Research**

This study comprises five chapters, where the first chapter includes the study problem, questions, importance, and objectives, and the second chapter focuses on the theoretical framework and previous studies related to the subject of the study, in addition to developing the hypotheses. The third chapter focuses on the study methodology in terms of describing a community and a sample; the study, data sources, collection tools, study variables, and methods of measuring them, in addition to the statistical methods used in the study. The fourth chapter deals with the statistical analyses of the study, testing of the hypotheses, and discussing the results obtained. The fifth and final chapter focuses on the conclusions obtained by this study, the recommendations that it presents, the determinants of the study, and the proposed fields of research.

## **Chapter Two**

### **Literature Review and Hypotheses Development**

#### **2.1 Introduction**

This chapter presents the theoretical and conceptual framework of the study and a review of previous studies correlated to the subject of the study, in addition to developing the hypotheses of the study on the relationship between CRs and FP of banks including agency theory, stakeholder theory, resource dependency theory, and supervision theory. Following which, the chapter reviews an explanation of the relationship addressed in this study in light of these theories. This is followed by a discussion of the previous studies related to the subject of the study. This chapter ends with the development of the study's hypotheses.

#### **2.2 Definition of Concepts**

##### **2.2.1 Credit Risk**

The Basel Committee on Supervision, 2001, defined CRs as the likelihood of total or partial loss of a loan owing to credit events. (Basel, 2001). Carma (2011) defined NPLs as the contracting party's failure to commit to paying the due on the agreed-upon terms. While Crestel et al. (2009) defined it as a type of risk to which financial institutions in general and banks, in particular, are exposed, such that it results in their failure and effects the company's FP. Peter R. (2002) defines NPLs as loans that no longer generate interest or income for the bank, thus forcing the banks to reschedule them in accordance with the borrower's existing situation.

In 1997, Skimping Hypothesis was proposed by Berger and DeYoung ,that explains the relationship between FP and CRs and indicated that profitability is negatively affected when CRs increases. In this context, the risk-return hypothesis assumes that the CRs will rise if the loan-to-asset ratio is high; this implies that the bank is exposed to high CRs (Berger & DeYoung, 1997). CRs is a common risk faced by banks that leads to major problems associated with lost capital and interest (Coogan-Pushner, 2012).

Inappropriate credit policies, interest rate variations, poor management, inadequate capital and liquidity ratios, inappropriate individual behaviors, inadequate control by the

central bank supervision, and high CRs are among the most important factors that cause CRs and lead to liquidity problems for management. These risks increase if the bank lends without adequate information and knowledge about the borrower's situation (Taxxman, 2016). Additionally, non-diversification of the credit portfolio, the bank's practice of lending in specified sectors or adoption of the credit concentration concept, and existence of significant CRs in the growth process are all factors that cause high CRs (Koch & McDonald, 2005). Thus, banks must recognize that CRs are one of the biggest threats they face, and that CRs affect the company's value and performance.

The issue of CRs is constantly increasing, and the resulting increase in the percentage of NPLs is a negative reflection on the performance of banks (Epure & Lafuent, 2015). Mekasha (2011) examined the relationship between CRs and profitability of banks in Ethiopia. The results indicated a negative impact of NPLs on the performance of banks in Ethiopia.

Panel data was used to discuss the impact of CRs on the FP of Jordanian commercial banks, where the results indicated that CRs have a negative impact on the indicators of Return on Equity and Return on Assets a sample of sixteen banks considered between 2008 and 2017 (Al-Eitan & Bani-Khalid, 2019).

In 2011, significant results about the effect of CRs on the FP of banks in Nigeria were released, as profitability was negatively affected by the increase of percentage of NPLs, thus exposing the banks to liquidity and bankruptcy risks (Kargi, 2011). Takeeda and Shawn (1998) found that the loan loss provision has a positive impact on NPLs, and, consequently, the increase in loans leads to an increase in the provision and increases CRs, which, in turn, negatively affects the performance of banks. Similar results appeared in Tanzania for the impact of NPLs on the profitability of banks in Tanzania (Pastory & Kaya, 2013).

### **2.2.2 Financial Performance**

FP refers to the degree to which the company's financial stability is measured across time, as it includes a set of measurements used to measure the company's financial results and operational activities in financial terms, as well as measure the company's success through profit and financial position of companies (Ijaz & Naz, 2016). The

main purpose of FP is to provide information that helps shareholders and stakeholders. FP is often measured using accounting and market-based indicators, each with advantages and disadvantages when used for measurement. The advantages of adopting accounting indicators, for example, are that they are available in all companies and are relatively comparable. The benefit of market indicators is that they are current, i.e., they reflect the market developments and changes faster than accounting indicators. While (ROA), (ROE), and return on capital employed are examples of accounting metrics, (Stock return), (Market value of a company), or used a combination of the two, for instance, the (Tobin's Q index), which is calculated by dividing the market value of an asset and book value of debit by the book value of the asset. However, restrictions on the use of accounting indices are considered historical and biased when comparing firms using return on assets. For example, restrictions on market indices are employed on publicly listed companies only (Cadez & Galant, 2017).

### **2.2.3 Corporate Governance**

There is no specific definition of CG. This may be because the concept overlaps with many organizational, economic, and social aspects of the corporation. Adam and Mahran (2003) have identified governance as the mechanism by which stakeholders (shareholders, creditors, employees, and the government) monitor management to protect themselves. CG is defined as a set of processes, habits, policies, and laws that affect the way the company is directed and controlled (Rouf, 2011). While the International Finance Organization (IFC) defined CG as the system through which the company is managed and its work is controlled, the Organization for Economic Cooperation and Development (OECD) defined CG as a set of processes that link those in charge of the company's management, the board of directors, shareholders, and other stakeholders.

The United States of America issued the Oxley Act in 2002 and included an important measure to criminalize officials who use their positions to achieve personal interests at the expense of other parties. Further, the Act highlighted the importance of the commitment of management and senior officials in providing good financial statements that accurately represent the company's real position (El-Kharouf, 2004).

The fact that the legislation and laws related to transaction regulation remained unchanged, the weakness of the internal control system, and the increase in the number of legal cases against international auditing companies such as Arthur Anderson Company due to the manipulation of external auditors by the board of directors and the inaccuracy of the financial reports issued by the company, were among the most important motives for increasing interest in CG, according to (El-Kharouf, 2004).

### **2.2.3.1 Principle of CG**

The OECD is an important organization that developed principles of CG, which became a reference for decision-makers, policy-makers, investors, and companies in the financial markets.

According to OECD, the following six CG principles were applied in 2004 (Abu-Tapanjeh, 2009):

- 1- Establishing an effective framework for CG: an effective CG framework must be developed in line with the market rulings to clarify the distribution of responsibilities between the various supervisory, regulatory, and executive bodies and encourage transparency and market efficiency.
- 2- Shareholder Rights Protection: The governance framework must protect the shareholders' rights and make it easier for them to exercise their rights.
- 3- Fair treatment of all shareholders: The governance system must ensure that all shareholders, particularly minority and foreign shareholders, are treated fairly.
- 4- The CG framework should respect the legal rights of stakeholders and enable effective collaboration between enterprises and stakeholders to achieve wealth.
- 5- Disclosure and Transparency: The CG framework must ensure the accurate and timely disclosure of all important corporate issues.
- 6- Responsibilities of the Board of Directors: the Board of Directors must ensure the strategic direction of the company, effective management oversight, and accountability to the company and shareholders. Furthermore, the framework must ensure effective management control over the boards of directors.

### **2.2.3.2 CG in Palestine and Jordan**

The Palestinian CG Code was issued in 2009. It was developed based on the principles of CG issued by OECD, which is a set of rules and laws that regulate the mechanisms and procedures within companies to address the main aspects of CG represented by the general assembly meeting and the rights of shareholders, company management, auditing, disclosure and transparency, and other stakeholders in the company.

The Palestinian CG Code includes two sets of rules, namely:

The first group is the legally binding rules of governance based on laws and regulations such as the Investment Law, Securities Law, Audit Profession Law, and Companies Law. While the second group includes guiding rules represented in a set of CG guidelines and directions, and since banks take the legal form of public shareholding companies, they are required to follow the directives and instructions contained in the Code of Governance, in addition to the governance requirements for banks issued by the PMA in 2009 (Palestinian CG Code, 2009) .

Referring to the CG Code in Palestine, specifically in relation to the company's board of directors, the code mandates that the board of directors include 5 to 11 members and that the members not be renewed more than three times. The members should be independent so that they do not have any relationship with the company and can maintain independence by not giving the members of the board of directors an executive position in the company, thus avoiding conflict of interests and facilitating monitoring and accountability ( Palestinian CG Code, 2009). With regard to executive management, it, emphasizes the need for the general manager of the company to have certain qualifications such as competence and objectivity and not have any relationship with the board of directors such that it affects the interests of the company. The board of directors determines the powers and responsibilities of the general manager in a way that contributes to achieving the interests of the company.

According to CG in Jordan, the Companies Control Department, known as the Department, was established in early 2003 as an administratively and financially independent department from the Ministry of Industry and Trade, thus providing the companies' registration services and implementing effective oversight to ensure the application of governance principles and maintain an investment environment to

enhance the national economy. Given the importance of governance and in line with the objectives of the Ministry of Industry and Trade, the Department decided to form a committee to formulate the rules of the CG guide, and this committee includes members from the public and private sectors.

The CG Guide is divided into five parts: the Board of Directors and their roles and responsibilities; control environment; disclosure and transparency; and rights of shareholders and stakeholders. The main objective of this guide is to provide guidance for all types of companies to achieve a set of goals to increase the value of companies, improve the performance of companies, and facilitate opportunities to obtain financing at the lowest possible cost (Jordanian CG code, 2017). It is based on the principles of CG issued by OCED, which include several of principals such as, protection of shareholders' rights and commitment to the principles of CG, the role of stakeholders, equal treatment of all shareholders, the role and responsibilities of the Board of Directors, and disclosure and transparency.

With regard to the Board of Directors, the CG code states that each company has a board of directors that is elected by the owners by taking into account other stakeholders. At least half of the members of the board of directors should be non-executive members, at least two of the members should be independent. The minimum number of board members is three, while the maximum is thirteen. The governance guide for the board of directors stresses the necessity for the formation of at least two committees, namely, the Audit Committee and Nomination and Remuneration Committee. For small businesses, it is sufficient to have one committee, the Audit Committee (Jordanian CG Guide, 2017).

According to the Palestinian Code of Governance for Banks, the board of directors should include members from all specialties so that they have knowledge on financial, banking, economic, and administrative matters; constant review of the number of board members to make effective decisions; and at least two independent members, where one of them represents minority shareholders. When the bank has controlling shareholders, one-third of the board of directors must be independent, since the controlling shareholders must be knowledgeable of their specific responsibilities, such as the duty of loyalty to the corporation, conflicts of interest, and responsibilities to other

shareholders (PMA, 2014). According to the code of bank governance in Jordan, which focuses on the structure of the board of directors, the number of members must be not less than eleven, and unless the bank is owned by one shareholder, the members of the board of directors must not be executive members of the company, and the number of independent members should not be less than five. There must be four members on the board of directors unless the board of directors is owned by one shareholder. To achieve the independence of the board of directors, the following are ensured: the member of the board of directors must not have worked as an executive member on the board of directors, nor as an employee of the company or any of its affiliated companies in the three years preceding their election; they must not have had a second-degree relationship with any of the members of the board of directors or members of the executive management of the bank's subsidiaries; be hired by the bank's external auditor, or be prohibited from receiving loans from the bank as a member of the board of directors of the bank or a firm in which they are a member of the board of directors (International Central Bank, 2016).

### **2.2.5 Palestine Securities' Exchange**

PEX was established in 1995 as a private, joint, stock company after the Palestinian National Authority agreed to start implementing the project of establishing the stock exchange and signing an operating agreement. The first trading session was held in 1997. At the beginning of its work, the stock exchange provided a set of systems and instructions that organized the work of the securities sector, in addition to the latest electronic systems for control, trading, settlement, and transfer of securities to a public, joint, stock company in 2010 in response to the rules of governance. Despite the ability to trade in multiple financial investment tools, the shares are currently traded in the market with the possibility of trading in the future with other financial tools. The shares of companies listed on the stock exchange are traded in the currency of the Jordanian dinar, shekel, and the dollar, and the stock exchange operates under the supervision of the Securities Law No. (12) of 2004, whereby the stock exchange seeks to regulate trading in securities through laws and regulations that provide the basis for protection and safe trading. (PEX).



### **2.2.6 Amman Securities' Exchange**

The ASE was established in 1999 as an independent, “non-profit institution”, authorized to operate as an organized market for trading securities in Jordan. In 2017, the ASE was registered as a public shareholding company wholly owned by the government. The ASE is managed by a board of directors comprising seven members appointed by the Council of Ministers and a full-time CEO who manages and monitors the daily business of the stock exchange. It is based on the practice, operation, management, and development of all stock, commodity, and derivative markets, both inside and outside the Kingdom, and it provides the appropriate environment to ensure the interaction of the forces of supply and demand for securities according to principles of sound, clear, and fair trading. In accordance with best international practices (ASE).

### **2.3 Credit risk and Financial Performance**

Borrowing is an important banking service provided by banks, and NPLs have become the focus of European regulators’ attention, especially after a series of financial crises in the global economy and the inability of banks to get out of the NPLs crisis (Ballotlu et al., 2020). During the 2008–2010 financial crisis, certain countries suffered large and unusual levels of NPLs, particularly in the euro area (Raradima & Louri, 2020). In 1988, three of the largest banks in Benin collapsed, leading to the collapse of 80% of the loan portfolio. In 1993, the NPLs portfolio reached 70% in Cameroon. As a result, commercial banks were closed, and other banks were restructured (Ugoani, 2016). CRs is an important and common risk in the banking sector, and it is defined as the possibility of the borrowers not paying their obligations on the specified date (Mekasha, 2011). According to Stuart (2005), one of the most important reasons for the rise in NPLs is the irregular and insufficient credit guarantee ratio, as well as the inefficient and ineffective risk management. All these factors have an adverse effect on bank profitability. So, to maintain the bank’s continuity, it must keep NPLs to a minimum, because exceeding this level would negatively affect the bank’s profitability (Jameel, 2014).

Several studies have addressed the impact of CRs on the profitability of banks, whether in developing or developed economies, whose results varied between negative and positive. Abbas et al. (2019) indicated that a negative relationship between NPLs and

bank profitability in the short-term. The study recommended the need for the government to take a set of appropriate measures and procedures to reduce the impact of these risks on the profitability of banks. The results showed that CRs negatively affect the profitability of banks in European, North American, and Australian countries. The level of NPLs can be attributed to quantitative economic conditions such as GDP, unemployment, inflation, and other factors, which indicate that the number of NPLs negatively affect the economic recovery of Central and Southeast Europe between 1998 and 2011 (Klein, 2013).

In 2016, panel data was used to measure the impact of CRs on profitability. Bank profitability was measured using the return on equity, while CRs was measured using the ratio of NPLs to total loans (NPLs), loans to total equity, and loans to total assets (LTA). The study found a significant inverse relationship between NPLs and return on equity (Ebenezer and Omar, 2016).

The empirical evidence found that NPLs, loan loss allowance, and capital adequacy ratio were used to measure CRs, which had a significant impact on the profitability of eight Ethiopian banks between 2003 and 2014 (Gizaw, 2015). Consistently, Hosna et al. (2009) indicated that the rates of NPLs and capital adequacy negatively affected the profitability of banks. Boundel (2012) found similar results from previous studies, where the findings indicated that an inverse relationship between CRs measured by the capital adequacy ratio, NPLs ratio, and profitability of banks. Panel data was used to examine the relationship between the financial risks and profitability of Malaysian commercial banks using a sample comprising 35 banks from 1996 to 2005. The results revealed that CRs negatively correlated with profitability as measured by return on assets (ROA) and return on equity (ROE), while the risks of interest rate change directly correlated with profitability measured by return on assets and inversely correlated with profitability measured by return on equity. Further, the study concluded that no significant relationship between liquidity risk and profitability, measured by both ROE and ROA ratio, whether the bank was Islamic or traditional (Tarfri et al., 2009).

It should be noted that the bank's internal environmental factors significantly effects the determination of the level of CRs, thus justifying poor management practices such as high level of NPLs, as there are no cadres with the skills required to measure credit

ratings, evaluate collateral, and monitor customer behavior. Effective borrowers increase the probability of default due to the fewer effort the banks put into ensuring high-quality loans, and higher percentage of NPLs (Gani, 2014). Moreover, small banks are more exposed to CRs than large banks; this can be explained by the fact that large banks have more alternatives for diversification in their portfolio of loans due to the diversity of their resources (Abid et al., 2014).

Although most prior studies and literature revealed negative association between CRs and FP, there is evidence and research that shows a positive effect of NPLs on bank performance.

In view of Koahene's study (2012), the performance of the six Chinese banks between 2005 and 2009 was positively affected by CRs. The results from Kithirji's study (2011) are in agreement with that of Koahene. It is agreed that CRs positively effects the FP of banks in Kenya. Hosna (2009) confirmed that CRs measured by NPLs positively affected profitability. Saaed and Zahed (2015) used impairment and NPLs to examine the effect of CRs on the banks' profitability as measured by return on assets and return on equity. The results revealed a positive relationship between the CRs variables and banks' profitability. Kulum (2017) revealed a positive effect of NPLs and CRs on the performance of banks listed on PEX for the period between 2010 and 2015. This is because the banks that were studied had a small percentage of non-performing loans.

Although previous studies confirmed that CRs has a significant effect on performance, which may be negative or positive, literature and empirical evidence revealed an insignificant effect of CRs on FP (Islam & Nishiyama, 2016; Yong Tan et al., 2017; Bayyoud & Sayyad, 2015).

## **2.4 Theories related to CG**

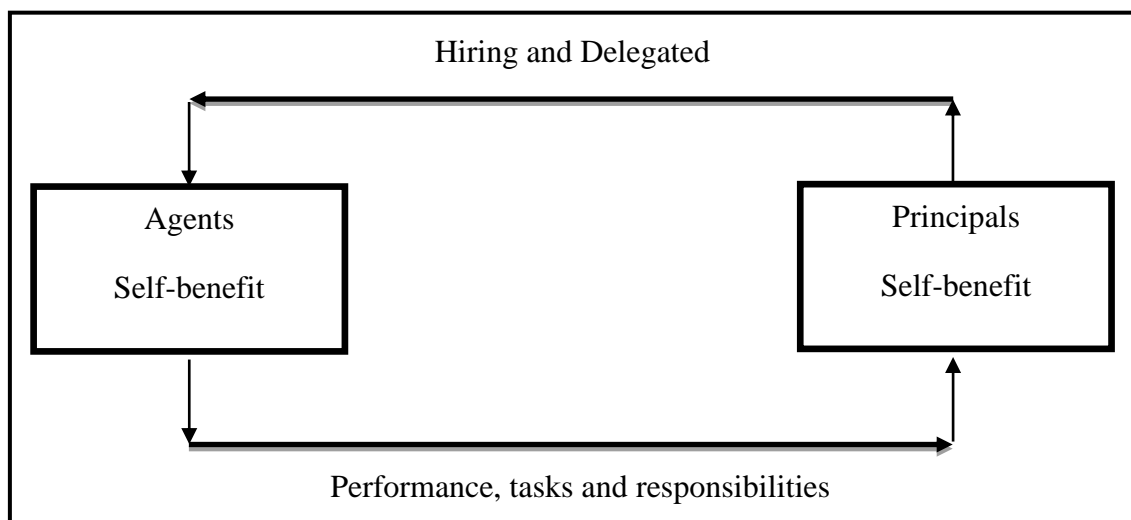
The study by Berle and Means (1933) is considered one of the first to shed light on CG in institutions. Numerous previous studies linked governance to a set of theories that explain the relationship between governance and FP, the most important of which is perhaps agency theory.

### 2.4.1 Agency Theory

Agency theory examines the relationship between the principal providing the capital and the person managing this money, i.e., the agent. According to Jensen and Meckling (1976), a company is defined as a fictitious entity that acts as a link between the principal and agent to manage the capital on behalf of the principal. This theory assumes two things, namely that the agents always seek to achieve their interests and maximize their wealth, and the existence of a conflict of interest between the principals and their subjects. In theory, the agency theory should reflect the relationship between the principal and agent and the effective flow of information, but the situation differs on the ground. The agency theory is based on a set of assumptions such as self-interest, conflict of interests and goals, and information asymmetry between managers and stakeholders. The agency theory proposes a set of mechanisms to reduce the agency problem in the company, such as the mechanism of managerial incentives to compensate management for efforts made to serve the interests of the owners; and the profit distribution mechanism to reduce management's intention to make investment decisions that are financed through free internal cash flow. Thus, there is an extension of the relationship between governance and agency theory.

**Figure (1)**

*Agency theory framework*



Source: (Abdullah & Valentine, 2009).

### 2.4.2 Stakeholder Theory

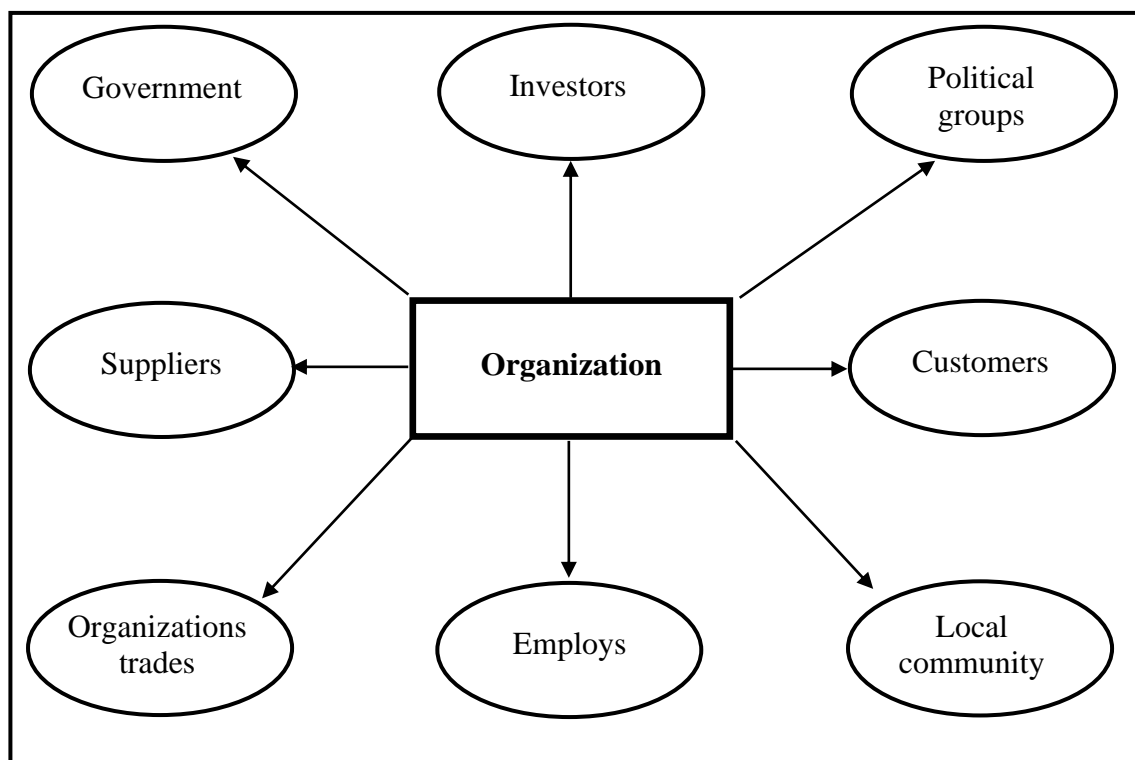
In contrast to the agency theory, which examines the relationship between the principal and agent and considers the stakeholders as the shareholders, the stakeholder theory includes a broader group of stakeholders (Fama, 1980).

Stakeholder theory argues that the stakeholders are everyone who contributes to the company's achievements. Freeman (1984) argues that the purpose of a company is determined by the overall value creation of stakeholders, which must be managed such that it benefits all the stakeholders and not just those who have direct or indirect interests.

This is considered crucial, especially when it comes to banks, as they deal with multiple stakeholders such as depositors and holders of shares and bonds (Donaldson & Preston, 1995). The stakeholder theory has received a lot of support, as it contributes to the development of alternatives to CG and helps achieve a balance between different stakeholders.

**Figure (2)**

*Stakeholder Theory framework*



Source: (Donaldson and Preston, 1995).

### **2.4.3 Stewardship Theory**

This theory emphasizes the fact that CEOs are the company agents who are responsible for preserving and increasing the shareholder wealth. The supervisors, based on this theory, are the executive management who work for the benefit of the company (Abdullah & Valentine, 2009). Contrasting the agency theory, the board of directors, according to this theory, do not monitor the performance of the executive management to a great extent, such that the role of the board of directors comprises supporting and assisting the executive directors to achieve optimal performance for the company (Shen, 2003).

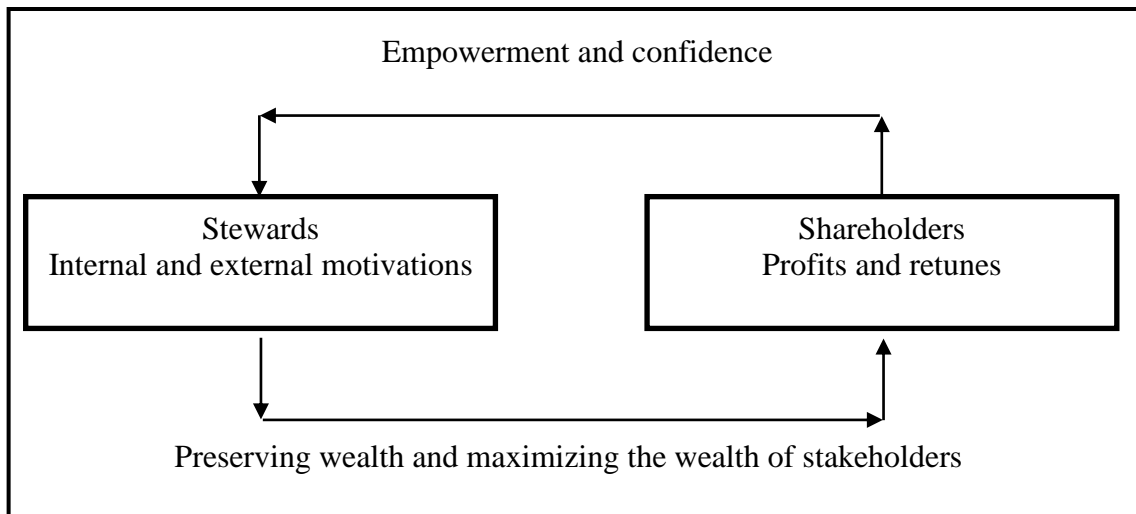
Thus, the managers will work according to collective interests rather than their interests; this implies that managers have an incentive to carry out the company's business and achieve general goals. They are sincere in their work and do not have any bad intentions towards their work. This theory focuses on the existence of complete trust between the owners and management of the company.

However, this theory was later criticized as giving managers full authority to do their jobs. As a result, the board of directors take a risk due to their full delegation of management, as they may have motivations that force them to execute their work in accordance with their interests or waste the company's resources (Keay, 2017).

This theory involves the board of directors 'cooperation and engagement with the executive managers on the vision and goals of the company, as well as the involvement of the management in making strategic decisions. This contrasts the agency theory, which assumes different interests between the managers and owners (Idris, 2014).

**Figure (3)**

*Stewardship Theory framework*



Source: (Abdullah & Valentine, 2009).

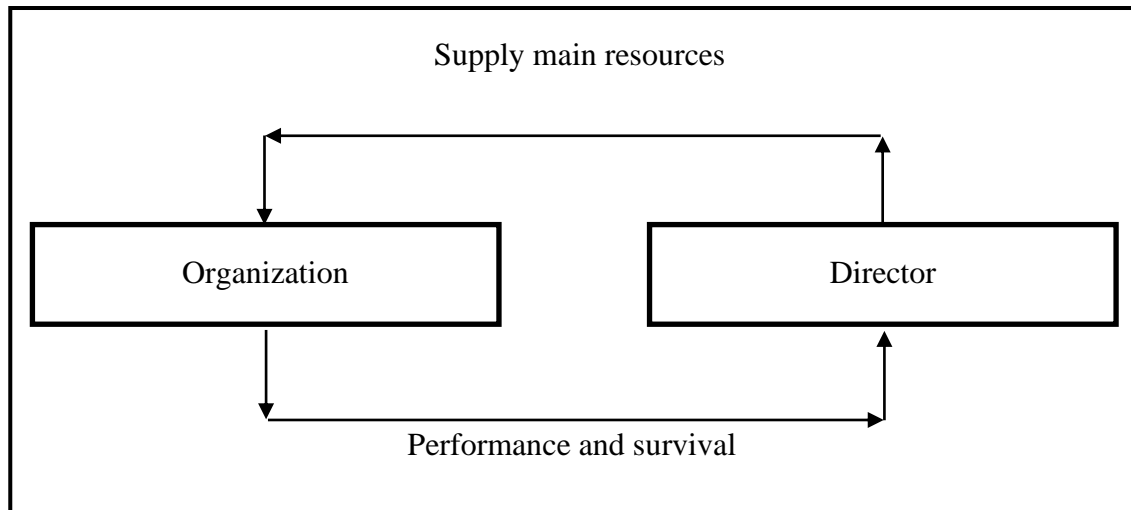
#### **2.4.4 Resource-Dependence Theory**

This theory explains that the members of the Board of Directors play an important role in providing the organization with the various resources it needs owing to their external relations. Examples of these resources include information, expertise, financial and human resources, and access to human resources such as suppliers and buyers. These resources work to develop the performance of companies (Hillman et al., 2009).

Additionally, the supporters of this theory focus on appointing independent board members as a means of providing the main resources to the company (Abdullah & Valentine, 2009). When a company appoints a new member of the board of directors, it expects them to bring new resources that support the company in emergencies, reduce uncertainty for companies, lower transaction costs, and, ultimately, help the company survive.

**Figure (4)**

*Resource-Dependence Theory framework*



Source: (Hillman et al., 2009).

## **2.5 Corporate Governance, Financial Performance and Credit Risk**

CG guarantees the protection of the rights of shareholders through an adherence to the rules of accountability, transparency, correctness of financial reports, and fair access to information from all shareholders, which enhance the value of the company, and thus maximize the wealth of owners (La Porta et al., 2000). The implementation of CG would ensure the reduction of the risks related to financial and administrative corruption, increase the competitiveness of national companies, and ensure transparency, accuracy, and clarity in the financial statements issued by companies. This would, in turn, increase the investors' confidence in the company and dependence on the company for decision-making, improve the company's management and development, raise the company's value, and increase the company's profits owing to investors' demand to buy its shares (Chey, 2013; Brown & Caylor, 2004). Furthermore, this maximizes the market value of the institution in the global financial markets, increases the profitability of these companies, and attracts investors, as they tend to invest in companies that have a high level of governance (Chung & Zhang, 2011). Moreover, companies with a high level of CG tend to distribute and pay more dividends, compared to other companies (Tang & Wang, 2011). Thus, CG is a mechanism and tool to achieve economic growth for any institution (Levine, 1997). There is no doubt that the main objective of any bank is to achieve high financial returns. On the other hand, achieving this goal comes with high risks. The return is



directly related to the risks, and the researcher believes that applying the principles of good governance is one of the most important mechanisms and means that enable the bank to mitigate the negative impact of credit risks on bank profitability. Many of the previous studies and literature emphasized the role of governance in reducing credit risks. Luu (2015) found the application of the mechanisms of the principles of good corporate governance has a strong impact on the risks faced by banks, and the size of the board of directors is negatively related to the level of risk, and banks that have a CEO and a high level of ability and control tend to participate in less risky activities. The banking methods and mechanisms pursued by bank administrations have an important role in credit risk management (Tsorhe et al., 2016). The efficiency of bank executive management has an important role in credit risk management. Effective governance mechanisms can reduce or exacerbate the conflict between shareholders and managers (Agency Theory). Augustorel et al. (2018) aimed to identify the impact of governance mechanisms on bank risks in light of the financial crisis through the use of agency theory, which was Its most important results are that the mechanisms of corporate governance have a strong impact on credit risk. The banks' boards of directors and senior management have a high tendency to apply the principles of governance in the banking sector. Al-Hewari (2016) recommended the need for risk management in banks to follow up on the policies and controls related to risk management and the responsibility of the supervisory authorities in banks to control those risks. In addition , governance helps reduce fraud risks and maintain the efficiency of internal operations. Abu-Aqleh (2018) concluded the need to issue a law obligating banks to implement banking governance. It was applied to banks listed on the Palestine Securities Exchange between 2009 and 2018, emphasizing the need to identify, measure, and report financial risks within governance mechanisms, as well as the need to adopt procedures and strategies to do so. Abu- Rahama et al, Governance is of great importance in the banking sector due to its privacy, especially in light of the financial crisis. and the credit crisis in 2008, which confirms the need to implement effective governance mechanisms and their impact on the performance of banks Abu- Rahama et al., 2020. The companies that comply with the rules and mechanisms of governance can get a greater opportunity to finance their debts than those that do not comply with the rules of governance, so the ability to pay the dues and interest on time Javed, (2017). There are also companies with a high percentage of non-board of directors managers, as well as a higher concentration

of ownership. Credit risk was reduced as a result, the ratio of managers from outside the board of directors was used to measure governance Bohoraji and Sengupta (2003).

Several previous studies examined the relationship between CG and FP by using individual variables to measure CG. By focusing on the characteristics of the board of directors, Mishra and Mohanty (2014) found a positive relationship between the company's FP and efficiency of board members. Contrastingly, a negative relationship exists between the size and independence of the board of directors and the performance of Indian corporate finance.

The remuneration granted to external auditors is a variable that can affect FP (Roudaki, 2018). The results of the study found that the remuneration granted to external employees and the compensation and independence of the instrument board is unrelated to FP. On the other hand, the concentration of ownership in the board of directors negatively affected the performance of corporate finance in New Zealand.

Weak CG, measured by the concentration of ownership, degree of independence between the board of directors and members of the board, and presence of the two financial disclosures, has a significant correlation with the FP of companies (Sabbaghi, 2016). A sample of 333 American companies listed on the NYSE was used to examine the impact of governance and financial leverage on the value of American companies for a period of three years. The results revealed that the boards of directors of large companies negatively affected the value of American companies, while the duplication of CEOs, audit committees, financial leverage, company size, and returns positively correlated with the value of the company by increasing the returns on the company's assets (Obradovich, 2012). While good governance increases the market value of a company (Black, 2001; Klapper & Love, 2004), internal ownership increases the firm's value, which is measured by Tobin's Q (Pattanoyak, 2008).

Shawwa's (2007) study revealed that banks have a stronger commitment to CG principles, compared to industrial businesses. This is an important finding about the impact of governance implementation on performance indicators in Jordanian companies that focus on board size and the concentration of the presidency of the board of directors and senior executive management in one person. Many previous studies examined the impact of the size of the board of directors on the FP of companies from

two different points of view, namely the agency theory and resource-dependence theory. While the agency theory holds that the smaller the board of directors, the more effective it is, as it can make decisions in less time and reduce agency problems in the board of directors, and that the size of the board of directors correlates negatively with company performance, as well as the large board of directors leads to weak communication between members (Bae et al., 2018). On the contrary, the resource theory assumes that a larger board of directors leads to better decisions through diversity in expertise and competencies, and thus renders a positive relationship between board size and performance (Amaqtari, 2019).

Matama (2005) examined the impact of CG on the FP of a group of select banks, and the results showed a positive relationship between CG and FP. In 2005, the existence of a direct and indirect positive correlation between the governance of the board of directors and FP of a group of state-owned companies listed on the Uganda Stock Exchange was revealed (Masibo, 2005). On the other hand, Pieses (2005) obtained different results regarding the impact of CG on corporate performance.

Despite most previous studies around the world confirming that CG has a significant effect on FP, limited studies stated that there was no relationship between CG and the performance of the firm. Detthamrong et al. collected data on 493 non-financial firms in Thailand in 2017. The result showed that CG was not associated with the FP of the full sample, but when splitting the sample into subsamples (both small and large samples), some effect of CG on the performance was observed (Detthamrong et al., 2017).

Another diminution of CG in the literature uses an index of CG; a limited number of studies used this diminution (Brown & Caylore, 2004; Compers et al., 2003; Core et al., 2004; Bebchuk & Cohen, 2004; Chohen et al., 2004; Christoffersen et al., 2004). Brown and Caylore (2004) used the CG index composite measure of 51 factors divided into eight CG categories for 2327 firms. The results showed that the firms with good CG achieved more profit and were more valuable. In 2003, Compers et al. used the GIM index of the 1500 largest firms during the 1990s by classifying 24 CG factors into five categories. The results indicated an improvement in the performance and profitability of the firm that complies with CG rules, compared to other firms that don't, such that the firms with stronger shareholder rights had a higher firm value (Compers et al., 2003).

This study used the last diminution in aiming to measure the CG by using the Brown and Caylore (2004) index. It didn't use all of the items that were included because they did not fit with the CG adapted in Palestine and Jordan

## **2.6 Hypotheses Development**

This study intends to investigate the influence of CRs on FP and the moderating role of CG on the relationship between them. The study hypotheses illustrate the development of the study.

### **2.6.1 The relationship between CRs and FP**

Based on previous studies that showed an association between CRs and FP and in line with previous studies, we assume a directional association between CRs and FP of companies. By referring to previous studies that confirm the existence of a significant impact of CRs on the FP of banks, we find a negative relationship between CRs and FP of banks. According to Al Etan and Bani-Khalid (2019), CRs are negatively associated with bank FP. The higher the CRs ratio of a bank, the lower the return on assets (ROA) and return on equity (ROE). The high percentage of NPLs in banks leads to a decline in the profitability of banks (Abbas et al., 2019).

According to Hosna et al.(2009), the percentage of NPLs and rate of capital adequacy negatively affect the profitability of banks. Boundel (2012) found similar results from previous studies. The study indicated a negative association between CRs measured by the capital adequacy ratio, NPLs ratio, and profitability of banks. The ratio of loans to total deposits is inversely related to performance, and the credit policy adopted by banks affects the performance of these banks (Samual, 2014). This was corroborated by the study by Ketten & Morres (1987), which is one of the oldest to examine the effect of NPLs on the performance of banks. The study was conducted on 2,400 banks in the United States of America. Based on this, the first hypothesis of the study can be formulated as follows:

**H1:** There is a statistically significant effect of CRs on the FP of banks listed on the PEX and ASE.

### **2.6.2 Interaction between CR, FP, and CG**

Shleifer and Vishny (1997) defined CG as a set of guidelines, structures, rules, and procedures that investors use to secure a return on investment and ensure that the managers do not misuse the funds of investors. According to Ko et al. (2019), there has been little research on examined the moderating role of CG in the relationship between CR and FP. Krause and Tse (2016) investigated the relationship between risk management and corporate value.

The study found that better risk management procedures, as a substitute for CG, decreased cash flow volatility, improved FP, and improved the value of the company. According to Ko et al. (2019), a higher level of operational risk occurrences is associated with a greater likelihood of credit default and poor performance. The authors indicate that greater levels of CG are correlated with lower levels of operational risk occurrences, improved performance, and reduced chance of credit fault. Lin and Liu (2015) investigated the relationship between research and development (R & D) expenditure and business valuation using Taiwanese enterprises. A company's value was measured in terms of Tobin's Q and market-to-book ratio, such that a significant positive association was found between Tobin's Q and market-to-book ratio, i.e., the larger the R & D investment, the higher the business value. Furthermore, R & D growth was found to be positively associated with firm value.

Moreover, the researchers discovered a “size” impact. Compared to smaller enterprises, the positive relationship between R & D and company value was strengthened for larger firms. Further, the relationship was impacted by the type of ownership. When the ownership was dominated by insiders, the correlation was weaker than when it was dominated by institutional owners. According to all the deliberations, the following research hypothesis has been developed:

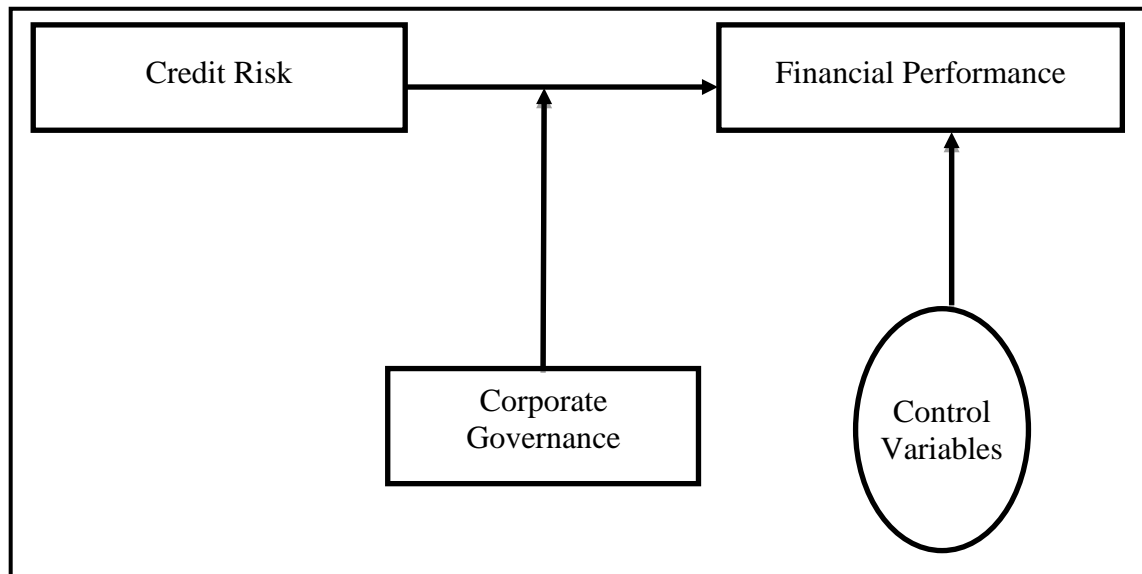
**H2:** The relationship between CR and FP is moderated by the level of CG for banks in PEX and the ASE.

## 2.7 Conceptual model of the study

Based on the previous studies and theoretical perspective related to FP, the researcher developed this framework to explain the influence of CRs on FP and the moderating role of CG on the association between CRs and FP.

**Figure (5)**

*The conceptual model of the study*



## **Chapter Three**

### **Research Methodology**

#### **3.1 Introduction**

The methodology is an important part of the study. Poole and Anderson (2019) define it as a set of rules and procedures or the methods on which the study path is based, and the organized steps that the researcher takes in the field to address the topics they study until they achieve a specific result. It describes the population and sample of the study, data sources and tools for collection, variables of the study and method of measuring each of them, model of the study, and statistical methods used in data analysis.

#### **3.2 Research Sample**

The study population comprises all banks listed on the PEX and ASE. All banks selected must fulfill the following conditions to form the study sample:

1. It will be listed on the Palestine and ASEs during the study period 2009-2019.
2. Access to yearly reports, as well as the data and information required to measure research variables during the study period 2009-2019.

The study sample comprised 21 banks listed on the PEX and ASE. It includes all types of banks listed including commercial, investment, and Islamic banks during the period between 2009 and 2019. Appendix A, show the sample used in the study.

The study chose the period between 2009 and 2019 for the following considerations:

1. Due to mergers or acquisition operations in 2009, so new banks existed such as the National Bank (a merger between Al Rafah Bank for Small Business Finance and Arab Palestinian Investment Bank) and Safwa Islamic Bank.
2. 2019 is the last year due to an exceptional event, which is the Corona virus, and, therefore, we removed 2020 and 2021 to exclude the effect of the Corona virus on the performance of banks.

### **3.3 Data Collection**

This study relied on a group of sources such as research, scientific articles, and master's and doctoral theses related to the subject of the study, in addition to websites. Further, this study relied on financial and non-financial data available through annual reports of banks and disclosures published on the websites of PEX ([www.pex.ps](http://www.pex.ps)) and ASE ([www.ase.com.jo/ar](http://www.ase.com.jo/ar)) for the period from 2009 to 2019. In addition to relying on the Palestinian CG Code (2009), the Banking CG Code in Palestine (2014), the Jordanian CG Code (2017), and the PMA (2019), data was collected based on panel data.

Panel data is defined as a data set that combines the characteristics of each of the cross-sectional data and time series. Cross-sectional data describe the behavior of a number of items or cross-sectional units over a time period. Whenever time series data describe the behavior of a single individual during a given time period, it means cross-sectional observation panel data observed over a period of time. a specific time, that is, merging cross-sectional data with temporal data at the same time. Panel models have recently been able to gain great attention, especially in economic studies, due to the fact that they It takes into account both the effect of the change in time and the effect of the change in the cross-sectional units Frees, E. W. (2004).

In this context, Hsiao (1986) shows that panel data is preferred over time series data or cross-sectional data. An advantage of using panel data is that it takes into account the individual variance, which may appear in the case of cross-sectional or time series data, leading to biased results. It also reduces the possibility of the emergence of the problem of neglected variables resulting from the characteristics of unobserved vocabulary, which usually leads to biased estimates and highlights the importance of using panel data in that it takes into account what is described as "heterogeneity or non-observable difference" of the sample vocabulary, whether cross-sectional or time series data, and gives data that is more useful, diverse, less correlated between variables, has a large number of degrees of freedom, and is more efficient than time series, which suffer from the problem of autocorrelation.

### **3.4 Variable Measurement**

This section explains the variables being measured in the study. It describes the dependent variable, independent variable, moderating variable, and control variables.



### 3.4.1 Independent variable

CR was used as an independent variable in this study, and there are multiple ways of measuring CRs. Two measures were used to measure CRs, namely, total loans to total assets (LTA) and non-performing loans to total loans (NPLs). These indicators were used with reference to previous studies. Table 1 indicates the measurement of indicators that were relied upon in the study.

**Table (1)**

*Measurement of CRs indicators that were relied upon in the study*

Variable	Measurement	Reference
LTA	Total loans to total assets (TL/TA)	Bourke (1989), Altunbas (2005), and Flamini et al.(2009)
NPLs	Total NPLs to total loans (NPL/TL)	Al-Eitan and Bani-Khalid (2019), Kumbakhar et al. (2001), Zhao and Murinde (2011), and Saaed and Zahid (2016)

### 3.4.2 Dependent variable

The dependent variable in this study is FP. This study used combined measures based on accounting and the market. Many studies have been conducted on FP (Athanasoglou, 2005; Angbazo, 1997; Chirwa, 2003; Sial et al., 2018; Herawaty, 2008; Flamini et al., 2009; Egesa, 2010).

ROA, which measures the amount of profit that a company earns by investing in its assets, is calculated by dividing net income after tax by the company's total assets. It gives an indication of the management's efficiency in using its assets to generate profits. While ROA is shown as a percentage, ROE is the ratio of net income divided by shareholders' equity. It is a common measurement of the company's profitability, and it indicates the amount of profit that the company achieves from the shareholders' investment.

Tobin's Q is one of the most important indicators for measuring FP. It is a more detailed measure that indicates the effectiveness of the administration in managing its economic resources. If the value of Tobin's Q is greater than one, it implies that investing in assets generates a higher profit than investing in spending. Investing in investment is useless if the Tobin's Q value is less than one. (Herawaty, 2008; Mukhtaruddin et al., 2019).

Where;

ROA is calculated using the following equation:

$$ROA = NI/TA$$

ROA: return on assets.

NI: net income.

TA: total assets

ROE is calculated using the following equation:

$$ROE: NI/SE$$

ROE: return on equity.

NI: net income.

SE: shareholders' equity

Tobin's Q:  $\text{Market value of equity} + \text{Book value of debt} / \text{Total assets}$

Here, the difference between the two dependent variables, return on assets and return on equity, should be pointed out. This is due to the financial leverage, or doubling equity, where financial leverage refers to the amount of debt that the company uses to finance its assets, compared to the amount of equity used by the company. This implies that the difference between the two variables is debt. If there is no debt in the company, ROA is equal to ROE. If ROE of the company increases due to the increase in the profit margin or turnover rate of assets (Robin et al., 2018), this is a positive indicator for the company, as it implies that it is effective in using its assets and making profits through sales. If financial leverage is the cause for the rise in equity, it is a negative indicator that the company depends on financing its assets through external debt. (Bunea et al., 2019; Robin et al., 2018).

### **3.4.3 Moderating variable: CG**

Shleifer and Vishny (1997) defined CG as a set of guidelines, structures, rules, and procedures that investors use to secure a return on investment and ensure that the managers do not misuse the funds of investors.

CG was viewed as a moderating variable in this study. It refers to the variables that impact the direction and/or strength of the relationship between the independent and dependent variables (Namazi & Namazi, 2016). CG was employed to modify the strength and direction of the association between CRs and FP. The study used a

checklist of 33 items to measure CG following a prior study (Brown & Caylor, 2004). The CG checklist was developed based on the Palestinian CG code issued in 2009 and the Jordanian code of CG issued in 2014. If an item on the checklist is discovered in the bank, it receives a one (1), otherwise, it receives zero (0). The CG index was estimated by computing the average of total items (Brown & Caylor, 2004).

Appendix B, lists the items included in the checklist, which were categorized into the following six types: Audit, Board of Director, Charter Bylaws, Compensation, Ownership, and Progressive Practices

#### **3.4.4 Control variables**

Several studies (Mishra & Mohanty, 2014; Gurusamy, 2017; Islam & Nishiyama, 2016; Sail et al., 2018; Assenga, Aly & Hussainy, 2018) use control variables such as ownership concentration, firm size, and firm age, as all these variables were relied on as control variables in addition to the Big Four and the percentage of liquidity, and, therefore, all these variables will be used to deduce if there are other variables that may affect FP. Firstly, we assume that company size, which is represented by the natural logarithm of total assets, is positively associated with FP (Puni & Anlesinya, 2020). Secondly, the ownership concentration of the company is measured by the total percentage of shareholders who own more than 5% of the shares. The agency theory is considered to explain the relationship between profitability of banks and ownership. It deals with the relationship between owners and managers (Ongore, 2013). The concept of ownership concentration refers to the concentration of the percentage of shares in a company by a few shareholders. Puni & Anlesinya (2020) argue that ownership concentration is positively related to the FP. Thirdly, the age of the company is measured by the natural logarithm of the number of years the company has been listed on the stock exchange, which is positively related to FP (Gurusamy, 2017). Fourthly, liquidity refers to the bank's ability to meet its obligations, which can be measured by dividing the liquid assets into the total liabilities. Dang (2011) and Bessey & Moses (2015) argue that liquidity is negatively correlated with the bank's profitability. Finally, the Big Four are included as dummy variables that equal 1 if a listed firm is audited by one of the international Big 4 audit firms or zero otherwise. Sail et al. (2018) argue that FP will be increased when the bank is audited by one of the international big four. Table 2 shows the measurement of the control variables that were used in the study.

**Table (2)***Measurement of the control variables that were used in the study*

<b>Variable</b>	<b>Measurement</b>	<b>Reference</b>
<b>Firm's age</b>	The natural logarithm of the company's number of years from the date of its listing on the stock exchange	Gurusamy (2017)
<b>Firm's size</b>	The natural logarithm of total assets	Puni & Anlesinya (2020)
<b>Liquidity</b>	Liquid assets / total liabilities	Islam & Nishiyama (2016) Dang (2011) and Bessey & Moses (2015)
<b>Ownership concentration</b>	Total percentage of shareholders who own more than 5%	Ongore, (2013)
<b>Big Four</b>	A dummy variable that is 1 if a listed firm is audited by one of the international Big 4 audit firms or zero otherwise	Sail et al. (2018)

### 3.5 Statistical methods used to analyze data

Given the nature of the study variable, the study adapted panel multiple regression as a statistical method to examine the hypotheses. The researcher applied the following statistical techniques to analyze the data:

- Descriptive statistics include measures to describe the mean, standard deviation, median, minimum value, maximum value, and how they have been used for each variable.
- A pairwise correlation matrix is used to show the correlation coefficient between variables.
- Regression analysis is used to examine the direction and strength of the relationship between the independent and dependent variables.

### 3.6 Research models

The main argument of this study is to investigate the relationship between CRs and FP and whether CG has an influence on the relationship between CRs and FP of Palestinian and Jordanian banks listed on PEX and ASE during the period 2009-2019. A regression model was developed to examine the hypotheses.

$$Y = \beta_0 + \beta_1(LTA) + \beta_2(NPLs) + \beta_3(NPLs*CG) + \beta_4(LTA*CG) + \beta_5(BAGE) + \beta_6(BSIZE) + \beta_7(LIQUID) + \beta_8(BF) + \beta_9(OC) + \epsilon_{it}$$

Where:

Y = Return on assets, Return on equity, and Tobin's Q

$\epsilon_{it}$ : is the error term

$\beta_i$ : are the regression coefficients

and the remaining variables are as presented in Table 3.

**Table (3)**

*The study abbreviation and operational definition variables*

Variables	Abbreviations	Operational definitions
loans to total assets	LTA	Total loans to total assets (TL/TA)
Non-performing loans	NPLs	Total NPLs to total loans (NPLs/TL)
Corporate Governance	CG	A checklist to measure the level of CG
Financial Performance	ROA	Net income after tax by dividing total assets
	ROE	Net income after tax by dividing total shareholders' equity
	Tobin's Q	Market value of equity + Book value of debt / total assets
Ownership Concentration	OC	The total percentage of shareholders who own more than 5% of the shares
Bank age	BAGE	The natural logarithm of the company's number of years from the date of its listing on the stock exchange
Bank size	BSIZE	The natural logarithm of total assets
Liquidity	LIQUID	Liquid assets / total liabilities
Big four	BF	A dummy variable that is 1 if a listed firm is audited by one of the international Big Four audit firms or zero otherwise

## **Chapter Four**

### **Results and Discussion**

#### **4.1 Introduction**

This chapter presents the results obtained from data analysis. The objective of this study is to investigate the relationship between CR and FP and the moderating role of CG on the relationship for the banks listed on PEX and ASE for the period from 2009 to 2019. The chapter reports the descriptive statistics for the variables in the second section. The third section presents the correlation analysis. The fourth section includes the estimation results, and the last section discusses the results and recommendations.

#### **4.2 Descriptive statistics of variables**

Table 4 presents the descriptive statistics (mean, standard deviation, median, minimum value, and maximum value), and how they have been used for each variable were taken into account in the study. The mean score of FP varies between different measures. The mean figures of performance indicators Tobin's Q, ROE, and ROA as a dependent variables are .959, .099, and .026 respectively. These results indicate a positive return for banks listed in PEX and ASE during 2009-2019. While the mean of ROA is 0.026 for a 231 number of observations, it indicates that an investment of one dinar in assets generates only 0.026 of profits, while the maximum and minimum values are, respectively, 0.407 and -0.02, but the mean of ROE is 0.099, which indicates that the investment by shareholders of one dinar achieves 0.099 of profits, and the maximum and minimum value of ROE is 1 and -0.04, respectively. The CG mean score is 0.804, which means that these banks have a high commitment to CG. Further, LTA has a mean of 0.487, which implies loans composite of about 48% of total assets in banks listed in PEX and ASE. On the other hand, the mean of NPLs is 5.669. This percentage is considered lower compared with other countries, such as Lebanon, where the NPLs reached 15% in 2019 (PMA, 2019). these results indicate banks listed in PEX and ASE have acceptable level of NPLs.

For control variables when considering the mean figures of FAGE of banks it, shows the average age of PEX and ASE banks is around 39 years. The average FSIZE of firms ranges from 7.689 to 10.42, with a mean of 9.164. Regarding LIGUD It has a minimum

value of 0.939 and a maximum value of 7.564, with a mean of 1.78. This means the banks listed in PEX and ASE have 1.78 dinner as liquid assets from its total assets and a standard deviation of 1.522. OWNERC has an average of 0.558, thus implying that 55% of the company's shares are owned by the largest five shareholders. Finally, with respect to the BIG4 the mean is 0.823. This means that 82% of banks are audited by one of the international "Big 4" audit firms.

**Table (4)**

*Descriptive statistics of the study variables*

<b>Variable</b>	<b>Observations</b>	<b>Mean</b>	<b>Std. deviation</b>	<b>Min</b>	<b>Max</b>
Tobin's Q	231	0.959	0.698	0.064	9.568
ROA	231	0.026	0.049	-0.02	0.407
ROE	231	0.099	0.144	-0.04	1
LTA	231	0.487	0.093	0.171	0.757
NPLs	231	5.669	3.527	0.03	18.2
CG	231	0.804	0.061	0.625	0.9
FAGE	231	39.186	17.739	6	91
FSIZE	231	9.164	0.481	7.689	10.42
LIGUD	231	1.782	1.522	0.939	7.564
OWNERC	231	0.558	0.232	0.065	0.88
BIG 4	231	0.823	0.383	0	1

### 4.3 Correlation Matrix

The correlation coefficients were shown in table 5 to determine the multicollinearity problem between independent variables and to assess the relationship between independent and dependent variables in terms of strength and direction. Table 5 shows a negative and positive relationship between NPLs, LTA, and control variables with the three measurements of FP, namely Tobin's Q, ROA, and ROE. This means that when the NPLs and LTA increases or decreases, the Tobin's Q, ROA, and ROE will also increase or decrease.

**Table (5)***Pair wise correlation matrix between variables*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) TOBINSQ	1.000										
(2) ROA	-0.052	1.000									
(3) ROE	-0.110*	-0.167**	1.000								
(4) LTA	0.017	0.020	0.067	1.000							
(5) NPLs	0.071	-0.316***	-0.169**	-0.034	1.000						
(6) CG	0.003	0.154**	0.087	0.398***	-0.278***	1.000					
(7) FAGE	-0.016	-0.164**	-0.052	0.089	0.106*	0.339***	1.000				
(8) FSIZE	-0.191***	-0.130**	0.065	0.033	0.205***	0.276***	0.694***	1.000			
(9) LIGUD	-0.150**	-0.063	-0.061	0.363***	-0.064	-0.018	0.029	-0.105*	1.000		
(10) OWNERC	-0.089	-0.184***	0.193***	0.046	-0.054	-0.082	-0.304***	-0.213***	0.095	1.000	
(11) BIG4	0.022	0.079	-0.044	0.000	0.168**	-0.041	0.056	0.068	-0.021	-0.245***	1.000

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



Multicollinearity problem occurs when there is a high correlation between two or more variables of the study, such that it is difficult to determine the importance of each element separately and the extent of its impact on the dependent variable, and we can determine whether there is a linear correlation between the variables if the correlation coefficients between the study variables exceed 0.80 (Al Farooque et al., 2019). However, a test known as the variance inflation factor, or VIF, was employed to confirm these results. The table reveals that the VIF values vary from 1.094 to 2.193 and the average of VIF value is which is 1.521 less than 5. That means that multicollinearity does not exist (Meeamol et al., 2011; Christensen et al.,2011)

**Table (6)**

*Multicollinearity test VIF*

	<b>VIF</b>	<b>Tolerance (1/VIF)</b>
FAGE	2.193	0.456
FSIZE	2.086	0.479
CG	1.634	0.612
LTA	1.465	0.683
LIQUD	1.255	0.797
NPLs	1.252	0.799
OWNERC	1.186	0.843
BIG 4	1.094	0.914
Mean VIF	1.521	0

#### **4.4 Estimation Result**

Two hypotheses were proposed by this study and investigated using three measurements for FP (Tobin's Q, ROA, and ROE). fixed effects regression was used to estimate the relationship between the dependent variables (Tobin's Q, ROA, and ROE), independent variables (LTA and NPLs), moderating variable (CG and its interaction with LTA and NPLs), and control variables (firm age, firm size, liquidity, ownership concentration, and the big four).

The fixed effects model was used. It was used to test the impact of CRs on the FP of banks listed on the Palestine Securities Exchange and ASE, as measured by the return on assets , return on equity, and Tobin's Q.

**Table (7)**

*Regression results (fixed effect estimation) for the model with TOBINS Q as a dependent variable*

<b>Dependent Variable: Tobin's Q</b>			
<b>Variable</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
LTA	2.823	4.837	0.000
NPLs	0.02	1.657	0.054
FAGE	0.059	4.214	0.000
FSIZE	0.012	2.108	0.036
LIGUD	-0.072	-0.92	0.356
OWNERC	0.488	1.50	0.135
BIG 4	0.241	2.00	0.042
Constant	21.015	13.87	0
R-squared	0.494		
Adjusted R-squared	0.511		
F-statistic	28.340		
Prob(F-statistic)	0.000		

Significant level 5%

**Table (8)**

*Regression results (fixed effect estimation) for the model with ROE as a dependent variable*

<b>Dependent Variable: ROE</b>			
<b>Variable</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
LTA	0.4	3.19	0.002
NPLs	0.023	0.10	0.924
FAGE	-0.006	2.12	0.035
FSIZE	0.083	2.43	0.043
LIGUD	0.050	2.22	0.027
OWNERC	0.193	2.65	0.009
BIG 4	-0.037	-1.39	0.166
Constant	-0.718	-2.12	0.035
R-squared	0.129		
Adjusted R-squared	0.135		
F-statistic	4.297		
Prob (F-statistic)	0.000		

Significant level 5%

**Table (9)**

*Regression results (fixed effect estimation) for the model with ROA as a dependent variable*

<b>Dependent Variable: ROA</b>			
<b>Variable</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
LTA	0.015	0.41	0.679
NPLs	-0.003	-3.21	0.001
FAGE	0.001	1.88	0.05
FSIZE	0.007	0.61	0.544
LIGUD	0.001	0.48	0.629
OWNERC	0.039	2.15	0.031
BIG 4	0.013	1.51	0.132
Constant	0.013	0.886	0.886
R-squared	0.189		
Adjusted R-squared	0.56		
F-statistic	19		
Prob(F-statistic)	0.008		

Significant level 5%

In the results of the previous statistical analysis, we notice differences in the impact of NPLs and LTA on the dependent variables, specifically the ROA and ROE. Owing to the debts, they may not always be affected in the same direction, which was explained in-detail when measuring the two variables.

The estimated findings for the TOBINSQ, ROE, and ROA as dependent variables with no moderator variable are shown in tables 7, 8, and 9. LTA coefficients (B = 2.823, 0.4, and 0.015) have p-values of 0.000, 0.002, and 0.679, respectively, whereas NPLs coefficients (B = 0.02, 0.023, and -0.003) have p-values of 0.054, 0.924, and 0.001, respectively. As a result, it can be stated that LTA has a significant and positive effect on TOBINSQ and ROE, but an insignificant and positive effect on ROA. On the other hand, NPLs has a significant and negative effect on ROA, whereas NPLs has a weak and positive effect on TOBINSQ. However, there is an insignificant and positive effect of NPLs on ROE.

Referring to the coefficient of determination (R-squared) in tables 7, 8, and 9, it is clear that the changes in TOBINSQ, ROE, and ROA, (dependent variables), are attributed to the change in the independent variables by .494, .129, and .189, respectively, as

indicated by the calculated (F) value in the first model, second model, and third model, with a significant level of 0.000 less than (5%), thus implying that it is statistically significant in all models.

Here, it must be pointed out that the role of the control variables were used in the study to control the influences or variables, i.e., by balancing the characteristics of the companies and making them fixed.

Referring to tables 7, 8, and 9, it was found that there is an insignificant positive effect of size on ROA at a level of significance 0.544, thus implying that the large size of the bank leads to a higher ROA, ( $P < 0.544$ ,  $B = 0.007$ ). On the other hand, there is a weak positive effect of size on ROE and TOBINSQ at the level of significance ( $P = 0.053$ ,  $0.036$ ,  $B = 0.083$ ,  $0.012$ ). From tables 7, 8, and 9 a positive, statistically significant effect of the liquidity variable is observed on the ROE ( $B = 0.050$ ,  $P > 0.027$ ); an insignificant negative effect on TOBINSQ at a level of significance 0.356 ( $B = -0.072$ ,  $P = 0.356$ ); and an insignificant positive effect on ROA at the level of significance of 0.629 ( $B = 0.001$ ,  $P < 0.629$ ).

With regard to the ownership concentration of shareholders, and referring to tables 7, 8, and 9, it was found that there is a significant positive effect of the ownership concentration on the ROA at a level of significance of 0.031, which is less than the level of significance adopted in the study. ( $P > 0.031$ ,  $B = 0.039$ ). Moreover, the results show that a significant positive effect of the concentration of shareholders' ownership on ROE at a level of significance 0.009 ( $B = 0.193$ ,  $P = 0.009$ ). This result can be explained by the fact that the presence of a concentration of shareholders helps strengthen the control procedures and increase the efficiency of the company's business, which will positively affect the ROE, but an insignificant relationship exists between Liquidity and TOBINSQ at a level of significance 0.135 ( $P < 0.135$ ,  $B = 0.488$ ). This result corroborates with studies (Lawa et al., 2018; Al Farooque et al., 2019), but it contradicts studies (Vintilă & Gherghinaa, 2014). Finally, big four had an insignificant negative effect on ROE at a level of significance 0.166, an insignificant positive effect on the ROA at a level of significance 0.132, and a positive and significant effect on TOBIN'S Q at a level of significance 0.04.

**Table (10)**

*Estimation results for the model with TOBINSQ as a dependent variable and CG as a moderator variable*

<b>Dependant Variable: TOBINS Q</b>			
<b>Variable</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
LTA	4.244	1.60	.111
NPLs	-0.319	-1.86	0.065
CG	3.427	0.000	1.527
NPL*CG	0.441	2.01	0.046
LTA*CG	-4.329	-1.44	0.15
FAGE	0.008	2.20	0.028
FSIZE	-0.656	-5.00	0
LIGUED	-0.082	-2.47	0.014
BIG4	-0.049	-0.41	0.682
OWNERC	-0.279	-1.37	0.173
Constant	6.458	5.62	0
R-squared	0.144	Mean dependent var	0.959
Number of observations	231	SD dependent var	0.698
F-statistic	4.147	Akaike crit. (AIC)	472.064
Prob (F-statistic)	0.000	Bayesian crit. (BIC)	506.488

Significant level 5%.

Table 10 shows the results of regression models that used LTA and NPLs as measurements of CRs. The results show an insignificant and positive relationship between LTA and TOBINSQ ( $B = 4.244$ ,  $P = 0.111$ ). This result does not correspond with our expectations of the relationship between the LTA and TOBINSQ. However, there is a significant and negative relationship between LTA and ROA and ROE ( $B = -0.44, -1.049$ ,  $P = 0.014, 0.056$ ). More specifically, one unit increase in LTA leads to a decrease of  $(-0.44, -1.049)$  in ROA and ROE, respectively. This result corresponds with our expectation of the relationship between the LTA with ROA and ROE. However, there is a negative and insignificant relationship between NPLs and TOBINSQ ( $B = -0.319$ ,  $P = 0.065$ ), but a positive and insignificant relationship between NPL and ROA ( $B = 0.021$ ,  $P = 0.071$ ). This result does not correspond with our expectation of the association between NPLs of TOBINSQ and ROA. NPLs and ROE have a significant and positive relationship, according to the findings ( $B = 1$ ,  $P = 0.005$ ). This result corresponds with our expectations about the association between NPLs and ROE. Referring to the coefficient of determination (R-squared) in tables 10 and table 11, and 12, (see appendix C) it is clear that the changes in TOBINSQ, ROE, and ROA,

(dependent variables), are attributed to the change in the independent variables by 0.144, 0.141, and 0.221.

Furthermore, there is an insignificant effect of CG on TOBINSQ and ROE where the interaction has a negative effect on TOBINSQ ( $B = -4.329$ ,  $P = 0.15$ ). Moreover, the findings revealed significant effect of CG on ROA where the interaction has a positive effect on ROA and ROE ( $B = 0.55$ ,  $1.455$ ,  $P = 0.007$ ,  $0.02$ ). This result confirmed that our expectation about the role of CG as a moderating variable in the relationship between LTA of TOBINSQ, ROE, and ROA is true. Furthermore, there is a significant effect of CG on TOBINSQ where the interaction has a positive effect on TOBINSQ ( $B = -0.442$ ,  $P = 0.046$ ). Further, the findings reveal a significant effect of CG on ROA and ROE where the interaction has a negative effect on ROA and ROE ( $B = -0.032$ ,  $-0.139$ ,  $P = 0.032$ ,  $0.002$ ). This result confirmed that our expectation about the role of CG as a moderating variable in the relationship between NPLs of TOBINSQ, ROE, and ROA is true.

Moving on to the control variables, the results show that there is a significant and negative relationship between TOBINSQ, firm age, and ROA ( $B = -0.008$ ;  $-0.001$ ;  $P = 0.028$ ;  $0.01$ ). This result complies with our expectations about the relationship between the firm age of TOBINSQ and ROA. However, there is an insignificant and negative relationship between firm age and ROE ( $B = -0.001$ ,  $P = 0.365$ ).

Furthermore, the findings show that firm size has a significant and negative relationship with TOBINSQ but a positive relationship with ROE ( $B = -0.656$ ;  $-0.078$ ;  $P = 0.000$ ,  $0.004$ ). This result complies with our expectations regarding the relationship between firm size and TOBINSQ and ROE. However, an insignificant and positive relationship exists between firm size and ROA ( $B = 0.004$ ;  $P = 0.621$ ).

Regarding liquidity, a significant and inverse relationship exists among liquidity with TOBINSQ and ROE ( $B = -0.082$ ,  $0.015$ ,  $P = 0.014$ ,  $0.027$ ). This result complies with our expectations regarding the relationship between liquidity, TOBINSQ, and ROE. However, there is an insignificant and negative relationship between liquidity and ROA ( $B = -0.003$ ;  $P = 0.168$ ).

Referring to table 10 and table 11 and 12 (see appendix C) ownership concentration has an insignificant and negative effect on TOBINSQ ( $B = -.279$ ,  $P = .173$ ). This result does not correspond with our expectation of the association between ownership concentration and TOBINSQ. The findings also show that ownership concentration has a significant and negative relationship with ROA but a positive relationship with ROE ( $B = -.049$ ;  $.131$ ;  $P = .000.002$ ). This result complies with our expectations regarding the relationship between ownership concentration of ROA and ROE.

Finally, the results show an insignificant and negative relationship between the BIG FOUR and TOBINSQ and a positive relationship with ROE ( $B = -0.049$ ,  $0.022$ ,  $P = 0.682$ , and  $0.372$ ). This result does not correspond with our expectation of the association between big four, TOBINSQ, and ROE. The findings show a weak and positive relationship between the big four and ROA.

#### **4.4 Testing of hypotheses and discussion of results**

The two hypotheses intended to be investigated in this thesis were as follows:

**H1:** There is a statistically significant effect of CRs on the FP of banks listed on the PEX and ASE.

**H2:** The relationship between CRs and FP is moderated by the level of CG for banks in PEX and ASE.

To conclude the findings from the analyses, table 13 (see appendix C) summarizes the results of the previous models.

Many studies have confirmed CRs as an important factor and variable that affects the profitability of banks Hosna (2009). It reduces the ROE and ROA. The results displayed an insignificant relationship between LTA and NPLs with FP when FP was measured by ROA and ROE. The insignificant relationship can be explained as the policy of addressing weak and small banks through the banking merging policy; this has contributed to the creation of banking entities that are close and competitive among themselves. Further, the percentage of NPLs in banks listed on the PEX reached to 4.1 and 5.2 percent in ASE, which is one of the lowest percentages, compared to other Arab countries such as Lebanon, where the percentage of NPLs in Lebanese banks reached 15.2%. Additionally, the policy of spreading and banking branching, and

raising the level of financial inclusion have contributed to enhancing competitiveness, improving the relative importance of bank market shares, the policy of raising the minimum capital of banks aimed at raising the level of competitiveness among banks, (PMA, 2019). According to Bayyoud and Sayyad (2015), there was no relationship between CRs management and the profitability of commercial and investment banks in Palestine. Only 16.3 percent of changes in profitability are explained by CRs management. Commercial banks have a relatively simple CRs management procedure. Several studies (Islam & Nishiyama, 2016; Yong Tan et al., 2017; Bayyoud & Sayyad, 2015) have shown that CRs, as measured by non-performing loans, has an insignificant influence on profitability.

Furthermore, the results show a significant and positive relationship between LTA and NPLs with TOBINSQ, ROE, and ROA. This result corroborates with other studies (Koahene, 2012; Saaed & Zahed, 2015; Kulum, 2017). On the other hand, the results confirmed a significant and negative relationship between NPLs and ROA. Ozili (2015) showed that in a market where lending quality is poor, there would be a higher loan loss provision, and the greater the non-performing loans, the lower the bank's profitability. This result corroborates with other studies (Berger & DeYoung, 1997; Pastory & Kaya, 2013; Al-Eitan & Bani-Khalid, 2019). However, this result contradicts the findings of other studies (Kithirji, 2011; Hosny, 2009; Kulum, 2017), where these studies found a positive impact of CRs on the performance of banks.

The interaction terms (LTA\*CG and NPL\*CG) are positively associated with the FP. When TOBINSQ, ROA, and ROE are used as FP measurements, the moderating influence of CG in the relationship between CRs and FP is significant, which is consistent with our hypothesis.

The findings show that implementing good CG structures decreases information asymmetry, reduces agency costs, and improves investor confidence. This finding encourages the management to enhance their performance by implementing good CG practices to reduce the impact of CR on FP in Palestinian and Jordanian banking. These results corroborate with Ko et al. (2019). It showed that a higher level of operational risk occurrences is associated with a higher likelihood of credit default and poor performance. Moreover, higher levels of CG are associated with lower levels of



operational risk occurrences, stronger performance, and a lower likelihood of credit failure.

The significant results of the study concerning the age of the bank (AGE) found that it has a significant negative relationship with TOBINSQ and ROA. Several studies have found a negative relationship between age and FP. Lodrere & Waelchli (2012) showed that ROA, profit margin, and Tobins Q tend to decrease as firms get older. This implies that the younger banks have better returns and higher rates of growth than the older banks (Ouimet & Zarutskie, 2014).

This result corroborates with the study by Majumader (1997), which states that older firms in India achieve a lower return on assets. Adams et al.(2005) and Lang and Stuls (1994) argue that investor uncertainty and profitability tend to decrease in older firms. In contrast, Coal et al. (2013) showed that older firms achieved high profits in Spanish manufacturing firms. However, the results of this study reveal that there is an insignificant relationship between AGE and ROE.

The size of the banks has a significant relationship with both TOBINSQ and ROE. Size is related to a significant and negative relationship with TOBINSQ. This result corroborates with other studies (Opoku et al., 2016 Mawutor et al., 2015). Size, on the other hand, was positively related to ROE. Small banks are more sensitive to CR than large banks, which is why large banks have more opportunities to diversify their portfolio, and, thus, increase their return loans through a greater variety of resources than in small banks, as well as more advanced skills and experience in risk management. These results corroborated with other studies (Bisayeha, 2015; Yakuba, 2016). While the relationship between size and ROA is insignificant. This finding corroborates with other studies (Ramadan et al., 2011; ALshatti, 2016; Dei & Amoh 2016, Boadi et al., 2016).

Theoretical and empirical literature (Rawlin & Bahatt, 2014; Ruziq, 2013; Nkegebe & Ustarz, 2015) show that liquidity is positively related to profitability. However, this study found a significant negative relationship between Liquidity, TOBINSQ, and ROE. This result corroborates with the study of Rahman et al.(2015). The high liquidity ratio is negatively associated with profitability because the banks' maintenance of a large percentage of liquidity causes the opportunity cost of some investments to be discarded.

Furthermore, banks with higher liquidity have lower risk and profit (Hempel et al., 1994). The results also indicated that there is an insignificant relationship between Liquidity and ROA. This consists of (Fredich, 2012 and Al-Shatti, 2016).

One of the key issues in CG is the investigation of the association between ownership concentration and performance, which has been the topic of extensive discussion in the financial literature. The agency theory underlies any relationship between company performance and ownership identity. This idea is concerned with the owner-manager relationship, which in some way relates to ownership and performance. According to Ongore (2011), risk-taking shareholder behavior and investment attitudes have a significant impact on management decisions in the day-to-day operations of the organization. The results indicated a positive and significant effect of ownership concentration on ROA, and the result can be justified by the presence of ownership concentration in a limited number of shareholders. This result is consistent with other studies (Al Farooque et al., 2019; Vintilă & Gherghinaa, 2014; Vasili, 2019), but the finding contradicts this study (Vintilă & Gherghinaa, 2014; Vasili, 2019). There is an insignificant negative effect of the concentration of ownership on TOBINSQ. This finding is consistent with that of Vintilă and Gherghinaa (2014). However, it contradicts other studies (Lawa et al., 2018; Al Farooque et al., 2019) that confirmed that the presence of a concentration of shareholders helps strengthen control measures and increase the efficiency of the company's business, which reflects positively on the return on the rights of owners. Previous studies found a negative relationship between the big four and FP. Previous studies (Lee et al., 2016; Ogbole et al., 2021; Defond, 2014; Velte & Stiglbauer, 2012) argued that the big four negatively affected FP in Nigeria. Contrastingly, Sawsan and Saqqa (2003) showed that FP positively affected the quality of audits. The results show a weak relationship between the BIG FOUR and ROA. This result corroborates with the study of Koet al.(2019). While Weiner (2012) discovered no link between FP and the big four, it was stated that firms prefer to work with one of the large audit firms because of the brand name (Weiner, 2012). This argument corroborates with our finding that the relationship between the BIG FOUR and ROA and ROE is insignificant

## **Chapter Five**

### **Conclusion and Recommendations**

#### **5.1 Overview**

This study aimed to investigate the relationship between CRs and FP and the moderating role of CG in this relationship. This was conducted because of a lack of prior research that examined the moderating role of CG in the relationship between CRs and FP. This study assumes that high commitment study to CG requirements decreases the CRs. Thus, it may improve the FP and profitability. The data for this study was collected manually from the annual reports of 21 banks, six of which were listed on the Palestinian stock exchange and 15 were listed on ASE from the period 2009 to 2019, with 232 total firm-year observations. In line with previous studies, the CRs was measured by using LTA and NPLs. With regard to the FP, it is measured by using three measurements, namely TOBINSQ, ROA, and ROE. On the other hand, CG was measured by using a checklist with 33 items to measure the commitment of the banks listed on the PEX and ASE with CG requirements.

#### **5.2 Conclusion**

This study aimed to investigate the effect of CRs on FP and the moderating role of CG in this relationship on banks listed on PEX and ASE. The results of the regression show mixed results about the effect of CR on FP. LTA has a significant and positive effect on TOBINSQ and ROE, but an insignificant and positive effect on ROA. On the other hand, NPLs has a significant and negative effect on ROA, whereas NPLs has a significant and positive effect on TOBINSQ. The finding stated that NPLs has an insignificant and positive effect on ROE, thus confirming the research hypotheses. We noticed that the interaction terms (LTA\*CG) and (NPLs\*CG) have a significant relationship when used (TOBINSQ, ROA, and ROE) as measurements of FP, except for the interaction term (LTA\*CG) when used with TOBINSQ as a measurement of FP. The findings of this study indicate that CG moderates the relationship between CRs and FP when good CG practices are implemented. The findings demonstrate that adhering to good CG principles reduces the impact of CRs. This improves FP.

### **5.3 Recommendations**

The findings of this study indicate that CG moderates the relationship between CR and FP; this means that adhering to good CG principles reduces the impact of CR. This, hence, improves FP when good CG practices are implemented. Mixed results were found regarding the pure relationship between CR and FP. A significant relationship was found between LTA, TOBINSQ, and ROE, but an insignificant effect on ROA. However, NPLs has a significant and negative effect on ROA, whereas it has a significant and positive effect on TOBINSQ.

In light of the findings of this study, it recommends the following:

1. The importance of paying attention to bank loans, implementing more effective credit processes and banking policies, and assuring that potential borrowers' credit is appropriately assessed.
2. Deconcentration of credit in a certain sector may and the necessity of diversity in credit portfolio
3. The necessity to allocate sufficient provisions to face any possible decline in credit facilities.
4. The requirement of banks and financial institutions to rely on risk-related models and applications to ensure that the value of the bank's assets is not decreased in value.
5. Since CG policies have a substantial influence on FP, the government must develop CG standards that reflect their own business environment to strengthen CG.
6. Constantly reviewing CG codes and learning from developed countries' experiences in corporate and bank governance, as well as directing companies to pay attention to CG practices through laws and legislation that require companies to follow CG practices.
7. Conducting workshops on CG and its importance in the presence of company management and decision-makers.

#### **5.4 Limitations of the study**

The results of this study extended previous research findings on CRs and its effects on FP. However, this study had many limitations that should be considered when drawing conclusions. The small size of the sample used in the study included 21 banks listed on the PEX and ASE. Likewise, the ASE and PEX are considered developing stock exchanges, so the results of this study may differ from those of other stock exchanges.

#### **5.5 Recommendations for future research**

Only CRs was considered in this study when examining the association between the profitability of Palestinian banks and ASE. Other studies can be undertaken on other non-financial risks, such as operational risk, to measure the differences between them and examine their effects on the profitability of Palestinian and Jordanian banks. Other studies might be performed to compare CRs and its impact on profitability in Palestinian and Jordanian banks with those in other western and eastern banks. Furthermore, in addition to TOBINSQ, ROA, and ROE, researchers can use other financial indicators to measure profitability. This will contribute to substantiating the present study's findings. Furthermore, the sample size of future research might be increased.

## List of Abbreviations

<b>Variables</b>	<b>Abbreviations</b>
loans to total assets	LTA
Non-performing loans	NPLs
Corporate Governance	CG
Return on Assets	ROA
Return on Equity	ROE
TOBINS Q	Tobin's Q
Ownership Concentration	OWNERC
Bank age	BAGE
Bank size	BSIZE
liquidity	LIQUD
Big four	BF
Palestine Securities' Exchange	PEX
Amman Securities' Exchange	ASE
Credit Risk	CRs
Financial Performance	FP

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**Appendices**  
**Appendix (A)**  
**Sample 2009-2019**

#	Market	Bank	Symbols
1	ASE	Jordan Kuwait Bank	JOKB
2	ASE	Jordan Commercial Bank	JCBK
3	ASE	The Housing Bank For Trade And Finance	THBK
4	ASE	Arab Jordan Investment Bank	AJIB
5	ASE	Safwa Islamic Bank	SIBK
6	ASE	Bank AL Etihad	UBSI
7	ASE	Arab Banking Corporation /(Jordan)	ABCO
8	ASE	Invest Bank	INVB
9	ASE	Capital Bank Of Jordan	EXFB
10	ASE	Sociate General De Banquo- Jordanian	SGBJ
11	ASE	Cairo Amman Bank	CABK
12	ASE	Bank Of Jordan	BOJX
13	ASE	Jordan Ahli Bank	AHLI
14	ASE	ARAB BANK	ARBK
15	ASE	Jordan Islamic Bank	JOIB
16	PEX	Arab Islamic Bank	AIB
17	PEX	The National Bank	TNB
18	PEX	Palestine Investment Bank	PIBC
19	PEX	Al Quads Bank	QUDS
20	PEX	Palestine Islamic Bank	ISBK
21	PEX	Bank Of Palestine	BOP

## Appendix (B)

### Corporate Governance Index

#	Items
	<b>Audit</b>
1	The audit committee is composed solely of outside directors who are all independent.
2	At the most recent annual meeting, the auditors were confirmed.
3	Auditor consulting fees are lower than audit fees paid to auditors
4	Auditor rotation is regulated by a specific policy at the company
	<b>board of director</b>
5	At least 75% of board meetings were attended, or all directors had a valid excuse for not attending.
6	The board of directors must include at least six but no more than thirteen members.
7	In the proxy statement, the CEO is not identified as having a "related party transaction".
8	More than half of the board is composed up of independent outside directors
9	The compensation committee is composed entirely of outside directors who are not employees of the company
10	The CEO and chairman's duties are separated
11	Shareholders have a vote in who is selected to fill vacancies on the board of directors
12	Changing the board size needs shareholder approval
13	Only independent outside directors make up the nomination committee
14	Shareholders have cumulative voting rights to elect directors
	<b>Bylaws / Charter</b>
15	A merger must be approved by a simple majority vote (not a supermajority).(
16	Shareholders are allowed to call special meetings..
17	To change the charter or bylaws, a majority vote is required (not a supermajority).
18	Shareholders can act with written approval, that doesn't have to be unanimous
19	The board can only alter the bylaws with shareholder approval or under restricted situations
	<b>Compensation for executives and directors</b>
20	There are no interlocks among the compensation committee's directors
21	Non-employees are excluded from corporate pension plans.
22	Shareholders voted to approve stock incentive plans.
23	All or a portion of the fees paid to directors are received in stock.
24	The company does not lend money to executives who want to exercise their stock options.
	<b>Ownership</b>
25	All directors with more than one year of service own stock
26	Executives are subject to stock ownership guidelines.

### **Progressive Practices**

- 27 There is a mandatory retirement age for directors.
  - 28 The board's performance is evaluated on a regular basis.
  - 29 A CEO succession plan has been approved by the board of directors
  - 30 The board has external consultants.
  - 31 When their work status changes, directors must submit their resignations
  - 32 Outside directors meet without the CEO, and the number of times they meet is disclosed
  - 33 Director term limits exist.
-

## Appendix (C)

### Tables

**Table (11)**

*Estimation results for the model with ROE as a dependent variable and CG as a moderator variable*

<b>Dependant Variable: ROE</b>			
<b>Variable</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
LTA	-1.049	-1.92	0.056
NPLs	0.1	2.82	0.005
CG	-0.132	-0.82	0.409
NPL*CG	-0.139	-3.06	0.002
LTA*CG	1.455	2.35	0.02
FAGE	-0.001	-0.91	0.365
FSIZE	0.078	2.90	0.004
LIGUED	-0.015	-2.22	0.027
BIG4	0.022	0.89	0.372
OWNERC	0.131	3.12	0.002
Constant	-0.662	-2.79	0.006
R-squared	0.141	Mean dependent var	0.099
Number of observations	231	SD dependent var	0.144
F-statistic	4.029	Akaike crit. (AIC)	-256.907
Prob (F-statistic)	0.000	Bayesian crit. (BIC)	-222.482

Significant level 5%.

**Table (12)**

*Estimation results for the model with ROA as a dependent variable and CG as a moderator variable*

<b>Dependant Variable: ROA</b>			
<b>Variable</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
LTA	-0.44	-2.49	0.014
NPLs	0.021	1.81	0.071
CG	0.116	2.11	0.035
NPL*CG	0.032	-2.16	0.032
LTA*CG	0.55	2.74	0.007
FAGE	-0.001	-2.60	0.01
FSIZE	0.004	0.50	0.621
LIGUED	-0.003	-1.38	0.168
BIG4	0.014	1.80	0.063
OWNERC	-0.049	-3.58	0.000
Constant	0.055	0.71	0.477
R-squared	0.221	Mean dependent var	0.026
Number of observations	231	SD dependent var	0.049
F-statistic	6.979	Akaike crit. (AIC)	-777.489
Prob (F-statistic)	0.000	Bayesian crit. (BIC)	-743.065

Significant level 5%

**Table (13)***Summary of the relationships from the study findings*

	<b>TOBINSQ</b>	<b>ROE</b>	<b>ROA</b>	<b>Conclusion</b>
Independent variable				
LTA	-	+	+	Mixed
NPL	-	-	-	Negative
CG	+	-	+	Mixed
LTA*CG	-	+	+	Mixed
NPL*CG	+	-	-	Mixed
AGE	-	-	-	negative
SIZE	-	+	+	Mixed
LIGUIDITY	-	-	-	Negative
OWNERC	-	+	-	Mixed
BIG FOUR	-	+	+	Mixed



جامعة النجاح الوطنية  
كلية الدراسات العليا

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والدور المعدل لمستوى الحوكمة: دراسة على البنوك  
المدرجة في بورصة فلسطين وعمان للأوراق المالية

إعداد  
ريم محمود شماسنة

إشراف  
أ. د. عبد الناصر نور  
د. سامح العطوط

قُدمت هذه الرسالة استكمالاً لمتطلبات الحصول على درجة الماجستير في المحاسبة بكلية الدراسات العليا في  
جامعة النجاح الوطنية في نابلس، فلسطين

2022

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إعداد

ريم محمود شماسنة

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د. سامح العطوط

### الملخص

تهدف هذه الدراسة إلى التحقيق في الدور الوسيط لحوكمة الشركات في العلاقة بين المخاطر الائتمانية والأداء المالي للبنوك المدرجة في سوق فلسطين للأوراق المالية (PEX) وبورصة عمان للأوراق المالية (ASE) للفترة بين 2009 و2019 تكونت عينة الدراسة من واحد وعشرين مصرفاً موزعة بين البورصتين.

تم استخدام البيانات الثانوية والتقارير السنوية والإفصاحات لتحليل واستخلاص النتائج والتوصيات. واعتمدت الدراسة على نموذج الانحدار الخطي المتعدد لاستنتاج تأثير المخاطر الائتمانية على أداء البنوك. حيث تم استخدام Tobin Q والعائد على الأصول (ROA) والعائد على حقوق الملكية (ROE) لقياس أداء البنوك بينما تم استخدام نسبة القروض المتعثرة إلى إجمالي القروض (NPLs) والقروض إلى إجمالي الأصول (LTA) لقياس المخاطر الائتمانية.

تم قياس الحوكمة باستخدام مؤشر بالاعتماد على الدراسات السابقة بما يتوافق مع متطلبات الحوكمة في البيئة الفلسطينية والأردنية أظهرت نتائج الانحدار نتائج متباينة فيما يتعلق بتأثير المخاطر الائتمانية على الأداء المالي للبنوك. وأظهرت النتائج وجود تأثير هام وإيجابي لمؤشر القروض إلى إجمالي الأصول على TOBINSQ والعائد على حقوق الملكية ، ولكن تأثيرها غير مهم وإيجابي على العائد على الأصول. من ناحية أخرى، فإن مؤشر القروض المتعثرة لها تأثير معنوي وسلبى على العائد على الأصول، بينما لها تأثير هام وإيجابي على TOBINSQ.



علاوة على ذلك، أظهرت النتائج أن للحوكمة الشركات دور معدل في العلاقة بين المخاطر الائتمانية والأداء المالي للبنوك المدرجة في كل من سوق فلسطين وعمان للأوراق المالية. هذا يعني أن الكفاءة العالية لقواعد الحوكمة تقلل من التأثير السلبي للمخاطر الائتمانية على الأداء المالي. وفي ضوء هذه النتائج تقترح الدراسة مجموعة التوصيات التالية: ضرورة الاهتمام بالقروض المصرفية. تنفيذ عمليات ائتمانية وسياسات مصرفية أكثر فعالية؛ وعدم تركيز الائتمان في قطاع معين؛ المراجعة المستمرة لقواعد الحوكمة والتعلم من تجارب البلدان المتقدمة في حوكمة الشركات والبنوك؛ توجيه الشركات للاهتمام بممارسات حوكمة الشركات من خلال القوانين والتشريعات التي تتطلب من الشركات إتباع ممارسات حوكمة الشركات؛ وعقد ورش عمل حول حوكمة الشركات وأهميتها بحضور إدارة الشركة وصناع القرار.

**الكلمات المفتاحية:** المخاطر الائتمانية، الأداء المالي، حوكمة الشركات، بورصة فلسطين للأوراق المالية، بورصة عمان للأوراق المالية.