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# The Impact of Corporate Governance Practices on Non-Performing Loans in Iraqi Banks; The Moderating Effect of Concentrated Ownership

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**Abstract**

This study aims to examine the connection between corporate governance mechanisms and non-performing loans (NPLs) using agency theory. In addition, the study examines the moderating effect of concentrated ownership (CO) between NPLs and financial distress. The study adopts a sample of 42 Iraqi banks from 2017–2021 with 210 observations. Panel estimation utilised a regression estimator to test the research hypotheses of the study. Three

regression models were used to test the hypotheses after obtaining the appropriate model. Our findings showed that non-executive directors, board financial experience, and risk management committee affected NPLs negatively. At the same time, the audit committee was an insignificant effect on NPLs. Moreover, concentrated ownership as moderating interacts with the relationship between corporate governance factors and NPLs. This study enhances the knowledge and implications of the theory used for corporate governance dimensions. It provides feedback and a map through which Iraqi regulators and decision-makers can improve the effectiveness of corporate governance practices in relation to NPLs control, which should enable Iraqi regulators and policymakers to improve the corporate governance system, especially since corporate governance is a new issue in Iraq. The study also offers the researchers, academics, regulators, and policymakers' proof of the detrimental impact of CO on NPLs since this study provided an original contribution by using CO in this position. Therefore, evaluating CO as a moderating function provides several literary and theoretical insights that can be a focusing area of future studies.

**Keywords:** Non-performing loans, Corporate governance, Concentrated ownership, Banking Industry

## 1. Introduction

In reality, the banking industry is seen as the ligament that holds the economy together since it provides credit and allows individuals, firms, and families to save, invest and expand their spending, all of which contribute to economic growth. The economy will be paralysed if consumers cannot get credit, but it cannot operate if banks are absent (Ben Abdesslem et al., 2022; Djebali & Zaghdoudi, 2020). Thus, non-performing loans (NPLs) is one of the dangers that maybe break down the banking industry (Leo et al., 2019). The basal committee defined credit risk as a partial or whole loss of outstanding loan as a result of the inability of borrowers to pay the loan amount or to pay interest on the borrowings he/she has obtained according to the conditions specified in the credit agreement (van Greuning & Brajovic Bratanovic, 2003). Therefore, many uncertainties are involved in the lending and borrowing process. And this risk is part of banking and can hardly be avoided as it is impossible to predict the future repayment capacities of borrowers (Manab et al., 2015).

The previous literature argued that NPLs were the driving force behind many economic downturn cases and no country has survived the effect of the events that resulted from NPLs. On the other hand, the marginal cost of debt and equity grows as NPLs grow. As a result, the cost of the bank's funding increases. It means with increasing NPLs in the banks, the risk of financial instability will increase. The problem of protecting against financial instability has grown more critical, especially in light of the global financial crisis of 2007–2008, which resulted in significant losses around the world (Matey, 2021). In this regard, concerns regarding the effectiveness of banks' risk management strategies were raised after the financial crisis of 2007 (Switzer et al., 2018). Risk management is critical in many industries, but it is more necessary for the banking industry, given the severe financial and economic reflections of bank failure (Ben Abdesslem et al., 2022). The effectiveness of credit risk management is attributable, among other factors, to the board of directors' ability (Bouteille

& Coogn-Pushner, 2012). NPLs have been accepted as part of the management's weakness and the conflict of interest between shareholders and managers (Alamanda, 2013; Moussa, 2019).

The board of directors' effectiveness is still being questioned; studies still indicate that higher credit risk is due to the weakness of the board of directors in controlling or limiting credit risk (Moussa, 2019; Nesrine, 2019; Switzer et al., 2016). The board of directors' weak oversight makes it possible for banking resources to be used inefficiently. They could devote fewer employees and money to monitoring and risk assessment assignments. Their lack of supervision capabilities may lead to excessive risk-taking and increase banking instability, which leads to impacting the overall financial and economic system. On the other hand, those who are most affected by the risks afflicting the bank are the owners of concentrated ownership, especially since they linked a large part of their money to the bank's capital (Ciampi, 2015; Manzaneque et al., 2016). As a result, they will hold huge losses based on their participation percentage in the capital. Hence, they need to sustain their investments which makes them particularly interested in the bank's success. Thus, compared to dispersed ownership, they actively and effectively monitor managers' behaviour and the bank's performance (Habib et al., 2020).

Our study's main objective is to determine the relationship between corporate governance and NPLs as well as the moderation role of ownership concentration. We research this relation focusing on the Iraqi banking sector. Our selection of preparation is motivated by the heterogeneity of the banking sector in Iraq in banking regulation and supervision with other countries' banking sectors. Moreover, NPLs are considered a serious issue that needs strong command in Iraq. According to the most recent report referred that NPLs percentages for private and public banks reached an all-time high of 47 per cent and 14 per cent, respectively, totalling an estimated 6.1 billion dinars (Central Bank of Iraq, 2019). Therefore, there is rising worry about the rise in bad loans in Iraqi banks because the weightage of the NPLs is heavy on banks. Second, the study makes an original contribution by examining the impact of concentrated ownership on the link between corporate governance and NPLs. High levels of ownership concentration have been observed in Iraqi banks (Sadaa et al., 2020). Hence, they are expected to exercise an effective supervision function to support the board of directors' gob in controlling risks.

## 2. Literature Review and Hypothesis Development

### *2.1 Corporate Governance and Non-performing Loans*

High competition, agency problems and unequal information in the banking system have led to serious concerns about corporate governance (Trinh et al., 2015). Also, the agency's difficulties in the banking industry differ from the agency's difficulties in other areas for stakeholders; because the financial industry has many more stakeholders than non-financial sectors, the nature of financial institutions' operation as 'opaque and complicated' can change very fast. Additionally, the difficulty of the risks faced by the financial sector makes these risks a severe concern to the board of directors (Din et al., 2021; Ganesan et al., 2022; Quoc Trung, 2021; Sadaa et al., 2022; Zaidan et al., 2023). Therefore, the inefficiency of

administration leads to opportunistic decisions in granting credit with insufficient guarantees to achieve revenues and services, which leads to unequal information and severe damage when part of these loans falters (Nesrine, 2019). Berger and DeYoung (1997) believe that the administration's incompetence leads to a loss of confidence in the bank's ability to appropriately manage its assets and liabilities. In banks, corporate governance revolves around the board of directors, which governs both business and affairs.

Furthermore, corporate governance mechanisms and risk management have garnered significant attention in financial companies and have been the subject of a flurry of academic study (Ahmed et al., 2021; Boateng et al., 2019; Mateev et al., 2022; Sadaa, Ganesan, & Yet, 2022a). Also, some studies indicate that by implementing corporate governance in the banking industry, opportunistic management behaviour and risk management can be reduced as well (Alamanda, 2013; Vassileios, 2011). Therefore, the agency theory can explain the relationships between corporate governance mechanisms and NPLs, which is characterised by a conflict of objectives between management and shareholders. Governance practices involve a series of characteristics that reconcile shareholders' interests and management's interests (Jensen, 1993). In this study, corporate governance mechanisms are represented by board independence, board financial expertise, audit committee, and risk management committee. Consequently, this research explored how corporate governance practices affecting NPLs. The hypotheses for the current study are developed as follows:

### 2.2.1 Board Non-executive Member and Non-Performing Loans

Board non-executive is considered a powerful method for monitoring manager performance and deterring opportunistic behaviour, owing to directors' increased desires and interest in reviewing managerial actions and thereby securing the company's reputation (Sadaa, Ganesan, & Yet, 2022b; Uribe-Bohorquez et al., 2018). Lu and Boateng (2018) anticipate that the substantial participation of outside directors on the board will be successful, result in judgments of a better calibre, and lower credit risk levels. In this regard, According to Moussa (2019), having non-executive directors on the boards of Tunisian banks indicates a detrimental effect on NPLs. Their findings concurred with Pathan (2009), who discovered a similar inverse link between risk and board independence. Indeed, non-executive directors may challenge poor choices and make the best arguments for choosing particular initiatives, so lowering the level of risk. Based on the above discussion, our study states that:

*H1: Board non-executive members will influence non-performing loans negatively.*

### 2.2.2 Board Financial Experience and Non-Performing Loans

Only a few studies have measured corporate governance practices using board financial experience, specifically with non-performing loans. Because the board's financial experience could serve as a control mechanism, their presence on the board will be critical in identifying risks that could harm the interests of shareholders, in order to accentuate the board's monitoring role (Minton et al., 2012; Sadaa, Ganesan, & Yet, 2022b). Board members who lack sufficient financial understanding cannot properly oversee or counsel management on taking risks (Unda et al., 2019). A more financially knowledgeable board can recognise risks

that will not pay off or are unsound and even adverse to the companies' financial stability and will advise senior managers to avoid such risks. Alternatively, these financial experts can regularly identify more calculated risks to shareholders and encourage management to take on those risks (Minton et al., 2014; Tariq et al., 2021). Pham (2021) pointed out the negative influence of board financial expertise on credit risk measured by non-performing loans in Vietnam banks during 2007-2018. Hence, the study hypothesises that:

*H2: Board financial experience influences non-performing loans negatively.*

2.2.3 Audit Committee and Non-Performing Loans

Boards of directors often exercise supervision through their operations committees, such as audit committees (Alhababsah, 2022; Pozzoli et al., 2022). Despite the fact that audit committees are supposed to be in charge of supervising risk management, there is no information about how the effectiveness of audit committees affects bank non-performing loans. In this regard, Lestari (2018) found that the audit committee negatively impacted banking risks in a group of Indonesian banks. Tahir et al. (2020) noted that the audit committee plays a critical role in enhancing bank loan quality in Pakistani. Finally, a recent paper by Ur Rehman et al. (2022) indicated that the audit committee had influenced credit risk negatively in Sukuk issuing corporations in Malaysia from 2011-2017. Therefore, our study hypothesises that:

*H3: Audit committee influence non-performing loans negatively.*

2.2.4 Risk Management Committee and Non-Performing Loans

As far as can be ascertained, there are limited studies that have employed the risk management committee as an antecedent of NPLs. Hines and Peters (2015) stated that practical oversight via risk management committees improves institutions' efficiency in utilising risk-related tools, therefore growing risk management capability. Kakanda et al. (2017) pointed out risk management committee has enhanced risk disclosure and its management in the Nigerian business during 2012-2015. The study assumes that the supervisory restrictions imposed by the risk management committee limit the manager's authority and power to approve loans. As a result, the scope of this control is reduced, and non-performing credits are also decreased.

*H4: Risk management committee influence non-performing loans negatively.*

*2.2 Concentrated Ownership as a Moderating*

The agency theory provides insights and thoughts on shareholder-manager friction, offering understanding in order to reduce shareholder gains in the relationship between principals and agents, where owners (principals) pick managers (agents) to manage companies, giving rise to agency friction as both are maximisers of their own gains. Managers' priority usually veers from their promises on contracts to maximise profits to shareholders (Jensen & Meckling, 1976). Alchian and Demsetz (1972) debated shareholders had suggested equity as a tool to control managers in side-stepping agency conflict in companies. This external controlling tool is important to shareholder wealth, company target and efficiency levels. In that case,

considerable shareholding seems to be the best method of control and also or shareholders to monitor managers. Ownership concentration is defined as more power in the hands of a dominant shareholder, resulting in better monitoring and a reduction in the effectiveness of other controls, such board of directors (Ahmed et al., 2023; Al Farooque et al., 2020; Shahrier et al., 2020). One or a small number of significant shareholders often own the majority of the shares in companies with concentrated ownership. Large shareholders in private companies often have strong financial ties to the company (Ciampi, 2015). Therefore, large owners are particularly interested in the firm's success. Unlike in the situation of dispersed ownership, they thoroughly and successfully oversee managers' activities as well as company performance (Habib et al., 2020). Such monitoring minimises managers' self-serving behaviour and shirking of duties (Jensen & Meckling, 1976), which may deter managers from taking on riskier initiatives (Shleifer & Vishny, 1986). Besides, based on their voting power in the bank, they may appoint members to the board of directors or the executive team, and they have authority over both managers and management; they can even terminate the manager if he or she performs poorly (Khaw et al., 2022; Sami et al., 2011; Singh & Gaur, 2009). Therefore, the study believes that the owners of concentrated ownership have the ability to play an excellent role in supporting the board of directors' effectiveness in monitoring NPLs. Hence,

*H5a: Concentrated ownership moderates the relationship between board non-executive members and non-performing loans such that this negative relationship will be stronger when ownership concentration is high.*

*H5b: Concentrated ownership moderates the relationship between financial experience and non-performing loans such that this negative relationship will be stronger when ownership concentration is high.*

*H5c: Concentrated ownership moderates the relationship between audit committee and non-performing loans such that this negative relationship will be stronger when ownership concentration is high.*

*H5d: Concentrated ownership moderates the relationship between risk management committee and non-performing loans such that this negative relationship will be stronger when ownership concentration is high.*

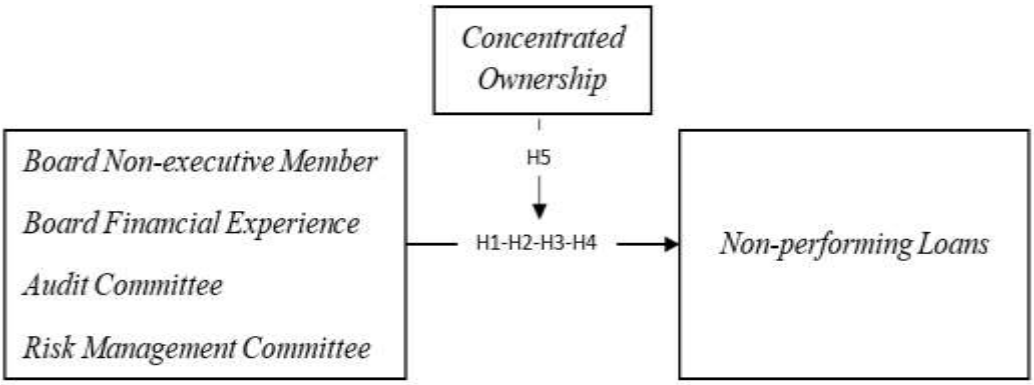


*Figure 1. Conceptual Framework*

## 3. Methodology

### *3.1 Sample*

This study adopted the listed banks in Iraq Stock Exchange. The study is based on purposive sampling which considers rationality in selecting the population sample to meet the study's goal of examining the context of accuracy, time, and convenience. The listed banks' statements from 2017 to 2021 were collected. 2017 has been selected as a basis because most of the banks were money transformation companies before 2017. 2021 because this is the most recent year the data is available. Our study chose 42 listed private banks in ISX based on their importance since they contribute almost 95% of the Iraqi private banking sector.

### *3.2 Measurement*

3.2.1 Dependence Variable.

The current study will measure non-performing loans by the non-performing loans rate (NPLR) according to the opinion that financial institutions' solvency is typically at risk when their assets become impaired. Wherefore, it is essential to monitor indicators for the quality of their assets in terms of overexposure to specific risk trends in non-performing loans and the health and profitability of bank borrowers. NPLs are inherent in lending and central to the banking business (Jimenez & Saurina, 2006). Thus, NPLR is the best proxy for asset quality (Moussa, 2019). Conclusively, the choice of NPLR is based on its properties and frequency of occurrences in previous studies. Additionally, NPLR is relevant to bank loans, and bad loans have a close relationship with banks' credit risk and influence credit risk management efficiency. Ben Saada (2018) and Chen and Lin (2016) also stated that the NPLR is a timely source of loan default information because most banks must disclose it. NPLR is the ratio of non-performing loans to total loans. Therefore, the equation can be defined as:

$$\text{NPLR} = \frac{NPLs}{Total\ loans}$$

Where: NPLR is non-performing loans ratio; NPLs are non-performing loans.

3.2.2 Independent Variables

Board non-executive member (BNEC), board financial experience (BFE), audit committee (AC), and risk management committee (RMC) are the factors of corporate governance. BNEC is measured by the non-executive members on the board divided by total board members. BFE is measured as the total number of board members with financial experience divided by total board numbers. AC is measured using dummy code if the bank has an audit committee assigned a 1; otherwise, it is 0. RMC is also measured using a dummy variable if the bank has an audit committee assigned a 1; otherwise, it is 0.

3.2.3 Measurement of Moderating Variable

Most previous studies defined the concentration ownership variables as the total ownership percentage of the largest five shareholders (Grassa, 2016; Jumreornvong et al., 2019; Haider & Fang, 2016). In addition, Iraqi banks disclose in their reports the ownership percentage of the five most prominent owners of the bank's shares during the year. Hence, the study will employ the proportion of shares that the five largest shareholders hold to the total outstanding shares.

3.2.4 Measurement of Control Variable

In addition to the variables discussed previously, several control variables are incorporated in this study to control bank-specific characteristics and some of the country characteristics that can influence the extent of NPLs. Bank size (Size) is measured by the natural logarithm of the bank's total assets at the end of the accounting year (Pathan, 2009). Bank performance measures (ROA) return on assets = net income to assets. Inflation (INF) is measured by the natural logarithm of annual CPI (Boateng et al., 2019). Finally, GDP is measured by the annual growth rate of real GDP (Ben Saada, 2018).

*3.3 Research Model*

Our study adopted two models in order to test the associations hypothesised, as followings:

$$NPLR = \beta_0 + \beta_1 BNEC + \beta_2 BFE + \beta_3 AC + \beta_4 RMC + \beta_5 SIZE + \beta_6 ROA + \beta_7 INF + \beta_8 GDP + \varepsilon_{it} \quad (1)$$

$$NPLR = \beta_0 + \beta_1 BNEC + \beta_2 BFE + \beta_3 AC + \beta_4 RMC + \beta_5 SIZE + \beta_6 ROA + \beta_7 INF + \beta_8 GDP + \beta_9 CO + \beta_{10} CO*BNEC + \beta_{11} CO*BFE + \beta_{12} CO*AC + \beta_{13} CO*RMC + \varepsilon_{it} \quad (2)$$

Where: NPLR is non-performing loans ratio, BNEM is board non-executive member, AC is audit committee, RMC is risk management committee, SIZE is bank size, ROA is measured bank financial performance, INF is inflation, GDP is measured the economic growth, and CO is concentrated ownership.

*3.4 Findings*

Our study aim is to determine whether corporate governance factors have an effect on NPLs in Iraqi banks and what role concentrated ownership can play in this relationship. This section will start with descriptive variables, then the correlation matrix, and finally, the hypotheses test.

### 3.4.1 Descriptive Statistics

Table 1. Descriptive Statistics

| Variables | Observations | Min | Max | Mean | Std.Dev | Median | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|---|
| NPLR | 210 | 0.0000 | 0.9300 | 0.3208 | 0.4582 | 0.1986 | 2.819 | 5.921 |
| BNEM | 210 | 0.0000 | 1.0000 | 0.3881 | 0.2708 | 0.3622 | 0.931 | 3.586 |
| BFE | 210 | 0 | 0.7142 | 0.3225 | 0.2404 | 0.3048 | 1.011 | 3.002 |
| AC | 210 | 0 | 1.0000 | 0.9408 | 0.1466 | 0.9154 | 1.376 | 3.048 |
| RMC | 210 | 0 | 1.0000 | 0.782 | 0.2510 | 0.7732 | 0.962 | 1.773 |
| CO | 210 | 0.3250 | 0.9300 | 0.5820 | 0.2092 | 0.5769 | 1.005 | 2.938 |
| SIZE | 210 | 9.8791 | 12.1718 | 11.5756 | 0.2137 | 11.7113 | 2.411 | 9.308 |
| ROA | 210 | -1.2533 | 0.2866 | 0.0013 | 0.0268 | 0.0268 | 1.987 | 5.228 |
| INF | 210 | -0.2000 | 6.1000 | 1.9800 | 2.3382 | 1.0882 | 0.963 | 1.088 |
| GDP | 210 | 2.3000 | 2.4440 | 2.4300 | 0.0687 | 2.4711 | 0.768 | 3.004 |

Table 1 shows that the non-performing loans were 32% on average, which stated that around 32% of the total loans provided during 2016-2021 were bad loans, and this issue needs strong guidance to avoid the risks that could result. The average of BNEM, BFE, AC, and RMC were 0.39, 0.32, 0.94, and 0.78, respectively. At the same time, concentrated ownership was 0.58, reflecting the high ownership concentration shown by Sadaa et al. (2020).

### 3.4.2 Correlations Matrix

Table 2. Correlation Matrix

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. NPLR | 1.000 | | | | | | | | | |
| 2. BNEM | -0.087 | 1.000 | | | | | | | | |
| 3. BFE | -0.094 | 0.582 | 1.000 | | | | | | | |
| 4. AC | 0.238 | 0.189 | 0.091 | 1.000 | | | | | | |
| 5. RMC | -0.032 | 0.048 | 0.012 | 0.630 | 1.000 | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6. CO | -0.180 | -0.115 | 0.301 | -0.042 | 0.101 | 1.000 | | | | |
| 7. SIZE | 0.074 | 0.394 | -0.217 | 0.016 | 0.039 | 0.157 | 1.000 | | | |
| 8. ROA | 0.038 | -0.128 | -0.072 | -0.107 | 0.203 | 0.102 | 0.108 | 1.000 | | |
| 9. INF | -0.195 | 0.313 | 0.112 | 0.192 | 0.092 | 0.255 | 0.201 | -0.092 | 1.000 | |
| 10. GDP | -0.055 | 0.153 | -0.100 | 0.064 | 0.103 | 0.192 | -0.510 | 0.031 | -0.072 | 1.000 |

Table 2 shows there is no multicollinearity issue since the correlation coefficients were ranked between 63% and -51% which are not higher than 90% referred by Hair et al. (2014).

### 3.4.3 Hypotheses Test

Table 3. Corporate governance and non-performing loans with the moderating role of concentrated ownership

| | **Pooled Effect** | **FEM Model** | **REM Model** | **Robust FEM** | **Pooled Effect** | **FEM Model** | **REM Model** | **Robust FEM** | **VIF** |
|---|---|---|---|---|---|---|---|---|---|
| BNEM | -0.0362 | -0.3304*** | -0.1880* | -0.3304*** | | | | | 1.44 |
| | (0.121) | (0.000) | (0.091) | (0.000) | | | | | |
| BFE | -0.2096*** | -0.3101*** | -0.2711*** | -0.3101*** | | | | | 2.46 |
| | (0.000) | (0.001) | (0.000) | (0.000) | | | | | |
| AC | -0.0838* | -0.0458 | -0.0332 | -0.0458 | | | | | 1.63 |
| | (0.108) | (0.153) | (0.187) | (0.120) | | | | | |
| RMC | -0.0738** | -0.2210** | -0.3206*** | -0.2210** | | | | | 3.33 |
| | (0.051) | (0.020) | (0.000) | (0.042) | | | | | |
| CO | | | | | -1.7600*** | -1.8530*** | -1.2884*** | -1.8530*** | 1.18 |
| | | | | | (0.0000) | (0.0000) | (0.0000) | (0.0000) | |
| BNEM*CO | | | | | -0.0912* | -0.2100** | -0.1800** | -0.2100** | |
| | | | | | (0.0712) | (0.0510) | (0.0288) | (0.0247) | |
| BFE*CO | | | | | -0.2490*** | -0.3812*** | -0.1688*** | -0.3812*** | |
| | | | | | (0.000) | (0.0002) | (0.0081) | (0.0000) | |
| AC*CO | | | | | -0.1290** | -0.2103** | -0.06911 | -0.2103** | |
| | | | | | (0.0388) | (0.0471) | (0.1208) | (0.0335) | |
| RMC*CO | | | | | -0.2344*** | -0.3100*** | -0.2866*** | -0.3100*** | |
| | | | | | (0.0000) | (0.0000) | (0.0000) | (0.0000) | |
| SIZE | 0.0030 | -0.0036*** | -0.0033** | -0.0036*** | -0.0817* | 0.0061** | 0.1833 | 0.0061** | 2.01 |
| | (0.381) | (0.009) | (0.018) | (0.001) | (0.0955) | (0.0303) | (0.2377) | (0.0242) | |
| ROA | 0.0933 | 0.1082 | 0.1138* | 0.1082 | -0.0822* | -0.1428** | -0.0064*** | -0.1428** | 1.81 |
| | (0.118) | (0.118) | (0.0823) | (0.178) | (0.0810) | (0.0338) | (0.0012) | (0.0400) | |
| INF | 0.0043** | 0.0337* | 0.0016* | 0.0337* | -0.1300** | -0.2508*** | -0.6101 | -0.2508*** | 2.45 |
| | (0.030) | (0.062) | (0.078) | (0.064) | (0.0422) | (0.0000) | (0.1920) | (0.0000) | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GDP | -0.1147** | 0.0390 | 0.1152* | 0.0390 | 0.4301 | 0.3186 | 0.1004** | 0.3186 | 1.66 |
| | (0.060) | (0.180) | (0.082) | (0.480) | (0.3519) | (0.2065) | (0.0284) | (0.2322) | |
| Constant | 0.5411 | 0.4626 | 0.7315 | 0.4626 | 0.4712 | 0.4108 | 0.3588 | 0.4108 | |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.0000) | (0.0000) | (0.0000) | (0.0000) | |
| Time Effect | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | |
| Obs. | 210 | 210 | 210 | | 210 | 210 | 210 | | |
| R-squared/Pseudo $R^2$ | .4120 | .4811 | .3715 | .5442 | .4743 | .6922 | .4956 | .6712 | |
| Adj $R^2$ | .3824 | - | .2971 | .5106 | .4183 | - | .4603 | .6288 | |
| Poolability test (POLS vs FEM) | 4.32*** (0.0000) | | | | 6.22*** (0.0003) | | | | |
| Breusch-Pagan LM test (POLS vs REM) | | | 20.01*** (0.0000) | | | | 19.22*** (0.0000) | | |
| Hausman test (FEM vs REM) | | 5.44 (0.3225) | | | | 6.98 (0.2653) | | | |
| Heteroskedasticity (chi2) | | | | 2264.51*** (0.0000) | | | | | |
| Multicollinearity (VIF) | | | | 2.09 | | | | 1.99 | |
| Serial Correlation | | | | 11.471*** (0.0002) | | | | | |

Table 3 shows the empirical findings of the link between corporate governance and non-performing loans through the moderating influence of concentrated ownership. Stata software has been employed to estimate the relationships. Three stages have been used to choose the appropriate model; first, the Poolability test stage to select the more suitable model between the fixed effect model (FEM) and POLS model. Second, the Breusch-Pagan LM test stage to select the better model between the random effect model (REM) and POLS model. Third, the Hausman test stage is to estimate the preferred model from FEM and REM. The study used this stage in the case of FEM being preferred in the Poolability stage and REM being preferred in the Breusch-Pagan stage. Based on these stages, the table shows that REM was preferred in both models. However, diagnostics tests indicate important and trustworthy results since we used the heteroskedasticity test, multicollinearity test, and serial correlation to test the REM reliability. The multicollinearity test (VIF) indicated no serious multicollinearity problems and the values of VIF are 2.09 and 1.99 which are less than 5.00 (Hair et al., 2014). However, the heteroskedasticity test has shown a problem in heteroskedasticity where the chi2 is significant at level 1%. The serial correlation test also showed a serious autocorrelation problem (F=11.471***; prob.=0.0002). Hence, to correct the issues of heteroskedasticity and autocorrelation, our study fixed both problems by employing a robust REF model.

The hypotheses test showed that BNEM affected NPLs significantly at level 1%. This result

is in line with the study of (Tarchouna et al., 2022). BFE also has affected NPLs significantly at level 1% which means more members with financial expertise on the board of directors can strongly reduce NPLs. Our finding is consistent with the study of Pham (2021), which found that BFE affected the risk negatively in the banks of Vietnam. Moreover, RMC has significant negative impacts on NPLs at level 5%. The result is consistent with the prior studies that stated a negative relationship between RMC and risk in several countries (Ben Saada, 2018). While the finding showed an insignificant effect of AC on NPLs in Iraqi banks. The finding is inconsistent with the studies of (Khaw et al., 2023; Sadaa, Ganesan, & Yet, 2022b, 2022a; Ur Rehman et al., 2022) that referred to negative links between AC and NPLs.

On the other hand, table 3 shows that OC has a strong negative correlation with NPLs and was significant at level 1%. Besides, the OC moderated the relationship between the antecedents named (board non-executive member, board financial experience, audit committee, and risk management committee) and NPLs. All the relationships are significant and negative. The study results confirmed our belief that CO can manage the risks of NPLs. Depending on concentrated ownership holders' voting power in the bank, they can bring their representatives to the board of directors or the executive team, and they may control both managers and management; they even can replace the manager in cases of poor or lackluster performance (Al Farooque et al., 2020). In other words, such shareholders can use resources and information to correct a business strategy immediately. consequently, the risks may be more apparent in companies with concentrated ownership than in those with a dispersed ownership structure (Shahrier et al., 2020).

## 4. Discussion and Implications

The practical and theoretical studies on the effect of corporate governance factors and NPLs insufficient. Besides, the knowledge about corporate governance and NPLs particularly in Iraq is insufficient. Accordingly, our study adopted corporate governance factors named (board non-executive members, board financial experience, audit committee, and risk management committee) with non-performing loans in Iraqi banks. In line with this study's purpose which is to investigate the relationships between corporate governance and non-performing loans, the study followed a quantitative method. Creswell (2009) stated that the quantitative method fits problems that call for identifying factors that influence an outcome. The study adopted 42 Iraqi private banks listed in Iraqi Stock Exchange during 2017-2021 with 210 observations.

The findings show that the NPLs incurred by the banks' sample exceed an average of 32 per cent (assets requiring special monitoring), with a minimum of 0 and a maximum of 93 per cent. It is deduced that the full recovery of all assets on time is unattainable. This high rate of NPLs in Iraqi banks is due to ineffective governance mechanisms (Sadaa et al., 2020; Sadaa, Ganesan, & Yet, 2022a). Second, many Iraqi banks underestimate these menaces and appear disinterested in rectifying them (Sadaa, Ganesan, & Yet, 2022b). In this regard, the rate of NPLs in Iraqi banks is high compared to international standards, especially in Asian countries. Indeed, about a sample of countries, the rate is 1.7 per cent for Qatar, Saudi Arabia (2%), Vietnam (2.3%), Oman (2.4%), India (3%), and Indonesia (3%) (Haque & Shahid, 2016; Ooi

et al., 2021). Countries in sub-Saharan Africa have rates of NPLs oscillating between 1.2 per cent and 18.5 per cent for Congo and Mali in 2011, while the percentage in Cameroon was 12 per cent and higher than 14 per cent in Tunisia (Moussa, 2019; Tioumagneng & Yota, 2018).

On the other hand, the study documented that BNEM affects negatively NPLs, this result supports the argument of agency theorists which pointed out that a board dominated by independent directors provides better monitoring over management than a board dominated by internal directors; in fact, internal directors may avoid criticising the decisions of the CEO, who is their boss. Additionally, non-executive directors challenge poor choices and make the best arguments for choosing particular projects, lowering the risk (Ramly & Nordin, 2018). A high number of non-executives' members can prevent independent boards from taking excessive risks in the absence of a robust risk mitigation framework. Independent directors also could be counted on to fairly examine finance and investment ideas, acting as a check and balance against senior management teams (Lu & Boateng, 2018). Besides, BFE also affects negatively NPLs. The finding is consistent with prior research which demonstrates that a board with more financial experience can identify risks that will not pay off or are risky to the company's financial health and advise top management to avoid such risks (Islam, 2020; Unda et al., 2019). According to Agency Theory, bank board members should be familiar enough with the bank's primary financial activities to 'allow effective governance and monitoring' since having more financial experts on the board will unquestionably result in lower risk profiles (Minton et al., 2014; Sadaa et al., 2022).

Similarly, the result showed that RMC affects negatively NPLs. This finding advocates the presence of the risk management committee is assist the board of commissioners in carrying out the supervisory function of protecting stakeholders and achieving the company's goals (Nasution, 2019). Where establishing a stand-alone risk management committee correlates positively with risk management transparency and the absence of financial crime (Abdullah & Said, 2019). On another hand, our study showed that the presence of AC does not affect NPLs. The current finding is not in line with the agency theory that suggests when the firm has an audit committee, it is more efficient in monitoring risk-taking (Al-Absy et al., 2019). According to Alles et al. (2005) and Ghani et al. (2022), the increasing roles and duties of audit committees can prompt a variety of concerns and questions about their capacity to work successfully. Assigned that boards have commonly given audit committees the responsibility of both risk management oversight and financial reporting, it might be argued that greater workload strain on such committees would raise the likelihood of inefficiencies (Ehigie & Isenmilia, 2022; Oradi & E-Vahdati, 2021).

Finally, the findings have shown that the CO moderated the relationship between corporate governance practices (named BNEM, BFE, AC, and RMC) and NPLs. All the statistics correlations were negative and significant. The finding supports the notion that the presence of shareholders who own the majority of bank shares would be more effective in monitoring performance and managers, and in making decisions to reduce risks from intentional or unintentional actions to avoid significant losses that may happen, because when banks with concentrated ownership go through financial failure, the large shareholders incur large losses according to their participation percentage in the shares of a bank financially troubling

(Manzaneque et al., 2016; Zong-jun et al., 2007). These findings are consistent with agency theory which suggests that the large owners are supposed to have a strong motivation to monitor their investments in order to avoid the possible loss that can result from NPLs since they will share the losses/profit according to their participation ratio in the bank's equity.

This study enhances the knowledge and implications of the theory used for corporate governance dimensions. It provides feedback to regulators and policymakers in Iraq on the effectiveness of corporate governance practices concerning NPLs control, which should enable Iraqi regulators and policymakers to improve the corporate governance system, especially since corporate governance is a new issue in Iraq. The study also offers the Iraqi regulators and policymakers proof of the detrimental impact of CO on NPLs, so evaluating CO as a moderating function provides several literary and theoretical insights. However, our study was limited by adopting only Iraqi private banks listed in Iraqi Stock Exchange. Thus, we cannot generalise the results to private banks and only to the countries that have the same banking environment as Iraq. Consequently, future research might include banks from multi-countries. Additionally, our study included only the period from 2017 to 2021; therefore, coming studies can focus on other periods.

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