

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Commercial banks are institutions that provide financial services, such as issuing money in several forms, receiving deposits, lending money, processing transactions, and generating credit (Campbell, 2007). These banks play a key role in allocating economic resources; they are the main indicator for the social and economic development of a country. In addition, commercial banks constitute a sophisticated and modern financial system that contributes significantly to the national economic balance and promote both domestic and foreign investment (Al-abadallat, 2017).

Banks are exposed to several types of risks. Risk in banking refers to the potential loss that the bank may incur due to the occurrence of certain events (Ghosh, 2012). Risk management is “the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources” (Al-Jarrah, 2012). It is an incorporated method by which a bank can optimally balance between risk and return. It is also an essential approach to determine the types and sources of risks, as well as the methods to optimally mitigate them. Credit and liquidity risk are the most significant risk exposures faced by banks. Credit risk refers to the potential inability of a borrower to meet his payment obligations according to the agreed terms (Ghosh, 2012). It concerns the customer’s inability to fully or partially pay the loan provided by the bank (Campbell, 2007). Credit risk in any financial institution also increases due to internal weakness, such as management inefficiency (Bhattarai, 2019). Credit risk management (CRM) is important to determine the appropriate approach in managing credit portfolio and to

determine how the loans are organized, evaluated, supervised, and collected. CRM is the process adopted by banks to set clear and specific steps to approve a new credit or increase current credit (Basel Committee on Banking Supervision, 2000a). CRM is a systematic approach of determining, analyzing, evaluating, rating, controlling, and expressing risk combined with banks procedures or activity to maximize advantages and reduces losses (Bhattarai, 2019). Adequate credit management is critical to maintain the profitability and stability of any financial institution, and worsening credit quality is the most frequent cause of poor financial performance of financial institutions (Gatuhu, 2013). To be truly effective, banks should implement CRM in most of its activities to maintain financial stability and gain more customers. Moreover, banks should choose an appropriate credit risk environment and credit administration; ensure the accuracy of the credit granting process; and control, monitor, and evaluate credit risk (Basel Committee on Banking Supervision, 2004).

Bank liquidity is the most common area of risk exposure in Islamic and conventional banks (Akhtar et al., 2011). Liquidity risk is the risk of being unable to liquidate a position in a timely manner at a reasonable price (Muranaga & Ohsawa, 1997). Jenkinson (2008) defined liquidity risk as the bank's inability to meet its obligations and lack of capacity to repay its depositors. It is the risk that a bank is unable to meet its liquidity needs or fund itself in the event of firm-specific, industry, or market liquidity stress events (The Goldman Sachs Group, 2022). Effective liquidity risk management (LRM) is "the capacity of banks to fund excess assets and meet commitments as they come due" (Basel Committee on banking supervision, 2008).

Theoretically, credit risk is related to liquidity risk through fund withdrawals and borrower defaults (Diamond & Dybvig, 1983). Bank may lose its liquid (short-

term) liabilities and illiquid (long maturity) assets due to fund withdrawals and loan defaults. The liability and asset structures of banks are closely connected, particularly in terms of deposit outflows and loan defaults (Bryant, 1980). Banks, mostly because of their maturity transformation role, are exposed to the liquidity risk. A loan default can increase liquidity risk by depreciating loan assets and decreasing cash flows (Diamond & Rajan, 2001). Thus, according to the classical financial intermediation theory, liquidity and credit risks are related. Moreover, when banks have a high level of liquidity, their managers tend to take more risk by lowering their lending standards to increase the volume of loans (Acharya & Naqvi, 2012).

Numerous studies have addressed the influence of CRE and LRE on bank performance, but most have focused on developed countries such as the United States of America (USA) (e.g., Berrios, 2013; Aebi et al., 2012; Eckles et al., 2014; Donaldson & Preston, 1995; Foos, 2010; Clair, 1992; Keeton, 1999; Bundesbank & Köhler, 2012). Nonetheless, there have been some studies that examined this issue in developing countries, such as Malaysia (e.g. Wasiuzzaman & Gunasegavan, 2013; Ariffin, 2012; Tafri et al., 2011; Rozzani & Rahman, 2014), Ghana (e.g. Abiola & Olausi, 2014; Afriyie & Akotey, 2013; Ansong, 2013), Pakistan (e.g. Akhtar et al., 2011; Farooq et al., 2015; Arif & Anees, 2013), and Egypt (e.g. Megeid, 2017; Fayed, 2013).

The financial crises and revolutions in some Arab countries (e.g., Dubai crisis in 2009 and the global financial crisis in 2008) renewed interests in understanding the roles of credit and liquidity risk exposures in improving bank performance. This renewed interest is also apparent in Jordan and Gulf Cooperation Council (GCC) countries, as they have been affected by the political turmoil in certain Arab countries (Arab Spring) and revolutions in several other countries (e.g., Syria, Egypt, Yemen,

Libya, and Tunisia). Furthermore, the Arab Spring has decreased the profitability of Islamic banks in Middle East and North Africa (MENA) following the growth of non-performing loans (NPL) (Chau et al., 2014). These revolutions have pushed the Jordanian government to increase its internal and external debts to mitigate financial risk. These loans have reduced the foreign currency reserve in the Central Bank of Jordan, thus affecting bank performance (Khasawneh, 2017).

Some studies have addressed this relationship in the context of Jordan (e.g., Al-Rdaydeh et al., 2017; Alshatti, 2015). Alshatti (2015) and Al-Rdaydeh et al. (2017) concluded that CRE and LRE in Jordanian banks still weak, mainly because the banks have poor understanding on the mechanisms to manage credit and liquidity risk, poor awareness of the risk management concept, and ineffective risk management strategies and supervision practices. In addition, Jordanian banks seldom consider macroeconomic prudential indicators, such as inflation rate and gross domestic production (GDP), in evaluating their own soundness and stability (Rajha, 2017). Alshatti (2015) pointed out that the implementation of credit and liquidity risk exposures mechanisms is still weak in Jordan, which negatively affects strategic decision making and thus bank performance. Therefore, this research examined the relationship between credit and liquidity risk exposures, and the performance of Jordanian listed banks.

On the other hand, other studies, such as Wasiuzzaman and Gunasegavan (2013), Akhtar et al. (2011), Hanif et al. (2012), and Tafri et al. (2011), have examined the relationship between risk management effectiveness and bank performance. They have also compared between the risk management practices of Islamic and conventional banks.

Islamic banks have witnessed rapid growth over the past five years in both Muslim and non-Muslim countries, with an annual growth rate of 15-20 percent. Islamic banks play a significant role in the global economy, offering a broad range of financial instruments based on Sharia principles. Some countries, such as Iran, Pakistan, and Sudan, operate their banks entirely on Islamic commercial law. In other countries, conventional banks operate alongside Islamic banks. Now, most Islamic banks are concentrated in Southeast Asia and the Middle East. Nonetheless, large international banks in the United States and Europe have introduced Islamic windows that offer Islamic financing products.

Islamic law founds five principles of Islamic finance. First, the prohibition of paying or receiving a pre-agreed rate of return, the purpose of which is to avoid conventional interest-based lending. Islamic law applies the principle of profit and loss sharing (PLS), in which interest-bearing contracts are replaced with return-bearing contracts. The main idea of PLS is to prohibit debt financing and replace it with equity financing using such financial instruments as *musharakah* and *mudarabah*. Second, the prohibition of *riba*, which is typically defined as interest or exaggerated interest. The Islamic law defines *riba* as a premium that should be paid by the entrepreneur (borrower) to the lender with the principal amount as a condition for extending its maturity. Third, each transaction must be backed by real, tangible assets. Fourth, the prohibition of certain actions or transacting certain objects for their contravention with Islamic law (e.g., gambling, production and sales of alcoholic beverages, drugs, tobacco, and pork products). Fifth, the prohibition of excessive risk or uncertainty (Baele et al., 2014).

Risk management is critical in Islamic banks. Risk management efficiency will determine the success and survival of financial organizations. Risk management is one

of the important determinants of better shareholder returns (Akkizidis & Khandelwel, 2007) as cited in Rosman & Abdul Rahman (2015). Moreover, the success and survival of banks, to a large degree, depend on how they manage the various risks arising from their operations (Khan & Ahmad, 2001) as cited in Rosman & Abdul Rahman (2015). Particularly for Islamic banks, the sound risk management principles established by the Islamic Financial Services Board (IFSB) in 2005 demonstrate the significance of risk management exercises.

Islamic banks develop and operate alongside conventional banks. While they face similar vulnerabilities, some risks are much more significant to Islamic banks than to conventional banks. Therefore, sound risk management in Islamic banks could improve their endurance during financial crises and ability to cope with the challenges of globalization (Sundararajan & Errico, 2002).

The major reason for using the globally recognized IFSB guidelines is the unique nature of risks in Islamic banks. The guidelines comprise 15 principles, including the overall requirements of managing risks, which involve six main risk areas, namely credit risk, liquidity risk, equity investment risk, market risk, operational risk, and rate of return risk.

The second principle in the comprehensive IFSB document is credit risk, which focuses on default and concentration and mitigating the risks associated to both. The principle explains the urgency of realizing credit risk exposures emerging from various stages of financing and suggests appropriate actions for financially distressed borrowers.

The fifth principle focuses on the main elements of effective LRM within the scope of Islamic banks. Islamic banks should have adequate policy and sound process for managing, monitoring, and evaluating liquidity. The banks should have an

appropriate system for controlling and reporting liquidity exposures on a periodic basis, well-developed liquidity crisis management, and acceptable funding capacity (Rosman & Abdul Rahman, 2015).

Therefore, based on the above studies on the impact of bank type on risk management effectiveness and bank performance, this study investigated whether bank type enhances or weakens the effectiveness of managing CR and LR in bank performance.

During the 2007-2008 financial crisis, international bank loans decreased from \$500 billion to \$100 billion, signifying an 80 percent drop. Following the collapse of Lehman Brothers in 2008, when global liquidity tightened the global economy, banks decreased their international exposure, particularly in emerging and developing markets (Dekle & Lee, 2013). Furthermore, during the global financial crises, there was accelerated decline in the amount of loans issued, from \$701.5 billion to \$150.2 billion. Similarly, the number of loan issued reduced by 33 percent (Ivashina & Scharfstein, 2010).

In addition, the bank run of Northern Rock on 14 September 2007 was the biggest banking crisis and the first bank run in the United Kingdom in 150 years. Northern Rock was founded in 1965 and the biggest player in the securitization market of the United Kingdom. Before its bank run, its share of retail deposits dropped from 60 percent to 20 percent and its assets grew from 17.4 billion pounds to 113.5 billion pounds in that same period. Then, when the markets became illiquid, the banks were unable to raise enough money to finance its activity. Furthermore, Northern Rock did not have a plan for this worst possible scenario, and its share price dropped about 40 percent from January 2007 to August 2007. The investors in the stock market did not have much confidence in the bank, and the Bank of England did

not give any emergency loan. Eventually, the bank run of Northern Rock led to its nationalization on February 2008 (Huijbregts, 2010).

Banks are highly interconnected because of the commonality of their functions and interlinked payment systems. Thus, the failure of a bank does not only affect its owners or shareholders, but also other companies and banks. Furthermore, the bankruptcy of large banks in any country does not only affect domestic economic growth and development, but their impact extends wide and fast across countries (Kumbirai & Webb, 2010). Therefore, the next issue addressed in this study is to compare credit and liquidity risk exposures between Jordanian banks and selected banks in Saudi Arabia and Qatar.

1.1.1 Overview of the GCC Economy

The GCC is a union of six countries: Qatar, Saudi Arabia, United Arab Emirates, Bahrain, Kuwait, and Oman. It is the largest exporter and producer of petroleum (Hammoudeh & Choi, 2007). GCC countries have the largest oil reserve in the world, representing 35.7 percent of the world's total. It accounts for 49.1 percent of the Organization of Petroleum Exporting Countries' (OPEC) total crude oil production and 52.1 percent of OPEC's total oil reserve. Gas and oil in GCC countries represent about 63 percent of total government revenue, 73 percent of total export earnings, and 41 percent of GDP (Fernandez & Sahawneh, 2010).

The oil boom between 2003 and 2013 has changed the economic growth track of GCC countries. The biggest beneficiary of the economic boom was the banking sector, as banks improved their financial strength by mobilizing deposits from the public sector, developed sound policies to strengthen their balance sheet, and enhanced capital ratios through robust earnings. The banks are governed by central

banks, which have played an active role in enhancing the sector's overall viability. Moreover, central banks play a significant role in updating and adjusting banking laws to preserve the financial soundness and stability of the banking sector. They apply Basel II and III to improve banking regulations and supervision of capital adequacy.

Listed banks in the GCC have continued to demonstrate growth in their total assets during the past years. The governments and central banks have played a significant role in helping bank assets to grow from USD 1369.3 billion in 2011 to USD 1978.02 billion in 2017. The main source of funding for the asset growth of GCC banks is customer deposits. In fact, approximately two-third of these assets is customer deposits. The total deposits of GCC banks increased from USD 851.6 billion in 2011 to USD 1282.3 billion in 2016, and their compound annual growth rate (CAGR) was 8.5 percent. GCC banks have continued to increase their deposits despite the challenging past few years. The total credit of GCC banks has been significant in improving their performance, and their total loan portfolio increased from USD 782.7 billion in 2011 to USD 1244 billion in 2016. Meanwhile, their CAGR was 9.7 percent, which means that their credit deployment was faster than their deposit mobilization.

Saudi Arabia has the second largest asset size in the GCC. Headed by the Saudi Arabia Monetary Agency (SAMA), their locally licensed institutions include 11 domestic banks, four Islamic and seven conventional. The government's collective stake in these banks is less than 10 percent. Saudi Arabia has developed the Vision 2030 National Transformation Plan (NTP), which aims to transform and diversify the country from an oil-dependent economy to a well-diversified economic powerhouse. This vision will have material effect on the broader economy in the long term.

According to the Doing Business 2020 report, Saudi Arabia is the most improved economy, with reforms on how to start a business, construction permits,

international trading, minority investor protection, contracts enforcement, and resolving insolvency. In 2019, Saudi Arabia ranked 36th in global competitiveness out of 141 countries. Along with several other countries, it held first place in macroeconomic stability (GFA Consulting Group, 2021). In addition, Saudi Arabia is the birthplace of Islam and home to Islam's two holiest cities in Mecca and Medina. The King's official title is the Custodian of the Two Holy Mosques.

Furthermore, Saudi banks have a strong level of capitalization: it has the best capital adequacy ratio (CAR) among GCC countries, which stood at 20.2 percent in 2017, 19.5 percent in 2016, and 18.1 percent in 2015, compared to the regional average of 18.6 percent in 2017. Such improvement in CAR will enable them to support the economic vision of the government by financing key projects. Saudi Arabia has one of the best asset qualities in the GCC because its banks have sound strategies and diversify their credit portfolio risk across various economic sectors. In addition, their NPL ratio is the lowest among GCC countries, as they were primarily exposed to domestic markets. In 2017, the ratio stood at 1.5 percent, while the regional average was 3.4 percent.

On the other hand, the banking sector in Qatar has been the biggest beneficiary of the expected infrastructure spending of USD 150 billion for hosting the 2022 FIFA World Cup. Banks in Qatar are licensed by the Qatar Financial Center (QFC) and overseen by the Qatar Central Bank. There are three Islamic banks and five conventional banks.

Qatar has the fastest growing economy in the GCC. Despite the challenges in the last two years, Qatari banks recorded an asset growth of 14.7 percent in 2017 and 13.5 percent in 2016. In addition, the Qatar National Bank is the largest and most dominant player in Qatar and the GCC, with a total asset size of USD 219.23 billion in

2017. The bank recorded a growth of 11.1 percent from 2016 to 2017. Furthermore, their rapid population growth, mostly from working expatriates, has opened new ways to increase and maximize the credit portfolio of Qatari banks, which is basically driven by the public sector. Their total credit recorded much faster growth compared to other GCC countries, increasing from QAR 110.9 billion in 2011 to QAR 839.3 in 2016. This translates to a CAGR of 15.8 percent, while the average CAGR in the region was 9.7 percent (Global Investment House, 2017).

Qatar is a strong regional leader in digital banking, supported by the QCB's regulatory sandbox initiative and government programs promoting digital society and digital government. Furthermore, as GCC members, Saudi Arabia and Qatar have a significant position relative to the European Union (EU), particularly in relation to commerce and alignment of security policies. In terms of economic relations, Qatar and Saudi Arabia have accumulated substantial assets in EU countries and play a pivotal role in the ongoing negotiations over enactment of an FTA between the GCC and the EU (Ehteshami & Mohammadi, 2017).

1.2 Problem Statement and Research Questions

The Jordanian economy is an emerging open market that is vulnerable to numerous internal and external shocks. It is a low-growth economy with persistently declining capital spending. The Jordanian government has always experienced a high level of deficit spending. There was also an abnormal population growth caused by the influx of Syrian and Iraqi refugees, in addition to high rates of unemployment (Baxter et al., 2017). Furthermore, public debt has persistently increased from 2014 to 2020, the public debt to GDP ratio increased from 89 to 106.5 percent (International Monetary Fund, 2019).

Banking institutions support macroeconomic and microeconomic stability and promote economic growth. The performance of banks can be evaluated at both macro and micro levels of the economy. At the micro level, profitability and funding resources are fundamental conditions of competitive banks, while external uncontrollable macroeconomic variables can affect the profitability of banks. The macroeconomic variable used in this study is economic growth, which positively affects the performance of banks (Alkhazaleh, 2017).

In addition, the Central Bank of Jordan revealed that the debt-to-income ratio has rapidly risen over a decade. In 2008, it was 40.5 percent; in 2010, 53.6 percent; in 2015, 69.4 percent; in 2016, 69.3 percent; in 2018, 66.6 percent; in 2019, 43 percent; and in 2020, 45 percent. Moreover, there was a steep decline in the growth of customer deposits. It was approximately 7.7 percent in 2015, before dropping to 1.1 percent in 2016 and -0.4 percent in 2017 (Financial Soundness Indicators, 2015). The rising rate of indebtedness and declining customer deposits has amplified the impact of liquidity risk on the performance of banks in the selected countries.

In recent years, numerous economic troubles have contributed to systematic instability and posed significant challenges to the banking sector in the GCC (Ghosh, 2014; Maghyreh & Awartani, 2014). Since 2014, the banking sector in the GCC has been undergoing a complicated period caused by the difficulty in mobilizing deposits and slowdown in economic activities, which have affected the operating environment of the sector. Moreover, GCC banks have kept away from excess liquidity and capital to moderate profitability and asset growth (Global Investment House, 2017). Additionally, a very significant rift occurred within the GCC in 2017, which witnessed Saudi Arabia and her regional allies flexing their muscles against Qatar due to significant differences in their world view. The Qatar crisis exhibited the stark reality

that the GCC countries tread separate socio-political and economic paths, and that their actions are not coordinated in any shape or form (Asisian, 2018).

Since mid-2014, the continued decline in oil prices has altered the dynamics of GCC economies, which witnessed a twin deficit of \$800 billion from 2014 to 2020. For Saudi Arabia, the budget deficit was \$437 billion that concluded with persistent withdrawals of public and government deposits (Al Jazeera Centre for Studies, 2021). The governments have initiated many reforms to reverse the dwindling public revenue. Moreover, the surplus public finance has been shrinking, and the governments have to resort to external and internal borrowing, as oil exports form three-quarters of gulf countries' exports (Altamimi, 2021).

Furthermore, this depression also affects the liquidity of Jordanian banks, as it has decreased their financial grants and remittance inflow from Jordanian expatriates. The number of Jordanian expatriates in the GCC is approximately 558,846. Around 12.53 percent of these expatriates live in Qatar while 61.3 percent in Saudi Arabia. Money transfers from Jordanian expatriates represented approximately 19 percent of total Jordanian national income in 2007. However, economic changes in the Gulf labor market caused this rate to decrease to 10 percent in 2016 (Jordan strategy forum, 2018).

Against this depression, the central banks in Jordan and GCC countries raised the interest rate by 0.25 percent in December 2015, which raised the cost of borrowing for individuals and companies and decreased consumer and investment spending (Al Jazeera centre for Studies, 2021).

Tables 1.1–1.3 show the effects of oil price decline and interest rate increase on banks in Jordan, Saudi Arabia, and Qatar. For Jordanian banks, there was a steep decline in deposit growth rate from 2013 to 2017, from 10.5 percent to 1.1 percent,

before increasing to 6.3 percent in 2020. There was a clear fluctuation in the banks' asset and credit growth.

Saudi Arabian and Qatari banks suffered from clear fluctuation in asset, deposit, and credit growth. For Saudi Arabian banks, asset growth dropped from 9 percent to 2.19 percent, before increasing to 13.2 percent in 2020; deposit growth from 11.2 percent to 0.13 percent, before increasing to 8.2 percent in 2020; and credit growth from 12 percent to 1 percent, before increasing to 14.8 percent in 2020. In addition, the growth of Qatari banks' assets dropped from 19.7 percent to 9.9 percent; deposit growth from 19.7 percent to 7.4 percent, and credit growth from 13.3 percent to 8.6 percent.

Table 1.1: Financial Facts Related to Jordanian Banks (%)

Year	Annual Growth of Bank's Assets	Deposit Growth	Credit Growth
2013	0.5	10.5	6.3
2014	4.71	9.7	1.8
2015	4.72	5.5	9.6
2016	-0.4	-2	8.9
2017	7.12	1.1	8
2018	2.3	1.9	2
2019	5.1	5	3.3
2020	5.4	6.3	3.2

Source: Financial Stability Reports of Jordan

Table 1.2: Financial Facts Related to Saudi Arabian Banks (%)

Year	Annual Growth of Bank's Assets	Deposit Growth	Credit Growth
2013	9	11.2	12
2014	12.6	12.4	56
2015	3.5	1.58	8.9
2016	2.15	0.76	2.2
2017	2.19	0.13	1
2018	2.5	2.5	5.3
2019	9.7	7.3	7.6
2020	13.2	8.2	14.8

Source: SAMA Annual Reports

Table 1.3: Financial Facts Related to Qatari Banks (%)

Year	Annual growth of bank's assets	Deposit growth	Credit growth
2013	19.7	19.7	13.3
2014	10	9.6	13.1
2015	10.7	8.2	12.7
2016	11.9	11.8	12.6
2017	12	13.2	10.3
2018	5.6	3.4	4.6
2019	5.3	4.8	5.8
2020	9.9	7.4	8.6

Source: Financial Stability Reviews of Qatar

Credit risk is the most significant risk faced by Jordanian banks, constituting 86.5 percent of total risk at the end of 2017. It was followed by market and operational risks, which together represented 1.8 percent of total risk (Central bank of Jordan, 2018). Therefore, the effects of NPLs and loan loss provisions (LLPs) on bank performance are an issue that must be clarified further.

Poudel (2015), Magali (2013), and Singh (2015) found a significant negative relationship between NPL ratios and bank performance. Meanwhile, Miller and Noulas (1996) indicated that poor asset quality and weak risk management activities lead to higher NPLs, thus negatively affecting bank performance. Furthermore, exposure to higher credit risk raises the exposure of banks to bad loans, hence decreasing their profits (Daly & Zhang, 2014). Jordanian banks are found to be saddled with more NPLs compared to Qatari and Saudi Arabian banks, likely due to their risky strategies (Table 1.4).

LLPs play a significant role in determining the failure or success of banks. Banks in Islamic countries have a large provision to meet losses that may occur due to excessive risk-taking. Therefore, the failure of banks to properly control NPLs will lead to substantial losses (Lee & Hsieh, 2013).

Large variations in the share of NPLs between Jordanian banks and their Saudi Arabian and Qatari counterparts, in addition to the fluctuating level of LLPs in Jordan, Qatar, and Saudi Arabia, raise the question of their impact on the performance of selected banks (Table 1.5).

Table 1.4: Non-Performing Loans of Listed Banks in Jordan, Qatar, and Saudi Arabia (%)

NPLs	2013	2014	2015	2016	2017
Jordan	6.8	5.6	4.9	4.3	4.2
Saudi Arabia	1.3	1.1	1.2	1.4	1.4
Qatar	1.9	1.7	1.6	1.3	1.3

Source: Financial Stability Report of Jordan, 2017

Table 1.5: Loan Loss Provision for Listed Banks in Jordan, Qatar, and Saudi Arabia (%)

LLPs	2014	2015	2016	2017
Jordan	78.7	75.7	78	75.4
Saudi Arabia	182.9	164.4	177	177
Qatar	99.1	100.1	79.9	79.9

Source: Financial Stability Report of Jordan, 2017

The return on equity (ROE) for the banking sector in Saudi Arabia from 2014 to 2017 (14.8%, 14.4%, 12.5%, and 12.9%) was lower than Qatar (16.5%, 16.2%, 15.5%, and 13.9%). However, Jordan reported the lowest ROE (11%, 10.3%, 8.9%, and 9.1%). Compared to Qatar and Saudi Arabia, the ROE of Jordanian banks remains the lowest (Central Bank of Jordan, 2017).

Furthermore, the profits of the Jordanian banking sector have declined. In the first quarter of 2017, the year-on-year profit has declined by USD 25.380 million, or a drop of 8 percent. Bank profits across the sector have also fallen by more than half. The effect of capital adequacy requirement on the financial performance of banks also presents another issue that must be studied. More rigorous capital regulations with a corresponding rise in capital are assumed to increase bank performance or minimize its risk-taking behavior (Barry et al., 2011).

In contrast, Dietrich and Wanzenried (2011) argued that a high level of capital adequacy ratio (CAR) translates to the inability of some banks to exploit crediting opportunities to support their bottom-line. The CAR for Jordanian banks is high, ranging between 18 and 21 percent in 2007-2016. In fact, it is one of the highest among five MENA countries. For comparison, the ratio ranged between 16 and 20 percent in Qatar and Saudi Arabia in 2014-2017 (Table 1.6). The reported CAR of the countries raises the question of whether the high CAR of banks in Jordan, Qatar, and Saudi Arabia reflects the lack of demand for credit or the reluctance or inability of banks to lend due to fear of higher NPLs, which would adversely affect their financial performance.

Table 1.6: Capital Adequacy Ratio for Listed Banks in Jordan, Qatar, and Saudi Arabia (%)

CAR	2014	2015	2016	2017
Jordan	18.4	19.1	18.5	17.4
Saudi Arabia	17.9	18.1	19.5	19.5
Qatar	16.3	14.99	15.76	16.23

Source: Financial Stability Report of Jordan, 2017

Moreover, Islamic finance is facing numerous challenges, the largest of which is the lack of suitable and efficient Islamic governance. Since its inception, the Islamic finance and banking industry has self-regulated without the supervision of independent authorities. The Islamic Financial Service Board (IFSB) is the largest representative of contemporary Islamic scholars. It is a regulatory authority within the industry, and it has dodged the issue of setting governance rules for Islamic boards to weed out the unqualified Islamic supervisory board members. The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is another regulatory institution within the industry. It has introduced a standard for *tawarruq*,

but this product has been ruled as categorically unlawful by the Fiqh Academy. This shows that the self-regulation of this industry has been unreliable and unpractical.

In addition, the intervention of central banks has also been unsuccessful because the main problems facing Islamic banks are the credibility of their products and their similarity to conventional banks' products. Moreover, central banks will not be pleased with Islamic banks if they offer truly Islamic products, because these products will then inherently add several business risks. Furthermore, the conflict and volatility of fatwas pertaining to Islamic finance and banking products have triggered some suspicion over their legitimacy and created confusion among the public. Thus, the full independence of any potential Islamic regulatory authority within the Islamic financial institution is a must, and a balanced Islamic regulation is required (Abozaid, 2015).

Finally, the overuse of credit and hire purchase transactions (AITAB and *al-murabahah*) obscures the significance of Islamic banks since they replicate conventional banking products, such as end financing bank's legal charge on asset purchase and taking contractual profit by virtue of time value and financial leasing instead of true leasing. Thus, these contracts remain controversial offer no significant advantage for Islamic banks over conventional banks so as to generate better financial performance (Rosly & Bakar, 2003).

In summary, the declining profitability of Jordanian banks; their lower ROE compared to other regional banks; political pressure in the GCC; the declining remittances from Jordanian expatriates; the increasing percentage of NPLs; the declining and fluctuating growth in bank assets, deposits, and credit growth in Jordan, Saudi Arabia, and Qatar; the absence of proper Islamic governance; and the conflict between and volatility of fatwas related to Islamic products have raised the question about the factors relating to credit and liquidity risk exposures that may affect the

performance of Islamic and conventional banks in Jordan and in selected GCC countries, namely Qatar and Saudi Arabia. Thus, the current study aims to analyze the performance of both conventional and Islamic banks in the three countries to fill the gap in the literature. To accomplish this objective, the research attempts to answer three questions.

1.2.1 Research Questions

1. What are the relationships between credit risk, liquidity risk exposures and bank performance of Jordanian listed banks?
2. Do credit and liquidity risk exposures differ between Jordanian, Qatari, and Saudi Arabian banks?
3. Do credit and liquidity risk exposures of listed Islamic banks differ from listed conventional banks in Jordan, Qatar, and Saudi Arabia?
4. What is the model for evaluating credit and liquidity exposures in Islamic and conventional banks?

1.3 Objectives of the Study

The research is back grounded by the importance of credit and liquidity risk exposures and bank performance to the economic growth of Jordan, Qatar, and Saudi Arabia. The main objectives of this research are as follows:

1. To examine the relationships between credit, liquidity risk exposures and the performance of Jordanian listed banks.
2. To compare credit and liquidity risk exposures between Jordanian, Qatari, and Saudi Arabian banks.

3. To compare credit and liquidity risk exposures between listed Islamic banks and listed conventional banks in Jordan, Qatar, and Saudi Arabia.
4. To develop a new model (CRETY) for evaluating credit and risk exposures in Islamic and conventional banks.

1.4 Motivations of the Study

This study is driven by at least four motivations. *Firstly*, banking activities play a significant role in the economic growth of any country, and therefore ensuring financial stability has become one of the main mandates of central banks across the world. Therefore, the financial performance of both conventional and Islamic banks and the determinants of bank performance have been a constant subject of interest to researchers. Identifying these factors is critical for shareholders, governments, regulators, and other stakeholders and it will continue to become the subject of future academic research.

Secondly, in recent years, several researchers, such as Rajha (2017), Alshatti (2015), Boahene et al. (2012), Abiola and Olausi (2014), Prakash and Poudel (2012), Magali (2013), Karim and Alam (2013), and Noman et al. (2015) have recommended examining the effect of NPL and LLP on bank performance. These recommendations come from a desire to understand how credit facility policies affect the effectiveness of CRM and bank performance, especially because most financial crises occurred due to the shortcomings of the risk management mechanisms of banks.

Thirdly, this study examined the impacts of credit and liquidity risk exposures on the performance of listed banks in Jordan, Qatar, and Saudi Arabia. Most studies have only focused on the GCC in general or on Jordan in particular (Smaoui & Salah, 2012; Rajha, 2017; Alshatti, 2015; Ben Khediri et al., 2015; Ramadan, 2011; Abu

Loghod, 2010), while comparative studies have been limited. This study is significant because it compares the effects between Jordanian banks and selected GCC banks. This exercise provides more clarification for the evaluation of financial soundness of banks in developing countries.

Fourthly, bank type potentially affects risk management effectiveness, thus motivating this study to explore whether bank type explains the relationships between credit and liquidity risk exposures, and bank performance. Some studies found a significant relationship between bank type and bank performance (Hanif et al., 2012; Chazi & Syed, 2010; Ben Khediri, 2015). Therefore, this study provides a comprehensive analysis for the financial performance of both conventional and Islamic banks in developing countries.

1.5 Contributions of the Study

The current study provides several meaningful contributions to the literature on risk management, particularly credit and liquidity risk exposures, and bank performance. *Firstly*, developed countries such as the USA and the UK differ significantly from developing countries like Jordan. There are limited studies in Jordan on the effects of CRM and LRM on bank performance. Most of these studies, such as Alshatti (2015), Rajha (2017), Warrad (2017), and Al-Rdaydeh et al. (2017), only focused on certain indicators, such as NPL ratio, capital adequacy ratio, and leverage ratio. Therefore, this research examined other indicators of credit risk exposures that have not been investigated by the Jordanian literature, such as credit growth ratio. These indicators are assumed to affect the performance of Jordanian banks. Using data extracted directly from the financial reports of listed banks and the

Amman Stock Exchange (ASE) website, the current study aims to enhance the understanding of risk management practices in Jordan and other developing countries.

Secondly, this research makes a new contribution to the literature by comparing credit and liquidity risk exposures between Jordanian banks and their Qatari and Saudi Arabian counterparts. This comparative analysis provides a more comprehensive view on the risk management practices of these banks. These findings will help banks to determine the appropriate qualities that they require from the risk management committee. The outcomes of this study will contribute to better understanding of effective management of credit risk and liquidity risk in relation to bank performance.

Thirdly, the results provide useful insights for banks in Jordan, Qatar, and Saudi Arabia in particular, and banks in developing countries in general, on how risk management level in banks could be better structured to help them to compete and develop. Moreover, they can also promote better understanding on how each country influence risk management effectiveness on the nature of interactions between risk management and bank performance. Therefore, the findings will be useful for banks, risk management committees, and shareholders in determining the level of credit risk and liquidity risk in the banking sectors of the three countries.

Alshatti (2015) suggested that Jordanian commercial banks need appropriate credit administration and adequate control over credit risk. Furthermore, they should establish convenient credit risk management strategies by conducting sound credit evaluation before granting credits to clients. Meanwhile, Islamic banks still have a long way to go, as their performance demonstrates a deviation from the theoretical framework and objectives of Islamic finance (Fayed, 2013).

Numerous studies have compared the adequacy of risk management systems and tools between conventional and Islamic banks within or between countries. To the

best of the researcher's knowledge, this is the first study to conduct a thorough comparative analysis of credit and liquidity risk exposures between conventional and Islamic banks in Jordan, Qatar, and Saudi Arabia. The dummy variable bank type has been suggested in previous studies, e.g., Tafri et al. (2011), Wasiuzzaman and Gunasegavan (2013), and Al-Rdaydeh et al. (2017). These researchers stated that the associations between credit and liquidity risk exposures and bank performance are greatly influenced by bank type, either Islamic or conventional.

Fourthly, the study presents methodological contributions because the sample included both Islamic and conventional banks across several countries and over time. The panel data approach was adopted. It is useful because it affords studying a large quantity of data points, which reduces the collinearity among variables and increases the degree of freedom. Additionally, panel data control invariant variables like time, countries, industries, and states. In Jordan, only few studies have used panel data to examine the impact of CRM, LRM, and credit and liquidity risk exposures on bank performance. To the best of the researcher's knowledge, this study is the first to estimate the variables for this particular topic in Jordan, Qatar, and Saudi Arabia.

Fifthly, the results are beneficial for policy makers and regulators in Jordan, Qatar, and Saudi Arabia. They help to explain the role of CRM and LRM in enhancing bank performance. The findings will allow policy makers and regulators to consider the positive effects of managing credit risk and liquidity risk. The study also proposes a conceptual framework for risk management in Jordan, Qatar, Saudi Arabia, and other countries with both Islamic and conventional banks.

1.6 Thesis Structure

The study comprises six chapters. Chapter One presents the introduction to the study, discussing the background and problem statement, as well as the research questions, objectives, motivations, and contributions.

Chapter Two describes the types of risks; defines risk management, CRM, and LRM; and discusses current risk management practices around the world and in Jordan, Qatar, and Saudi Arabia, and credit and liquidity risk exposures in Islamic banking and Basel III. The chapter also explains the theories related to risk management. Chapter Three reviews prior empirical studies on credit and liquidity risk exposures and bank performance, it also describes the theoretical framework and hypotheses development.

Chapter Four presents the research methodology, research instruments, variables and their measurements, and data analysis techniques.

Chapter Five discusses the data analysis procedures, which begins with diagnostic tests and selection of adequate regression models for the panel data. It also presents the descriptive statistics for the independent, dependent, and control variables. In addition, this chapter presents the regression results for the relationships between credit and liquidity risk exposures, and bank performance. Additionally, it compares the regression results of risk management between Jordan, Qatar, and Saudi Arabia.

Finally, Chapter Six concludes the study and summarizes the research findings. The limitations and implications of the study are discussed, and directions for future research are proposed.