CORPORATE GOVERNANCE MECHANISMS AS ANTECEDENT AND FINANCIAL DISTRESS AS CONSEQUENCE OF CREDIT RISK IN THE IRAQI BANKS

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by

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NPLs	Non-performing loans
AMF	Arab Monetary Fund
CBI	Central Bank of Iraq
ICCG	Iraq Code of Corporate Governance
OECD	Organisation for Economic Co-operation and Development

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MEKANISMA TADBIR URUS KORPORAT SEBAGAI ANTESEDEN DAN KESUKARAN KEWANGAN KESAN DARIPADA RISIKO KREDIT TERHADAP BANK DI IRAQ

ABSTRAK

Dalam beberapa tahun terakhir, bank-bank Iraq menghadapi peningkatan pinjaman tidak berbayar (NPL), kekukuhan dan kestabilan kewangan bank dipersoalkan. Para penyelidik mendapati bahawa kelemahan dalam pengurusan risiko kredit merupakan salah satu punca perningkatan bilangan NPL. Oleh itu, pengurusan risiko yang baik adalah penting bagi melindungi kekukuhan kewangan bank. Kajian ini bertujuan untuk mengkaji hubungan antara mekanisme pentadbiran korporat (struktur lembaga dan struktur pemilikan) dengan risiko kredit. Selain itu, juga mengkaji kesan risiko kredit terhadap kesukaran kewangan. Kajian ini turut mengkaji kesan pengawal selia pemilikan di antara risiko kredit dan kesukaran kewangan. Kajian ini menggunakan 31 bank Iraq sebagai sampel dari tahun 2011 hingga 2020 dengan 310 pemerhatian. Penganggaran panel menggunakan penganggar regresi untuk menguji sepuluh hipotesis penyelidikan kajian. Penganggaran kuasa terkecil, model kesan tetap, dan model kesan rawak dilakukan untuk menguji hipotesis dan mendapatkan model yang sesuai. Keputusan ujian hipotesis mengenai faktor penyebab risiko kredit menunjukkan bahawa kepakaran kewangan lembaga, jawatankuasa pengurusan risiko, dan pemilikan asing mempunyai hubungan negatif yang signifikan dengan risiko kredit. Sementara itu, keputusan menunjukkan kesan yang tidak signifikan terhadap kemandirian lembaga, jawatankuasa audit, pemilikan institusi, pemilikan kerajaan, dan pemilikan pengurusan terhadap risiko kredit. Berkaitan dengan akibat risiko kredit, dapatan menunjukkan bahawa risiko kredit mempunyai

pengaruh negatif yang besar terhadap kesukaran kewangan. Akhir sekali, penumpuan pemilikan sebagai pengawal selia berinteraksi dengan hubungan antara risiko kredit dan kesukaran kewangan. Kajian ini meluaskan pengetahuan mengenai risiko kredit kerana penyelidikan mengenai faktor penyebab dan akibat memberikan pemahaman menyeluruh tentang mekanisme kawalan risiko kredit dan impak risiko kredit terhadap kesukaran kewangan. Memandangkan kajian ini memberikan maklum balas kepada pengawal selia dan pembuat dasar di Iraq mengenai kesan negatif risiko kredit dan hasil daripada risiko kredit, ini mewajibkan pengawal selia dan pembuat dasar untuk melindungi pelabur bank dari situasi tersebut dengan memperbaiki peraturan kredit yang ditetapkan dan undang-undang yang sedia ada. Kajian ini juga memberikan pandangan yang jelas kepada pengawal selia dan pembuat dasar di Iraq mengenai faktor-faktor tadbir urus korporat yang mempengaruhi risiko kredit, yang seharusnya membolehkan pengawal selia dan pembuat dasar Iraq untuk memperbaiki ICCG kerana ini adalah isu baru di Iraq dan memerlukan lebih banyak perhatian.

CORPORATE GOVERNANCE MECHANISMS AS ANTECEDENT AND FINANCIAL DISTRESS AS CONSEQUENCE OF CREDIT RISK IN THE IRAQI BANKS

ABSTRACT

In recent years, Iraqi banks faced increased non-performing loans (NPLs), which has interrogated banks' robustness and financial stability. Researchers point out that the laxity of credit risk management is one of the growth causes in the amount of NPLs. Therefore, good management of this risk is necessary in order to protect banks' financial soundness. This study aimed to examine the connection between corporate governance mechanisms (board structure and ownership structure) and credit risk. Besides, examines the effect of credit risk on financial distress. The study examines the moderating effect of ownership concentration between credit risk and financial distress as well. The study adopts a sample of 31 Iraqi banks from 2011–2020 with 310 observations. Panel estimation utilised a regression estimator to test ten research hypotheses of the study. The ordinary least square, fixed effect model, and random effect model regression estimators were performed to test the hypotheses to obtain the appropriate model. The hypotheses test findings on credit risk antecedents reveal that the board's financial expertise, risk management committee, and foreign ownership have significant negative relationships with credit risk. Meanwhile, the findings show an insignificant effect of board independence, audit committee, institutional ownership, governmental ownership, and managerial ownership on credit risk. Concentrating on the consequence of credit risk, the findings revealed that credit risk had a substantial negative influence on financial distress. Finally, ownership concentration as moderating interacts with the relationship between credit risk and

financial distress. This study extended the knowledge of credit risk since research on both antecedents and consequences provides a comprehensive understanding of the controlling mechanisms of credit risk and credit risk impacts on financial distress. Since the study provides feedback to regulators and policymakers in Iraq about the negative effect of credit risk and what resulted from credit risk, which necessitates regulators and policymakers' protection of bank investors from such situations by improving established credit rules and laws. This study also gives the regulators and policymakers in Iraq a clear view of corporate governance factors that affect credit risk which should enable Iraqi regulators and policymakers to improve ICCG as it is a new issue in Iraq and needs more concern.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

The subject of credit risk management and other types of risk has received extensive attention due to the financial crises that had been faced by certain banks in the business and financial world (Al-Qudah et al., 2022; Duho et al., 2023; Kinateder et al., 2021; Mateev et al., 2022; Moussa, 2019; Snapp et al., 2022; Xie et al., 2022, 2023). These include the mortgage crisis of 2007 and 2008 which led US banks to write off tens of billions of dollars in loan defaults caused by mortgage fraud (Brunnermeier, 2009). Many risks are related to banks because of their dynamic structure and the complex nature of the economic environment in which they operate. According to Altman and Saunders (1998) divide risk portfolios in financial institutions according to types of risk: operational risk, market risk, and credit risk. Power (2005) defined operational risk as the risk of direct or indirect loss caused by insufficient or failed internal processes, people, and systems, as well as external occurrences. Schanzenbach and Sitkoff (2017) defined market risk as a risk that an investor has due to a fall in the market value of a financial instrument due to market-wide circumstances. Ben Abdesslem et al. (2022) and Bouteille and Coogn-Pushner (2012) defined credit risk as a measure of the possibility of losing or a decline in an asset's value according to unstable influencing variables. Each of these risks may lead to negative impacts on financial institutions' profitability, market value, liabilities, and equity.

Credit creation is the main income-generating activity for the banks. Therefore, credit risk is one of the most important risks banks face. The credit creation process carries huge risks in terms of both the lender and the borrower. A risk arising from a trading partner's failure to fulfill its contractual obligations on time or later may considerably jeopardize the bank's business. On the other hand, a bank with a high credit risk has a high bankruptcy risk that endangers depositors. Credit risk defines by The Basel Committee on Banking Supervision, as the probability of partial or total loss of an outstanding loan due to non-payment of the loan on time (Basel Committee on Banking Supervision, 2015). Credit risk also results in the borrower's inability to pay interest on the borrowings he/she has obtained or to pay the principal under the conditions specified in the credit agreement (Greuning & Bratanovic, 2003). Therefore, many uncertainties are involved in the lending and borrowing process. In other words, the risk is related to banks' traditional lending activities. Risk is part of banking and can hardly be avoided as it is impossible to predict the future repayment capacities of debtors with precision (Manab et al., 2015). On the other hand, Ekinci and Poyraz (2019) referred that an increase in credit risk raises the marginal cost of debt and equity. Correspondingly, the cost of the bank's funding increases. As a bank's exposure to credit risk increases, a bank's tendency to experience financial distress increases. As a result, effective credit risk management is deemed essential for bank survival and global financial stability (Tekathen & Dechow, 2013). Credit risk management is controlling the potential consequences of credit risk by following a standard credit risk management framework based on the identification, evaluation, and management of credit risk (Brown & Moles, 2012).

Credit risk is a global occurrence that most banking industries the world over suffer from, and Iraq is no exception to this type of risk. The Financial Stability Report in the Arab countries by the Arab Monetary Fund reported that credit risk in Iraqi banks has increased extensively, and out of 20 Arabic countries from 2013-2017, Iraq was ranked fourth in terms of non-performing loans (NPLs) after Libya, Tunisia and Algeria (AMF, 2018). Indeed, there is growing concern about the increase in NPL cases in Iraqi banks because the weightage of NPLs is heavy on banks, even though the Central Bank of Iraq (CBI) has obligated banks to control and reduce risks, and also implemented the establishment of risk management committees. In a survey conducted by the CBI from 2013 to 2016, Iraqi banks recorded NPLs of 2.26 billion dinars for the year 2014, and 3.080 billion dinars for the year 2015, and the growth of financial institutions in Iraq had been decreasing every year with stakeholders avoiding investing due to high risk and uncertainty (Central Bank of Iraq, 2015a). At the same time, the recent financial safety report issued by the Central Bank of Iraq in 2020 indicated that the ratio of non-performing loans to total loans has an upward growth. The volume of non-performing loans of the Iraqi private banks in 2019 was 46.9%, equivalent to 6.4 trillion dinars. Then the upward trend of the non-performing loans ratio continued until it reached 50.7% in 2020, which is equivalent to 8.2 trillion dinars (Central Bank of Iraq, 2020).

Interestingly, the study by Abdul Shara (2019) pointed out that there is no comprehensive understanding of the credit risk that Iraqi banks face due to the ineffectiveness of risk management, even though the CBI had obligated banks to undertake a set of measures to control and reduce risks, including establishing supreme committees of credit and risk management. Notably, weak control and administrative indecisions have led to high credit risks that contributed to the failure of Iraqi banks or the possibility of their loss (Al-Brifkani, 2017; Samir et al., 2019). Concerning this issue, costly and onerous regulatory requirements, particularly in internal controls as well as the roles of the board, are required to strengthen risk monitoring methods and avoid problems that harm shareholders and stakeholders. Furthermore, many Iraqi banks seem to underestimate these threats and appear uninterested in addressing them, especially prior to situations turning critical (Almarshadi, 2018; Central Bank of Iraq, 2018a). AMF (2018) indicated that the increase in Iraqi banks' NPLs is due to a lack of discipline of banks in providing loans and the weak banks' management policies in dealing with the problem of bad loans that increased over the years.

According to Jensen and Meckling (1976), the separation of ownership and control translates to goal divergence between managers and shareholders and directors of (joint-stock) companies; mainly as managers are managing other people's money instead of their own, they cannot be expected to monitor the funds with the same attention and constant care that partners in a private co-partnership frequently monitor their funds. This separation resulted in several types of risks. Nwude and Okeke (2018) referred that the agency's problem in the banking sector differs from the agency's concerns in other areas; it depends on the extent of monitoring and managing risk. Information asymmetry marks the relationship as the agent retains information that the other party does not know (Gadzo et al., 2019). Thus, internal mismanagement is the most critical factor leading to bank failures, as managers misuse their job authority and breach credit obligations and responsibilities by engaging in activities that serve their own interests (Soyemi et al., 2014). Incorrect goals and irrational decisions lead to business failure, causing financial losses that result in institutions faltering and deter them from working out well or even from simply working or functioning at all (Saji, 2018). These issues increase the importance of strong management monitoring and control in order to defend the interests of both investors and stakeholders (Fama & Jensen, 1983).

Previous studies demonstrated that poor corporate governance could cause the market to lose confidence in the bank's ability to deal with its assets and liabilities effectively, leading to a liquidity crisis that could lead to a systematic economic and social crisis. Therefore, to ensure that the bank can identify and assess the risks to which it is exposed, which represent a significant concern for policymakers, appropriate bank governance legislation must be implemented (Cebenoyan & Strahan, 2004; García-Marco & Robles-Fernández, 2008).

Usually, domestic and international financial companies, in general, must have acceptable corporate governance standards due to their important contribution to the economy in maintaining market credibility and raising depositor levels of confidence. However, corporate governance has not gotten the same level of attention in the Iraqi banking sector, and it has been insufficient and weak (Anwar, 2015). Besides, due to fears of a repeat of the economic collapse during the crisis that struck most of Asia in the earlier years of 1997 and 1998, which was itself a starkly clear example of poor governance and subpar governance standards (European Central Bank, 2016), many Asian countries have had to learn their lessons the hard way. They have appropriately bolstered their corporate governance framework. Therefore, in hindsight the CBI introduced the Iraqi Code of Corporate Governance (ICCG) 2017 (OECD, 2019). In addition, the CBI and Stock Exchange of Iraq have strengthened other corporate governance practices in terms of effectiveness and developed the best regulations and structures that banks should follow.

Basel Core Principle 1 states that the bank's board of directors is responsible for approving and regularly reviewing a bank's credit risk management strategy and significant policies and processes for identifying, measuring, evaluating, monitoring, reporting and mitigating credit risk consistent with the approved risk appetite set by the board. In addition, to limit the risk that lending exposures pose to depositors and, more generally, financial stability (Basel Committee on Banking Supervision, 2015). Moreover, Basel Core Principle 3, "Board's own structure," indicated that the board should structure itself in order to carry out its oversight role and other responsibilities effectively (Basel Committee on Banking Supervision, 2015). Leblanc (2007) and Wu et al. (2022) referred that the board of directors' effectiveness depends on many factors. Factors such as board independence, size, expertise and also other factors play important parts (Omer & Al-qadasi, 2020). Byrd and Hickman (1992) contend that the board's monitoring role is facilitated by a committee whose composition should reflect a more significant proportion of external independent directors, since such a composition could represent a more effective way of monitoring and controlling managerial actions. As for board sub-committees, Al Farooque et al. (2020) referred that board sub-committees have become the norm and a part of companies' governance systems to ensure a firm's best interest. Furthermore, Jensen (2003) opined that the ownership structure is most crucial of all corporate governance mechanisms in controlling the manager's behaviour and decisions. There is no space for personal power to drive decision-making and corporation activities when the corporation has an efficient ownership structure. Therefore, management choices cannot damage shareholders since all shareholders can vote on critical matters affecting firm performance based on their ownership.

Besides, the banking industry is particularly interested in ownership structure as a number of characteristics, such as the effectiveness of bank regulation and supervision and the opaqueness of bank assets, interact with and conform to governance (Barry et al., 2011). A further difference between diverse ownership organisations and privately owned ones is the greater separation between ownership and control. In truth, ownership is probably spread out among numerous shareholders in institutions where the nature of requests varies. This indicates that separating shareholders and managers are more effective at these banks. However, the separation of shareholders and management can lead to increased information asymmetry and, as a result, a divergence in incentives (Jensen & Meckling, 1976).

Regarding Iraq, the Central Bank of Iraqi efforts to increase the efficiency of the board of directors began in 2004 when the Central Bank issued the Banking Law of 2004 and the subsequent decisions related to the formation of the Board of Directors. Articles No. 16 and 17 of the Iraqi Banking Law of 2004 obligated banks to include members on their boards of directors who have financial and legal backgrounds and experience in banking activities. However, the law did not specify the number of independent board members who must be present. Moreover, Article 17 of the Iraqi Banking Law of 2004 required banks to form audit committees to supervise the various operations within the bank (CBI, 2004).

Additionally, after the CBI introduced the Iraqi Code of Corporate Governance (ICCG) for Iraqi banks in 2017, the formation of the board of directors has been determined to follow the provision that the number of independent board members is not less than 4 out of 7, or not less than a third of the total board of directors' members. Besides, it imposed on banks the forming of sub-committees (audit, risk management, governance and nomination and remuneration committees) for the board of directors.

It defined the formation and responsibilities of each committee separately (Central Bank of Iraq, 2018). The CBI believes that board subcommittees can help boards defend the advantages and rights of shareholders and stakeholders, hence, assisting the board in risk management.

Moreover, Iraq is an exciting avenue for the ownership case since it is well known that in Iraq, block shareholding (individual and family) and concentration ownership (institutional) are common (Talab et al., 2018a). In this regard, Flayyih et al. (2018) showed that the percentage of managerial ownership, foreign ownership and ownership concentration of Iraq banks were 29.1%, 18.3% and 40.5%, respectively. According to the Iraqi Depository Center (2019), state banks are wholly owned by the Federal Government. As for private banks, their ownership is distributed among various sectors, e.g., individuals, governmental and non-governmental, and foreign and domestic institutions; also appendix (A) explains that the ownership of Iraqis was 80.2% for deposited capital of private banks, and ownership of non-Iraqis was 19.8% (Iraqi Depository Center, 2019). On the other hand, studies indicate that the agency problem may be present in Iraq due to the nature of mixed-ownership which characterises Iraqi banks. Besides, the concentration of ownership in the hands of several shareholders may lead to the confiscation of minority rights, especially in the absence of legal protection and weakness of corporate governance regulations (Flayyih et al., 2018; Jadah, 2016; Talab et al., 2018a). As a result, due to the nature of multiple bank owners and lack of corporate governance framework, Iraqi banks may have agency issues. Furthermore, ownership structure affects the seriousness of agency problems (Talab et al., 2018).

Investigating the effects of credit risk is another strand of this study. Credit risk is a known factor harming financial performance (Ahmed et al., 2022; Gadzo et al., 2019), bank profitability (Abdelaziz et al., 2020; Noman et al., 2015) and firm value (Abinzano et al., 2020; Astvansh & Jindal, 2022). Based on these detrimental effects, Kayode et al. (2015) referred that the growing tendency of more risks may lead to bankruptcy and failure of many banks. Credit risk theory states that the main reason for severe problems remains directly related to the low credit standards of lenders and counterparties (Thakor, 2016; Zhou et al., 2012). Following the core concepts of credit risk theory, the guiding premise in loan assessment is to be reasonably certain that people granted loans (borrowers) are capable of satisfying repayment arrangements, including interest, and can access the loans. The theory's assumption implies that the level of credit quality, rather than volume of credit, is important (Sánchez et al., 2008).

Therefore, gathering enough data to distinguish between bad and good borrowers is essential to carrying out effective screening (Gadzo et al., 2019). Failing to do so could lead to moral hazard issues and adverse selection, where high-quality borrowers are replaced by low-quality borrowers. This, in turn, lowers the overall quality of bank loan portfolios and increases the amount of NPLs (Koju et al., 2018; Liang & He, 2020). In this regard, the theory of information asymmetry and bad management hypothesis support the notion that a rise in NPLs is due to adverse selection and associated with management's inability to manage operating efficiency, which over time leads to a decline in profitability (Makri et al., 2014; Kingu et al., 2018).

Moreover, managing risk is part of the tasks of the executive board and managers of banks (Hagigi & Sivakumar, 2009), and these risks affect firm financial stability. In this regard, Saunders and Cornett (2007) referred that notwithstanding the banks may primarily depend on an effective credit risk management strategy, some officials neglect this banking aspect for selfish motives. The theory of asymmetric information, ‘Lemon Theory’, confirmed that 'bank executives hold and withhold very different information from others, posing a great challenge in finance (Richard et al., 2008). Thus, there exists inadequate information on borrowers before credit is advanced to them, which may result in the inability of banks to extend credit to only good borrowers. Hence, the asymmetric information results in adverse selection and moral hazards leading to an increase in default and credit risk, which, given that bank default results from borrower default, might cause a bank to fail and destabilise the entire financial system (Ben Abdesslem et al., 2022; Bofondi & Gobbi, 2003; Jan 2021). According to Waemustafa and Sukri (2015), borrower defaults can cause a crisis for individual banks as well as the entire financial system. Reinhart and Rogoff (2011) also pointed out that NPLs are the central axis of a bank's failure, leading to a banking crisis. As a result, credit risk can be shown as a reason for financial distress. Unfortunately, financial bankruptcy is regarded as one of the main problems contributing to Iraq's economic issues, which have led to some banks being suspended or put under legal protection by the CBI (Al-Taei & Al-Shakarchi, 2022; Aqeel, 2019; Hanoon, Rapani, et al., 2020; Mohammed, 2019).

Following the link between credit risk and financial distress, this study will introduce a moderating variable that is thought to moderate the relationship between credit risk and financial distress. Ownership concentration has been chosen as the moderator to control the respective association due to the demand in avoiding risks and safeguarding the banks' profitability and continuity. Some agency theorists argue that small owners are uninterested in monitoring because they will have to bear the majority of costs, and they will still share a negligible percentage of gains (Islam et al., 2022; Shleifer & Vishny, 1986). Therefore, major shareholders are motivated to effectively monitor their management to protect their essential investments (Fama & Jensen, 1983b; Madhani, 2016; Shleifer & Vishny, 1997). According to Rosen (1995), with only low ownership levels, incompetent managers will exert effort to persuade outside shareholders that they are good managers by making riskier but ultimately, loss-incurring investments. Moreover, García-Marco and Robles-Fernández (2008) discovered that ownership concentration reduces risk-taking, improves the quality of loans, reduces asset risk, and decreases bankruptcy risk in Spanish commercial banks.

Likewise, Shehzad et al. (2010) demonstrated that an ownership concentration of greater than 50% reduces the volume of NPLs. Additionally, Wang and Deng (2006) noted a strong correlation between the degree of ownership concentration and the likelihood that a company will collapse. Large shareholders may incur significant losses in the distressed company resulting from their investing in a struggling business. Therefore, in the absence of adequate supervisory mechanisms, large shareholders are expected to play a critical monitoring role of opportunistic management behaviour; in this case, share ownership might take the place of monitoring (Anh & Khuong, 2022; Jensen & Meckling, 1976; Kilincarslan, 2021; Madhani, 2016).

1.2 Background of Iraqi Banking Sector

Iraqi banks share economic activity and are leaders of country‘s economy as they play a significant role in improving economic progress in the country. In this regard, the Iraqi Stock Exchange dominates the Iraqi banking sector; according to the CBI, the Iraqi banking sector consists of 71 banks, of which 7 are public banks and 64 local and foreign banks. In this regard, local private banks have reached 46 in total, while foreign banks number at 18, with a large part of the work of these banks is based on providing banking facilities to various sectors (Anwar, 2015; Central Bank of Iraq, 2018a).

The total assets of the Iraqi banking sector until 2019 amounted to 121.4 trillion dinars, of which 96.6 trillion dinars were for public banks, amounting to 84% of total assets. Simultaneously, private sector assets touched 25 trillion dinars, representing 16% of total assets. Besides, the total capital of the banking sector until 2019, was 17.6 trillion dinars, with private banks being the most significant at 11.5 trillion dinars, while public banks accounted for 6.1 trillion (Central Bank of Iraq, 2019).

Both conventional and Islamic banks need licenses under Banking Law No. 94 of 2004; the Islamic banks then began operating under Islamic Banks Law No. 43 of 2015 (Central Bank of Iraq, 2015b). Fundamentally the difference between Islamic banks and conventional banks in Iraq is the reliance of their transactions on the principles of profit and loss sharing approved by Islamic Sharia while avoiding dealing with bank interest, unlike traditional banks, which rely on the interest system in dealing with clients. Furthermore, in addition to financial control, Islamic banks are subject to Sharia control over all of their activities to ensure their compliance with the provisions of Islamic Sharia through the Shariah Supervisory Board, consisting of a group of jurists. Besides, there are commonalities, given that these banks - Islamic and conventional - offer a range of banking services, and despite the difference in the mechanism, both are financial intermediaries (Central Bank of Iraq, 2015b; Central Bank of Iraq, 2018).

Iraqi banks propose loans to individuals and manufacturing and agricultural enterprises to empower them to precede fruitful investments and advance Iraq's economic progress. In this regard, the amount of credit provided by the banking sector in 2019 amounted to 32.6 trillion dinars; credit offered by public banks constitutes the most significant proportion, reaching 84% of total credit. On the other hand, while the volume of deposits in the Iraqi banking sector reached 93.3 trillion dinars in 2019, public banks deposits constitute the most significant percentage, at 86% of total deposits (Central Bank of Iraq, 2019).

Table 1-1 shows hows the distribution ratios of private bank loans in Iraq, which show residents and non-residents, other financial companies, the central government, non-financial companies, and the family sector. Moreover, Table 1-1 shows that the family sector and non-financial corporate sector dominate loans granted by private banks, constituting 90% of total loans.

Table 1.1 Sectorial Distribution of Loans in Private Banks

Sectorial distribution of loans	**2015**	**2016**	**2017**	**2018**	**2019**
Residents	99.3%	99.3%	99.3%	99.5%	99.1%
Other financial companies	6.8%	5.2%	8.3%	7.6%	6.9%
The central government	-	-	-	-	-
Non-financial companies	26.0%	36.6%	44.7%	49.5%	54.8%
Family sector	66.5%	57.5%	46.3%	42.4%	37.3%
Non-residents	0.7%	0.7%	0.7%	0.5%	0.9%

Source: (Central Bank of Iraq, 2019).

Additionally, Table 1-2 shows hows the distribution ratios of public bank loans in Iraq. It points out that the central government sector is the largest borrower in public banks at rates exceeding 55% for all years. In comparison, the individuals sector is the second-largest borrower from public banks at rates ranging from 28.5% in 2015, to 34.7% in 2019.

Table 1.2 Sectorial Distribution of Loans in Public Banks

Sectorial distribution of loans	**2015**	**2016**	**2017**	**2018**	**2019**
Residents	100%	100%	100%	100%	**100**%
Other financial companies	1.9%	1.9%	1.3%	1.3%	1.1%
The central government	63.3%	59.9%	55.8%	56.5%	56.0%
Non-financial companies	6.3%	6.3%	7.8%	10.5%	8.2%
Family sector	28.5%	31.9%	35.0%	31.7%	34.7%
Non-residents	-	-	-	-	-

Source: (Central Bank of Iraq, 2019).

When reviewing the overall sectoral distribution of credit provided by Iraqi banks, as in Table 1.3, findings show that sectors which borrow the most from Iraqi banks are the public government and individual sectors.

Table 1.3 Sectorial Distribution of Loans in Iraqi Banks

Sectorial distribution of loans	**2015**	**2016**	**2017**	**2018**	**2019**
Residents	99.9%	99.9%	99.9%	99.9%	99.8%
Other financial companies	2.9%	2.5%	2.5%	2.4%	2.1%
The central government	50.3%	48.4%	46.2%	46.3%	46.2%
Non-financial companies	10.2%	12.2%	14.2%	15.7%	16.3%
family sector	36.5%	36.8%	37.0%	35.5%	35.2%
Non-residents	0.1%	0.1%	0.1%	0.1%	0.2%

Source: (Central Bank of Iraq, 2019).

Table 1.3 shows that the average concentration of 37% of total loans for the family sector indicates the wasteful nature of credit provided in Iraq. The concentration of public government loans in public banks indicates the extent of credit facilities offered by state public banks, as they are essentially state-owned. On the other hand, borrowing from the non-financial corporate sector is weak compared to the individuals' sector, due to structural imbalances in the Iraqi economy and weak incentives of the non-financial corporate sector to borrow from the banking sector to stimulate production. In conclusion, it turns out that all loans are granted to residents with an average of 99.9 percent, which indicates that the banking sector in Iraq is not directly affected by banking crises occurring abroad.

Furthermore, the banking sector may face default risk when the government and household sectors falter. According to the Financial Safety Report issued by the CBI for the year 2019, bad loans grew negatively from year to year until the percentage of NPLs in the fourth quarter of 2019 reached 46.9% in private banks and 14% in public banks. In other words, nearly half of all loans granted by private banks are NPLs, and subject to a high risk of default. This is an indication of the lack of discipline exhibited by banks in providing loans and the weak policy of bank management in dealing with the problem of bad loans, which have increased steadily over the years (Central Bank Of Iraq, 2019). Figure 1-1 below shows the status of bad loans in banks, as mentioned in the Financial Safety Report issued by the CBI.

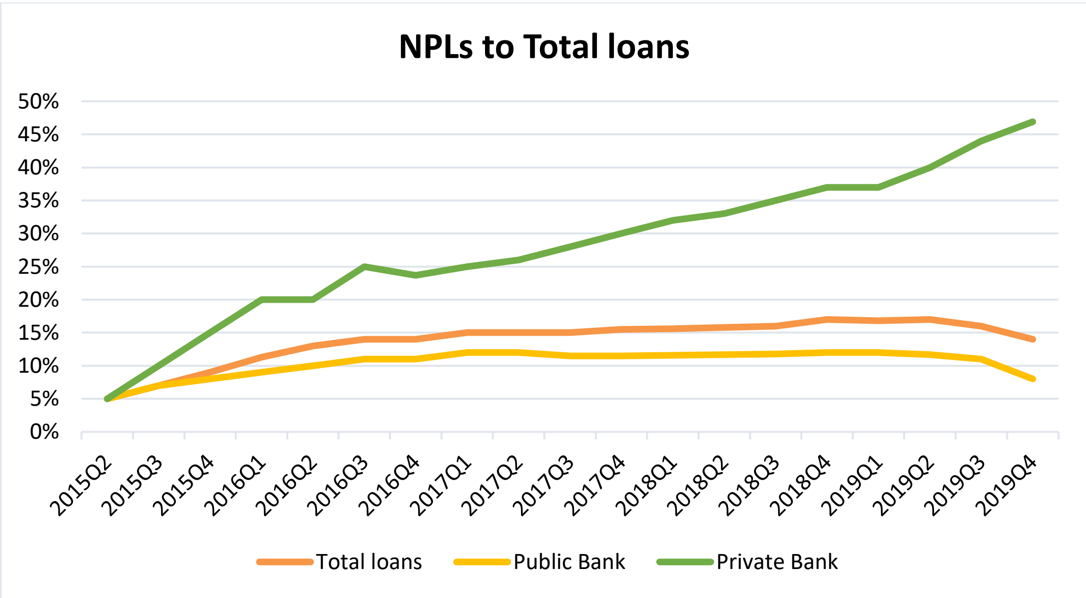

Figure 1.1 Non-Performing Loan to Total Loans

Source: Central Bank of Iraq (2019).

The Arab Monetary Fund indicated that the increase in NPLs in Iraqi banks is due to the lack of discipline of Iraqi banks in granting credit, whether by granting credit with insufficient guarantees or granting the credit above credit limits specified in the bank's policy (AMF, 2018). According to the latest report of the Arab Monetary Fund, the ratio of NPLs to total loans granted by Iraqi banks exceeded 12.7% in 2019, after Libya at 21%, and in Tunisia at 13.2 %. Meanwhile, in countries such as Jordan, Oman, Morocco, Egypt, Saudi Arabia, Qatar and the UAE, NPLs came in less than 10% (AMF, 2020).

Iraqi private banks have a large capital capacity to cover all expected credit losses if all bad loans are written off, as they had started in 2015 to calculate allocations higher than bad loans if the percentage were to reach 110% of NPLs, and this continued to decline until the second quarter (Q2) of 2016, after which it began to be relatively stable; while public banks recorded coverage ratios for bad loans higher than private banks in the period following 2016 Q2. Figure 1-2 indicates that coverage ratios tend to rise over time until reached 86.5% in 2019 Q4. On the other hand, the ratio of bad loans to total loans is significant, indicating an apparent weakness in credit-granting policies, offset by a relatively small coverage ratio (Central Bank of Iraq, 2019). Figure 1-2 shows the percentage of provisions for non-performing loans.

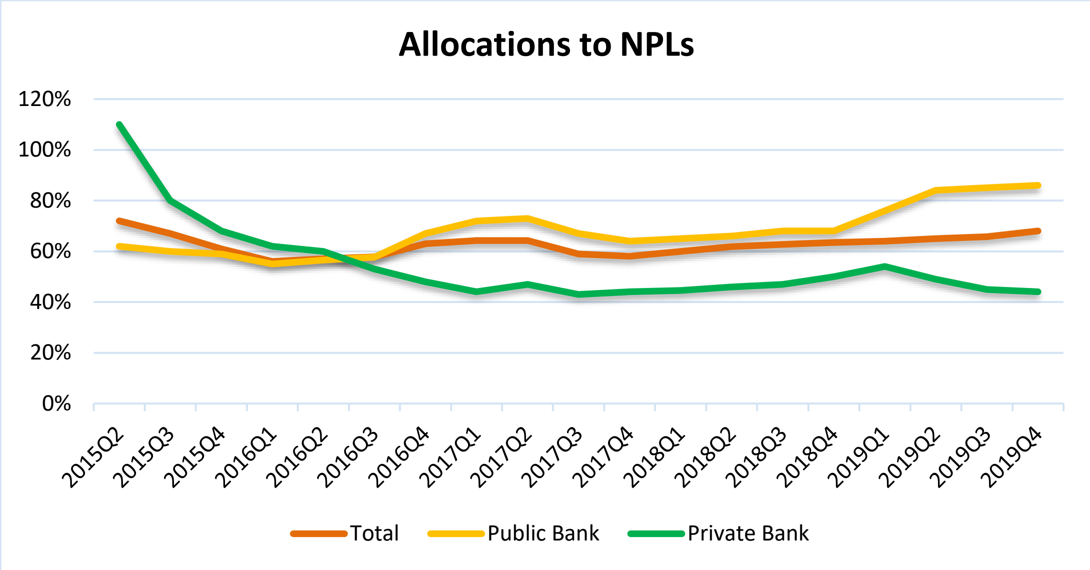

Figure 1.2 Allocations to NPLs

Source: Central Bank of Iraq (2015a, 2019).

1.3 Problem Statement

The Iraqi banking system suffers from many problems, including low capital, a large amount of non-performing loans, and poor enforcement of regulations, which resulted in many Iraqi banks being technically insolvent (Hashim, 2016). Non-performing loans in Iraqi banks increased sharply, as the ratio of non-performing loans to total loans in 2013 and 2014 was about 27.4% and 22.7%, respectively, then it expanded in 2015 to 32.9%, totaling around 1,012.2 billion dinars (Central Bank of Iraq, 2015a). However, non-performing loans became 25%, 29.6%, and 34% in 2016, 2017, and 2018, respectively. Then the percentage continued to rise negatively until it reached 4.9 in the second quarter of 2019, equivalent to 5.8 trillion dinars (Central Bank of Iraq, 2019). The recent report on financial safety indicators indicated that the index of non-performing loans for Iraqi private banks to total loans reached 50.7% in 2020 totaling around 8.2 trillion dinars (Central Bank of Iraq, 2020). Therefore, the credit risk in Iraq is a serious problem that requires more concern and review to reform the situation and avoid any possible collapses in private banks.

Credit risk study often entails determining the factors, regulatory mechanisms, and environmental conditions that impact its occurrence, also known as antecedent variables. This study chose corporate governance mechanisms as an antecedent of credit risk because of their potential to impact the incidence of credit risk (Al-Qudah et al., 2022; Ben Saada, 2018; Ur Rehman et al., 2022). These mechanisms also known as corporate governance mechanisms supposedly reduce credit risk or financial risk in general. Al-Qudah et al. (2022) Moussa (2019) acknowledge that conducting this type of credit risk research can help market players and insider decision-makers better understand how to manage credit risk. Moreover, researchers from various disciplines have been interested in corporate governance issues for many years (e,g., Amin et al., 2022; El Diri et al., 2020; Elnahass et al., 2022; Mili & Alaali, 2023; Reyad et al., 2022; Ur Rehman et al., 2022). This interest stems from various ongoing concerns that necessitate continuous efforts to identify the optimum recipe for better governance.

Besides, credit risk considers one of the challenges that require strong command. The effectiveness of credit risk management is attributable, among other factors, to the board of directors' ability (Bouteille & Coogn-Pushner, 2012). Credit risk has 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 (Berger & DeYoung, 1997; Moussa, 2019; Nesrine, 2019; Switzer et al., 2016). The board of directors' weak oversight makes it possible for banking resources to be used inefficiently. The board could devote fewer employees and less money to monitoring and risk assessment assignments. Board lack of supervision capabilities may lead to excessive risk-taking and increase banking instability, impacting the overall financial and economic system (Ben Abdesslem et al., 2022). Hence, this study attempts to renew interest in corporate governance mechanisms, specifically in taking advantage of the board of directors structure and the ownership structure to solve the problem of Iraqi private banks, which is represented by credit risk management. Since Ben Abdesslem et al. (2022) argued that 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.

This study was stimulated by corporate governance by Al Farooque et al. (2020), Ben Saada (2018), Karim et al. (2022), and Zaid et al. (2020) and it refers to corporate governance in two dimensions, namely board of directors structure and ownership structure; since both the board of directors structure and ownership structure is intertwined mechanisms in corporate governance and tested in a study, Therefore, thorough and comprehensive discussion and insights on the efficiency and effectiveness of the board can be obtained. The board of directors' effectiveness has raised discourse among many parties; therefore, this study tries to establish whether this oversight mechanism can serve its assignments.

Studies investigating the agency theory Fama and Jensen (1983b), Jensen and Meckling (1976), and Liu et al. (2019) indicate that board structure or ownership structure may be utilised to construct a superior monitoring and control mechanism that reduces agency cost and which may alter risk in general. It has also been reported that the structure of boards can be a tool to enhance their overall ability to solve financial problems (Chaudhary, 2021; Hussain et al., 2022) and enhance their effectiveness in managing credit risk (Basel Committee on Banking Supervision, 2015). An effective board of directors requires a variety of knowledge, diversity, work experience, and functional background. As such, these values are often included in the board selection process (Triana, 2009). In addition, Boussaada and Labaronne (2015) indicated that board committees play a vital role in risk control. Sub-board committees are one of the internal governance mechanisms that work as a monitoring body to oversee the behavior and actions of company executives (Al Farooque et al., 2020). As well as the board of directors structure, ownership structures constitute an essential mechanism of corporate governance that balances the rights and benefits of shareholders and shares the advantages to all shareholders fairly (Cremers & Nair, 2005). Hence, this study aims to give empirical evidence as to whether the bank's board structure or ownership structure has a major impact on credit risk.

Following that, a credit risk event might result in financial distress. Being the variable for the result of credit risk, this study would like to determine if the increase in financial distress in the Iraqi context is attributable to credit risk. Traditionally, prior studies reported that credit risk poses a serious threat to banks (Abdelaziz et al., 2020; Gadzo et al., 2019; Hoolash et al., 2020; Noman et al., 2015), according to their analysis of the impact of credit risk on banks across many dimensions. They mentioned that credit risk negatively affects financial performance, firm value, bank profitability, and financial stability. Besides, according to Imbierowicz and Rauch (2014) bank stability declines when credit risk rises. As a result, banks may experience instability that is mostly caused by insufficient capitalisation, low profitability, overexposure to specific loan types, and high loan default rates.

On the other hand, following the principles of money formation, banks are intermediary financial institutions. Its principal activities depend on deposits and loans; therefore, banks may close their doors if borrowers fail to pay the loan amount, interest, or both (Laryea et al., 2016). However, banks may adopt high-risk strategies to achieve high returns, as managers misuse loans, some violations include granting unsecured credit facilities and exceeding legal lending limits (Soyemi et al., 2014). The expansion of loans without reasonable assurance that the borrowers can pay the loans and the interest on the loans at the time of repayment will lead to moral hazards and risks of adverse selection (Sánchez et al., 2008). Adverse selection leads to the replacement of high-quality borrowers with low-quality borrowers, which leads to a decline in the overall quality of bank loan portfolios, which in turn leads to an accumulation of non-performing loans, lower profitability, and capital erosion (Koju et al., 2018; Liang & He, 2020). At the same time, the moral hazard occurs when the borrower provides false information about his credit capacity, which leads to the possibility of the bank defaulting as a result of the borrower's default in payment, which leads to the collapse of the bank and the destabilization of the banking system (Burtch et al., 2014; Richard et al., 2008).

Besides, bank financial health impacts stakeholders (e.g., financial creditors, managers, shareholders, investors, workers, government regulators and society in particular, and the state's economy in general) (Manzaneque et al., 2016). Thus, financial issues may arise when there is insufficient oversight of bank financial soundness. Large shareholders may experience significant losses in this scenario as a result of their investment in a business that may be experiencing financial difficulties. As a result, this study engages in exploring how ownership concentration may act as a moderating factor in the relationship between credit risk and financial distress.

According to Karajeh (2019), concentrated ownership may reduce agency disputes when corporate governance is insufficient. This applies to multiple developing nations, including Iraq (Anwar, 2015). Wherefore, in the absence of effective oversight, the administration can decide to obtain a short-term advantage rather than overcome financial troubles due to the lack of security in their jobs (Donker et al., 2009; Lo et al., 2016). In this regard, Shehzad et al. (2010) and Shleifer and Vishny (1986) argued that concentrated ownership reduces the volume of NPLs because manager accountability to shareholders gives concentrated-equity banks a better incentive to engage in prudent lending. Also, some studies referred that concentrated shareholders help to alleviate the problem of the agency by bringing their representatives to the board of directors or the executive team; they may control both managers and management (Al Farooque et al., 2020; Jeanjean & Stolowy, 2009; Trung, 2021). As a result, they manage the risks of credit and financial distress. Meanwhile, Shahrier et al. (2020) and Arosa et al. (2010) stated that large shareholders have strong incentives to monitor managers and even change them due to poor performance. Thus, risks could be more controllable in companies with concentrated ownership than in other companies which have a dispersed ownership structure.

Moreover, Auvray and Brossard (2012) found that large bank owners increased accuracy and predictive powers in anticipating bank distress and recovery, suggesting that such shareholders can use resources and information to correct a business strategy immediately. Besides, Wang et al. (2007) and Manzaneque et al. (2016) also found that in case companies fail, major shareholders suffer significant losses because they participate in a troubled financial company in this sense. Therefore, they must exercise vital monitoring functions on opportunistic administrative behaviour. Thus, the main advantage of ownership concentration is the owner's ability to monitor manager decisions and contribute strong incentives to avoid excessive risks to keep their ownership and hold onto the bank's business continuity. Therefore, stock ownership is a substitute without helpful oversight tools (Gupta et al., 2022; Madhani, 2016).

Ownership concentration may be a moderating factor by monitoring the relationship between credit risk and financial distress. This study proposes that corporate governance mechanism is an antecedent of credit risk in Iraqi banks. Besides, financial distress is a credit risk outcome. Additionally, this study will look at how ownership concentration modifies the association between credit risk and financial distress.

1.4 Research Gaps

Corporate governance has been researched in both developed and developing nations, as well as its relationship to credit risk management and financial stability separately (Boateng et al., 2019; Honey et al., 2019; Kinateder et al., 2021; Li et al., 2021; Liu et al., 2019; Nesrine, 2019; Reyad et al., 2022; Ur Rehman et al., 2022; Wang et al., 2022). Credit risk is a significant concern for shareholders and stakeholders in various countries. Such risk is relatively more problematic in Iraq, where corporate governance is generally weak (Anwar, 2015; Talab et al., 2018a). However, there are a limited number of empirical researches on the effect of corporate governance on credit risk in developing countries, including Iraq; corporate governance and credit risk were studied separately (Abdel et al., 2019; Boateng et al., 2019; Doski, 2015; Jabbar, 2018; Moussa, 2019; Talab et al., 2018). From the said perspective, this study attempts to fill the knowledge gap on corporate governance value in Iraq by understanding and discovering the implications of using corporate governance mechanisms in terms of credit risk management in the Iraqi environment.

On the other hand, this study examines the impact of credit risk on financial distress. Credit risk and financial distress are prominent studies topics, but these variables are often considered isolated from each other, and there are only limited studies about this relationship, e.g., previous studies deal with the effects of credit risk on firm value (Abinzano et al., 2020; Astvansh & Jindal, 2022) and financial performance (Abdelaziz et al., 2020; Ahmed et al., 2022; Gadzo et al., 2019; Isshaq et al., 2019). However, credit risk has not been studied in the context of financial distress; this study seeks to fill the literature gap by studying the effect of credit risk on financial distress. Meanwhile, to try to provide valuable solutions to banks in Iraq and contribute to addressing the economic problems, they are exposed to results in the investigation of the effect of corporate governance on credit risk and the impact of credit risk on financial distress.

In addition, the moderating influence of ownership concentration on the link between credit risk and financial distress will be investigated in this study. There has been little study on the effect of large owners on the association between credit risk and financial distress. As a result, this study adds to current literature by investigating the impact of ownership concentration as a moderating variable on the link between credit risk and financial distress.

Lastly, this study will serve as a theoretical model that associates the antecedent, consequence and moderating role. At the same time, previous empirical and theoretical studies on credit risk have examined different aspects of the study framework and scrutinised both sides separately. Hence, incorporating both sides in one study can exhibit comprehensive knowledge coverage and detail, and fill the prior studies' gaps.