FINANCIAL PERFORMANCE OF THE COMMERCIAL BANKS IN THE KINGDOM OF SAUDI ARABIA: AN EMPIRICAL INSIGHT

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MASTER OF SCIENCE
UNIVERSITI UTARA MALAYSIA
DECEMBER 2014

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Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
In the Fulfillment of the Requirement for the Degree of Master of Finance

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations that have been duly acknowledged.

I also certify that the substance of this project paper has never been submitted for any degree and is not currently being submitted for any other qualifications.

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December 2014

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ABSTRAK

Kajian ini bertujuan untuk meneliti prestasi kewangan bank perdagangan di Arab Saudi dalam tempoh 2000-2013. Sampel kajian yang digunakan adalah 21 buah bank perdagangan yang terdiri daripada 10 bank milikan asing yang beroperasi dalam negara dan 11 buah bank tempatan Arab Saudi untuk tempoh 14 tahun. Walaupun terdapat kajian terhadap bank perdagangan dalam negara tersebut, setakat ini belum ada penilaian komprehensif yang turut memasukkan bank-bank asing sebagai sampel kajian. Penyelidik mahu mengisi jurang ini dalam literatur. Data panel model Linear Regresi Berganda dan model Kuasa Dua Terkecil Biasa telah digunakan dalam kajian ini untuk menganggar nisbah kesan pemacu seperti kecukupan modal (CAR), kualiti aset (AQ), kecekapan operasi (OE), saiz bank(SAIZ), pinjaman bersih kepada jumlah deposit (LIQR-1), aset cair kepada jumlah aset (LIQR-2) pada parameter kewangan seperti Pulangan ke atas Ekuiti (ROE), Pulangan atas Aset (ROA), Margin Faedah Bersih (NIM) dan Q Tobin. Kajian ini mendapati bahawa di peringkat pengumpulan, CAR, OE, SAIZ, LIQR-1dan LIQR-2 mempunyai hubungan yang positif dan signifikan dengan ROA tetapi AQ mempunyai hubungan yang negatif dan signifikan dengan ROA. Begitu juga, CAR, SAIZ dan LIQR-2 mempunyai hubungan yang signifikan positif dengan ROE, manakala LIQR-1 mempunyai hubungan yang positif tetapi tidak signifikan dengan ROE. AQ mempunyai hubungan yang negatif dan signifikan dan OE mempunyai hubungan negatif tetapi tidak signifikan dengan ROE. Semua pemboleh ubah penentu kecuali CAR dan OE bank mempunyai hubungan yang signifikan positif dengan NIM. CAR mempunyai hubungan yang positif tetapi tidak signifikan dengan NIM dan OE mempunyai hubungan negatif yang signifikan dengan NIM. Q Tobin mempunyai hubungan yang signifikan positif dengan LIQR-2. CAR, OE, dan LIQR-1 mempunyai hubungan yang negatif dan tidak signifikan dengan Q Tobin. Juga didapati bahawa AQ dan SAIZ mempunyai hubungan negatif yang signifikan dengan QTobin. Dalam bank-bank tempatan pula, semua pemboleh ubah bebas mempunyai kesan yang tidak signifikan pada semua pemboleh ubah bersandar, kecuali CAR yang mempunyai hubungan yang positif dan signifikan dengan ROA. AQ mempunyai hubungan negatif yang signifikan dengan ROA, ROE dan Q Tobin. SAIZ mempunyai hubungan negatif tetapi signifikan dengan Q Tobin dan LIQR-1 mempunyai hubungan yang signifikan positif dengan NIM; dan LIQR-2 mempunyai hubungan yang positif dan signifikan dengan ROE, danQ Tobin. Akhir sekali, dalam bank asing, kesemua pemboleh ubah pemalar mempunyai kesan yang tidak signifikan pada ROA, ROE, NIM dan Q Tobin, kecuali CAR, OE dan LIQR-1 yang mempunyai hubungan yang positif dan signifikan dengan ROA. AQ dan, LIQR-1 mempunyai hubungan yang signifikan positif dengan NIM. CAR, AQ dan SAIZ mempunyai hubungan negatif dengan Q Tobin. LIQR-2 mempunyai hubungan yang positif dan signifikan dengan ROE, NIM dan Q Tobin.

Kata Kunci: Prestasi kewangan, bank perdagangan, faktor-faktor tertentu bank, Arab Saud.

ABSTRACT

The purpose of this study is to investigate the financial performances of Saudi commercial banks during the period 2000-2013. A sample of 21 commercial banks comprising of 10 foreign owned banks operating in the country and 11 Saudi domestic banks for the captioned 14 years period have been used in the study. Though there are studies on Saudi domestic commercial banks, no comprehensive evaluation have so far been made by including foreign banks in their sample. The researcher has aimed to fill-in this gap in the literature. Using panel data Linear Multiple Regression model and Ordinary Least Squares have been used in the present study to estimate the impact of the driver ratios like capital adequacy (CAR), asset quality (AQ), operational efficiency (OE), bank size (SIZE), net loan to total deposits (LIQR-1), liquid assets to total assets (LIQR-2). on the financial parameters like Return on Equity (ROE), Return on Asset (ROA), Net Interest Margin (NIM) and Tobin's Q. The study found that at the pool level, that CAR, OE, SIZE, LIQR-1 LIQR-2 have positive and significant relationship with ROA but AQ has negative and significant relationship with ROA. Similarly, CAR, SIZE and LIQR-2 have positive significant relationship with ROE, whereas LIQR-1 has positive but insignificant relationship with ROE. AQ has negative and significant relationship and OE has negative but insignificant relationship with ROE. All the determinant variables excepting CAR and OE of banks have positive significant relationship with NIM. CAR has positive but insignificant relationship with NIM and OE has negative but significant relationship with NIM. Tobin's Q has positive significant relationship with LIQR-2. CAR, OE and LIQR-1 have negative insignificant relationship with Tobin's Q. It's also found that AQ and SIZE have negative but significant relationship with Tobin's Q. In the case of domestic banks, all independent variables have insignificant impact on all dependent variables, except CAR which has positive and significant relationship with ROA. AQ has negative but significant relationship with ROA, ROE and Tobin's Q. SIZE has negative significant relationship with Tobin's Q and LIQR-1 has positive significant relationship with NIM; and LIQR-2 has positive and significant relationship with ROE, and Tobin's Q. Finally, in the case of foreign banks, all deriver variables have insignificant effect on ROA, ROE, NIM and Tobin's Q, except CAR, OE and LIQR-1 which have positive and significant relationship with ROA. AQ and LIQR-1 have positive significant relationship with NIM. CAR, AQ and SIZE have negative relationship with Tobin's Q. LIQR-2 have positive and significant relationship with ROE, NIM and Tobin's Q.

Keywords: Financial performance, Commercial banks**,** Bank Specific Factors, Saudi Arabia

ACKNOWLEDGEMENT

First and foremost, my thanks should go to Allah Almighty for making this dissertation possible for me.

I would like to express my sincere gratitude to my supervisor, Prof. Dr. Asish Saha, for all his support, insights and valuable comments without which this dissertation would not have been possible. I am very grateful to him. I will never forget his words of encouragement which stimulated me to continue with my work during the difficult times of my Master study. I have been extremely fortunate to have him as my advisor during my Master program and I look forward to working with him for many more years to come.

I would like to thank my Parents: my mother Mrs. Zain Ghalib Saeed who has blessed me with all her gentle love and support throughout my life (May Allah be pleased with her); my father, Mr.Yousef Al-Yousfi who has taught me the value of education and instilled in me the value of giving without any expectation (May Allah have mercy on him). I would like to acknowledge the support I received from my wife Mrs. Wafa Abdullah and my little son Omar for his endurance during the course of this study. My wife is an example of love, support and sacrifice: I owe her my every achievement.

I am also thankful to my sisters and brothers including my lawyer brother Mr.Mohammed Hezam. He has always been my additional source of moral support and has encouraged me to proceed with this dissertation. I pray that Allah protect and guide them through all their endeavors.

I am very grateful to the committee members; Prof. Dr. Nor Hayati Ahmed and Prof. Siew Goh for their valuable time in the evaluation of my thesis and their comments which has greatly benefited me to improve my dissertation.

Last, but not the least, I would like to acknowledge the support of many persons at Taiz University, Yemen who have assisted me to complete this research study; the Instructors and Professors in the department of Banking and Finance at the University and Dr. Hamdan al-jaifi who has contributed in one way or the other towards the success of this study.

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SAMA	Saudi Arabian Monetary Agency
SAR	Saudi Arabian Riyal
IMF	International Monetary Fund
ROA	Return on Assets
ROE	Return on Equity
NIM	Net Interest Margin
TQ	Tobin's Q
CAR	Capital Adequacy Ratio
AQ	Asset Quality
OE	Operational Efficiency
SIZE	Bank Size
LIQR1	Liquid Risk Ratio (Loan to Deposits)
LIQR2	Liquid Risk Ratio (Liquid Asset to Total Assets)
NPL	Non-preforming Loans
SARIE	Saudi Arabian Riyal Interbank Express
SADAD	Saudi Arabia Payment System
FSAP	Financial Sector Assessment Program
ROD	Return on Deposit

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The banking sector plays a significant role in enhancing and developing a nation's economy. Banks provide a safe link between the savers who deposit their money and the investors. In addition, banks are involved in current and future development plans of an economy by providing capital for innovation, and infrastructure, and create job opportunities. It is therefore, necessary evaluate the financial performance of banks in order to identify their strengths and also possible weaknesses in their managerial skills and competencies which can be strengthened to enhance the services of they provide. In addition, banks must make future plans to develop their service standards to facilitate balanced economic and technological growth in the country.

Efficiency in Financial performance of banks is very important in all societies and economic systems. One of the most important challenges faced by bank managers, therefore, is how to optimally use their scarce financial resources. In-depth analysis and evaluation of the financial performance of different banks can identify the strengths and weaknesses in the system further improvement. In other words, analysis of financial performance provides an insight into how efficient a bank is in using its assets to generate profits and how sound was its financial health was over a given period of time. It can also, be used to compare and assess similar firms across the domain of banking in the country.

The review of the previous studies on financial performance of commercial banks reveals that the financial climate in any economy has five key components: viz., money; financial tools; financial firms; rules and systems; and capital and monetary financial markets (Al-Karim and Alam, 2013; Jha and Hui, 2012). Financial firms or banks can be considered as major players in the financial structure (Dhanabhakyam & Kavitha, 2012) of any economy. They are the intermediaries for the transfer of funds from units where there is surplus to units that need the funds. As mentioned, banks are the backbone of economic growth of any country (Rashid, 2010); and are key players in the financial market of any country due to their financial strength and investment experience (Guisse, 2012). According to Brigham & Houston (2011), a bank's strength and impact on the economy depends its performance and financial capability.

Kumbirai, & Webb (2010) have highlighted that banks are highly correlated due to their common functions and their linkage through payment system. Hence, the failure of one bank does not just impact the bank's owner and investors, but also all other banks and other businesses interconnected with that bank. Moreover, in the era of globalization, the failure of a major bank/banks in one country can not only have negative impact on the economic growth and development in the home country but can spread fast and wide across nations; this is stated to be one of the important reasons which lead to the global financial crisis that originated in USA in 2007- 08 (Ongore & Kusa 2013). Wide spread recession that followed the financial crisis in 2007-08 has made governments and regulators appreciate the importance of maintaining a sound financial system (Searle, 2008). As supervisor, the central bank of any country controls financial institutions and

their flow of funds in the payments system ; monitors their strengths and weaknesses, assesses their performance and takes appropriate actions as and when deemed necessary (Iqbal, 2012). Demirguc-Kunt and Detragiache (1999) posit that the most important indicators of financial crises are the index of a bank's profitability.

Evaluation of financial heath is a systematic way for firms to encourage the owners and all interested parties to understand their performance (Sun, 2011). Evaluation of financial performance of commercial banks refers to how the banks' management uses common equity, deposits as well as other liabilities, current and fixed assets to generate revenue through efficient control of operating expenses. Traditional ratio analysis provide little information about the inner dynamics of financial performance of the banks in comparison with previous period to provide necessary insight to bank management improve performance (Lin et al., 2005).

Financial analysis is the process of interpretation of a commercial bank's financial position and to create various bench-marks / financial indicators, these indicators can provide insights into the areas of improvement and help management to improve and enhance the banking performance (Ghoch, 2012. Such analysis also provides key insights to bank management to assess whether their previous decisions are right and in the process helps management in their future decisions (Darškuvienė, 2010).

There is no doubt that the banking sector is the pivot of the economy of any country: the banking sector in Saudi Arabia is not an exception. According to the 2014 economic

report, a balanced monetary policy by the Saudi Arabian Monetary Agency's (SAMA) has contributed to strengthening the stability of the national economy during stages of global stress and turbulence. As a result, the credit rating of the Kingdom of Saudi Arabia has been upgraded: Fitch upgraded the Kingdom's sovereign credit rating to AA from AA- with a stable outlook. Banking services witnessed further expansion throughout the Kingdom. Total number of commercial banks' branches increased by 53.8 percent to 1,862 at the end of July 2014, compared to 1,211 at the end of July 2004.

SAMA has issued a number of rules and regulations to regulate the activities of the financial sector in the Kingdom, to improve its services, to promote governance and transparency, to protect the rights of its beneficiaries and to create a competitive environment in the country. It also contributed to the provision of better financial services by banks to meet the needs of the market and beneficiaries at competitive prices. Up to the end of July 2014, SAMA licensed 12 banks, four companies to conduct real estate financial activities and financial leasing, and 4 companies to carry out other financial activities. SAMA has also granted initial approvals for 11 applications for licensing pending the completion of the legal requirements of the Ministry of Commerce and Industry (SAMA, 2014).

At the international level, the Kingdom today holds a prominent position. It is an active member of the G20 since its establishment; and of several international financial organizations. SAMA represents the Kingdom in a number of international forums and institutions, such as the Bank for International Settlements; the Financial Stability Board;

Basel Committee; the International Association of Insurance Supervisors; the Islamic Financial Services Board; and the Gulf Monetary Council. Currently, SAMA participates in more than 25 committees, working groups and sub-committees in international commissions and organizations. SAMA effectively contributes to the efforts exerted in international regulatory reforms, enabling SAMA to cope with the latest developments and international standards in supervision and control (SAMA & IMF, 2014).

Although there is an extensive body of literature on the relationship between ownership structure and bank performance, the evidence is mixed and not entirely conclusive. Moreover, most of these studies addressed the said issues either in the developed economies or the east European economies that have undergone a wave of privatization. . Little or no work has been directed at the Middle-Eastern markets.

Yildirim and Philippatos (2007) observed that though foreign banks in the transition economies exhibit better operating parameters, they are unable to translate these into higher profitability. Similarly Sturm and Williams (2004) in their study of the Australian market come to the conclusion; that although foreign banks tend to be more cost efficient, there is no evidence of superior profitability over domestic banks. Demirgu¨c¸-Kunt and Huizinga (1999) pointed out that operating characteristics and profitability are perhaps more importantly determined by the operating environment of the bank, which may swamp the effects of ownership. Foreign ownership, particularly in developing economies, can contribute to improved quality by providing a diverse range of financial services and products.

Middle-East region, particularly the oil rich Gulf Cooperation Council (GCC) states are increasingly becoming the destination for international investments, and understanding the drivers of performance of the banking industry in this region is becoming increasingly important. This is particularly true for the largest economy in the GCC – Saudi Arabia, where in addition to its traditional role; the banking sector almost entirely carries out all equity brokerage functions. Banking shares in Saudi Arabia are the most actively traded shares in the local equity markets and thus understanding this sector is useful and important to investors and policy makers. According to July 2014, banks with foreign participation are more aggressive in the use of leverage, maintenance of Tier- I capital, and proportionately larger loan portfolios, they do not translate these into superior performance measures over their domestically owned counterparts.

1.2 Problem Statement

In view of the fact that the banking system plays a critical role in the economic development of any country, an ongoing evaluation of the financial performances of banks assumes critical importance not only to the regulators but also other policy planners in the country.

Banking sector, across the globe, has experienced profound changes over the past two decades. Globalization, deregulation, financial innovation, automation etc. have major impact on the performance of the banking sector, Saudi Arabia being no exception. Commercial banks in Saudi Arabia have undergone immense regulatory and technological changes since financial sector reforms in 1991. Saudi Arabian banks are

faced with increasing competition and rising costs as a result of regulatory requirements, financial and technological innovation, entry of large foreign banks in the retail banking environment and challenges of the recent financial crisis. These changes had a dramatic effect on the performance of the commercial banks in the Kingdom of Saudi Arabia.

An ongoing system of evaluation of the financial performance of commercial banks is crucial and relevant. Central bank must ensure conducive investment environment that fosters investment climate in the economy and proves beneficial to business. Banks are therefore subject to more exacting standards of supervision and control by their central bank and also the Ministry of Finance. Banks must maintain and uphold the rights of shareholders, depositors, investors and ensure the integrity in the implementation of monetary and fiscal policies. Bank management has to shoulder more crucial responsibilities and act prudently in the challenging market and regulatory environment I the country.

Evaluation the financial performance of the banking sector in the Kingdom of Saudi Arabia is considered important, but difficult due to overlap of the Islamic and traditional system. The world banking system uses multiple models/methods to monitor and assess the health of banks. However, the approach vary from one country to another depending on the privacy of the economic activity, quality of institutions and standards used, and most importantly the touch-stone of capital adequacy standards (Basel-II & Basel-III)), which is considered a benchmark for banking safety.

Several countries have set different standards for evaluating the financial performance of banks by using indicators, such as banking efficiency measurement, profitability measurement. In the early 1970s, federal regulators in USA developed the CAMEL rating system to assess the banks. In 1979, the Uniform Financial Institutions Rating System was adopted to provide federal bank regulatory agencies with a framework for rating financial condition and performance of individual banks (Siems and Barr; 1998). The aim of these indicators is to distinguish the nonperforming banks and smoothly performing ones. Providing a general framework in evaluating overall performance of banks is of great importance due to the increasing integration of global financial markets.

CAMEL model reflects the conditions and performances of banks over years as well as enriches the on-site and off-site examination to bring better assessments towards banks' conditions. Its purpose is to provide an accurate and consistent evaluation of a bank's financial condition and operations in the areas such as capital, asset quality, management, earning ability and liquidity. Muhammad (2009) claims that the strength of these factors would determine the overall strength of the bank. The quality of each component further underlines the inner strength and how far it can take care of itself against the market risks. Furthermore, it serves the purpose of summarizing the significant compliance information needed for the regulators. It also assists them to ensure the degree of supervisory concern and type of supervisory response to generate timely warnings to minimize the adverse effects on banks. During the financial crisis of 2008, this rating was being used by American government respond to the crisis to help decide which banks

needed the special help and which not as part of its capitalization program authorized by the Emergency Economic Stabilization Act of 2008.

Barker and Holdsworth (1993) find that the CAMEL system is useful, even after controlling for a wide range of publicly available information about the condition and performance of banks. This composite index further acts as a bank's failure predicting model. The rating is assigned based on both quantitative and qualitative information of the bank. If a bank's index is less than two, it is regarded as a high-quality bank, whereas institutions with grade four or five are rated to be insolvent (Curry, Elmer and Fissel, 2009.) The up-to-date examination ratings help identify if the banks require increased supervisory attention well before they actually fail. Although Gaytán and Johnson (2002) argue that the model is only parallel with the performance of the bank at the time of the examination, while variables in banks are highly volatile to market forces; the CAMEL model is still very much popular among regulators due to its effectiveness.

In Europe, there are other indices, for example, the French system known as "ORAP" "; Italy's system of "PATROL"; and Germany's "BAKIS". These indices of consist of a set of indicators, including a number of financial ratios, especially asset quality analysis (for example, in Germany, this index contains of 18 ratio) profitability analysis (10 ratios), two ratios of liquidity, one ratio of capital adequacy and 16 ratios for market risk. Banks are now expected to meet the capital and other standards of performance as specified in various Basel Accords over time but each country has the flexibility of setting their own standards of performance depending upon their individual requirements.

In the Kingdom of Saudi Arabia, SAMA, the central bank of the country, is established in 1952. It is entrusted with many functions pursuant to several laws and regulations. Apart from the conduct of the monetary policy to maintain the price stability and exchange rate mechanism, SAMA is mandated to monitor and supervise banks in the country

Several studies have been undertaken on the subject of financial performance of commercial banks in many countries. The studies that were focused on Saudi commercial banks include two studies by Almumani (2013), Almumani (2014), Almazari (2013), Akhtar (2014) and by Abraham (2013), In his first study Almumani (2013) have made a comparative evaluation of the management of liquidity risk between banks in Saudi Arabia and in Jordan. In the second study, Almumani (2013) assessed the relative efficiency of Saudi banks using data envelopment analysis; Almumani (2014) analyze and compare the performance of Saudi banks that listed in stocks market for the period 2007-2011; Almazari (2013) studied the Capital Adequacy, Cost Income Ratio and the Performance of Saudi Banks (2007-2011). Akhtar (2014) addressed whether Saudi banks are "productive and efficient". Abraham (2013) studied the effect of foreign ownership on bank performance metrics in Saudi Arabia during the period 2008 to 2009. There is however no comprehensive evaluation of the financial performances of Saudi commercial banks that includes foreign banks operating in the Kingdom using CAMEL.

Present study evaluate the performance of the banks not only based on financial parameters (Capital adequacy, Asset quality, Operational efficiency, bank size, net loan to total deposits liquid assets to total assets as driver variables with ROA, ROE and NIM)

but goes beyond to include market based indicators (Tobin's Q). It also incorporates domestic listed and unlisted banks and also foreign banks into its sample. This study fills important gaps in literature by looking at the financial performances of both domestic and foreign bank on a comprehensive basis and hence represents an important contribution relevant to all concerned. The framework adopted in the study can be used as a bench-mark for future studies on Saudi commercial banking system.

1.3 Objective of the Study

This study seeks to analyze the financial performance of commercial banks, both foreign and domestic in the Kingdom of Saudi Arabia. The specific objectives are the following:

1. To identify whether Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt), and Liquidity Assets/ Total Assets Ratio have statistically significant impact on Return on Assets (ROA) of Saudi commercial banks.

2. To identify whether Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt), and Liquidity Assets/ Total Assets Ratio have statistically significant impact on Return on Equity (ROE) of Saudi commercial banks.

3. To identify whether Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt),

and Liquidity Assets/ Total Assets Ratio have statistically significant impact on Net Interest Margin (NIM) of Saudi commercial banks.

4. To identify whether Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt), and Liquidity Assets/ Total Assets Ratio have statistically significant impact on market-based performance Market Value of the Bank / Book Value of Equity (Tobin's Q) of Saudi commercial banks.

1.4. Research Questions

The study attempts to answer the following questions:

1. What is the relationship between Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt), and Liquidity Assets/ Total Assets Ratio with Return on Assets (ROA) for Saudi Arabian commercial banks?

2. What is the relationship between Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt), and Liquidity Assets/ Total Assets Ratio with Return on Equity (ROE) for Saudi Arabian commercial banks?

3. What is the relationship between Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short

Term Debt), and Liquidity Assets/ Total Assets Ratio with NIM for Saudi Arabian commercial banks?

4. What is the relationship between Capital Adequacy, Asset Quality, Operational Efficiency, Bank Size, Liquidity Risk (Net Loan / Total Deposit and Short Term Debt), and Liquidity Assets/ Total Assets Ratio with Tobin's Q for Saudi Arabia commercial banks?

1.5 Significance of the Study

The Kingdom of Saudi Arabia now holds a prominent position at the international level and is an active member of the G20 and several international financial organizations, such as the Bank for International Settlements, the Financial Stability Board, Basel Committee, the International Association of Insurance Supervisors and the Islamic Financial Services Board. Accordingly, trade has increased and the financial sector is gaining importance, especially the banking sector, because the State which is one of its biggest investors.

Saudi Arabia is also one of the developing countries with high financial resources. It is the largest Arab economy and with the largest oil reserves in the world, and excess production capacity that could help compensate for any sudden shortage in oil supplies, known as Systemic Risk.

Banking sector is a key pillar of the community and the economy as a whole. Banks contribute both economically and socially and help the economy to move forward by providing funds for investment, facilitate internal and external financial transactions and providing other services and banking facilities for all segments of the society. It has become necessary to study the level of performance of this sector and work towards improving its performance.

This study aims to fill the gap in studies and research related to the assessment of the financial performance of banks operating in the Kingdom of Saudi Arabia. It is noted that there is a lack of published research on this subject despite the crucial role that banks play in have contributing effectively to the development process. The researcher hopes that the results of this study can be beneficial to bank management in Saudi Arabia and act as a guide to improve their performance and enhance their competitive strengths.

1.6 Scope of Study

There are 24 domestic and foreign banks operating in Saudi Arabia. However, 21 banks were included in the sample. The annual report of National Commercial Bank (NCB) was not available for all the years under reference; Similarly, complete data were also not available for T.C.ZIRAAT BANKASI A.S. Industrial and Commercial Bank of China (ICBC) though have been granted necessary license by SAMA, they are yet to start their operations in the country. Present study covers the financial performance of 21 banks in Kingdom of Saudi Arabia, comprising 11 domestic and 10 foreign banks for the period

2001 to 2013. The data for domestic banks were collected from DataStream of Thomson Reuters from the Sultanah Bahiyah Library of the Universiti Utara Malaysia (UUM). The data on foreign banks were collected from their respective annual reports.

In the study, the focus is to evaluate the effect of driver ratios like capital adequacy, asset quality, operational efficiency, bank size, net loan to total deposits, liquid assets to total assets etc. have been used as driving variables for the purpose of evaluation on the financial parameters like ROE, ROA, NIM and Tobin's Q. The entire analysis was carried out in three stages: in the first stage, Saudi Banks were evaluated at the pool level by including all banks. In the second stage, domestic banks were evaluated as an independent group; it was followed by analysis of foreign banks in Saudi Arabia in the third stage.

1.7 Organization of Study

This study has five chapters organized as follows: Chapter 1 is the introduction, which explains the background of this study, problem statement on analysis of the financial performance, research questions, objective of the study, significance of the research, scope and limitations of the study. Chapter 2 is on financial performance and commercial banks, literature review of relevant theory and empirical insight of financial performance of commercial banks and overview of the Saudi Arabian banking industry. Chapter 3 explains the methodology used in this study, sample data and research framework of the study. Chapter 4 shows the empirical analysis and findings and chapter 5 is on the summary of findings, recommendations and suggestions for further research.

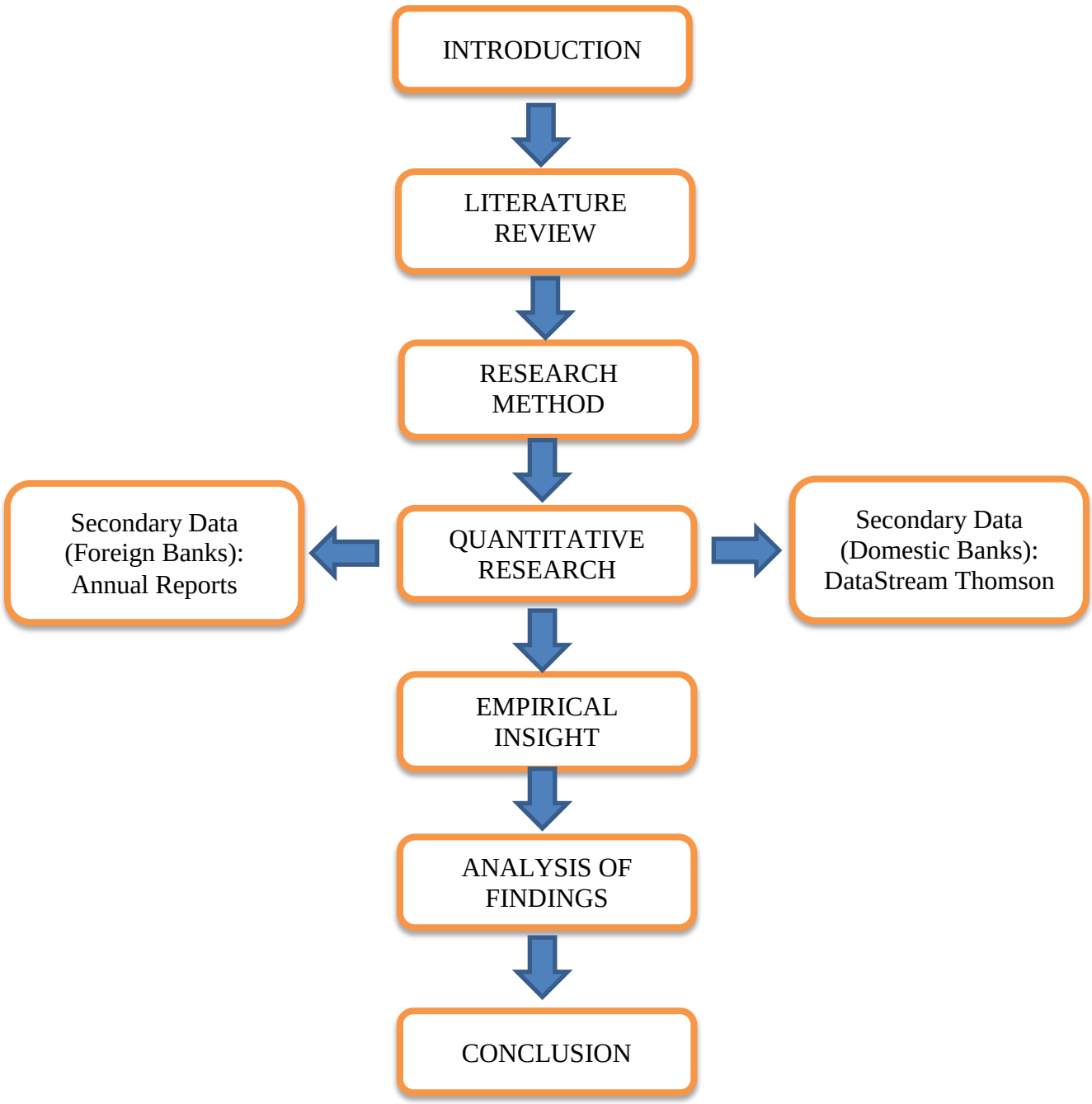

Figure 1.1.Thesis Method and Structure

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses on the theoretical aspects of financial performance of commercial banks; theories of financial intermediation; provides an overview of the Saudi Arabian banking industry; and summary of the main findings in other empirical studies.

2.2 Theories of Financial Intermediation

Theories of financial intermediation are reviewed in this section. Gurley and Shaw (1960) and many authors emphasized the role of transaction cost in intermediation theory. The traditional Arrow-Debreu resource allocation model suggests that financial intermediaries do not perform any role because firms and households interrelate through markets. It is argued that in the presence of complete information and perfect markets, the allocation of resources will remain effective and there will be no room for welfare improvement by intermediaries.

Modigiliani- Miller theorem used in the context of this study affirms that financial structure is not necessary since household can create portfolios that offset any stand taken by an intermediary which cannot create value (Fama, 1980; Fama 1978; Fama 1995). Such an extreme view, that financial markets ensure effective allocation of resources with intermediaries playing no role, is not in consonance of what is observed in practice.

Generally speaking, banks and insurance firms do play key role in resource mobilization and its allocation. This seems to be real in almost all economies except for developing economies that are still at a very initial stage.

Even in such situations, it is found that the growth of intermediaries have tendency of leading the growth of financial markets (McKinnon, 1973. Existence of banks can be traced to ancient periods, receiving deposits from households and granting loans to economic representatives that needs capital. Insurance, specifically marine insurance, has also been in existence for a long time. It is argued that the necessity of financial markets is realized relatively recently only in advanced economies like the US and the UK. However, even in these countries banks and insurance firms play crucial role to transform savings from household sector into real assets investments.

The theory of financial intermediation is related to the agency theory and the informational asymmetry theory. According to Leland and Pyle (1977), an intermediary may indicate its informed position through investing in assets which it has special knowledge. Diamond and Dybvig (1983) regarded banks as a coalition of depositors which ensures savers against the risks that may have impact on their liquidity. In another study, Diamond (1984) stressed that intermediaries counters the asymmetric information difficulties through performing the role of "delegated monitors."

The information asymmetry approach to intermediation deals with the problem of relationships between bank and creditors, as well as bank and debtors. Under this

approach, key issues addressed in the analysis of the association between bank and debtor are the role of the selected bank and the follow up of the loans granted, the problem of moral hazard and the issue of adverse selection. In the association between bank and creditors an extra attention is paid to the factors that determine withdrawal of deposits by the depositors before expiry date.

The second approach of the theories in financial intermediation is focused on transaction cost. The approach was established by Benston and Smith (1976) and supported by Fama (1980). The theory of perfect markets is not contradicted by this second approach and is based on the dissimilarities of the technologies used by the participants.

The third approach to financial intermediation is based on the method of the monetary creation, savings and financing in the economy. The approach was established by Guttentag and Lindsay (1968) and is supported by Merton (1995. Diamond and Rajan (2000) indicate that regulations relating to the capital position of the intermediaries have influence on the ability of the institutions to lend and also their financial health.

Building on the earlier review of the banking studies by Santomero (1984), Bhattacharya and Thakor (1993) provide an outstanding survey of the present status of the studies on banking. The study of Dionne (1991) is on his surveys of literature on insurance. A significant exception is the study of Merton(1989), Merton(1993) and Merton and Bodie (1995). They have suggested that financial intermediaries should be analysed in terms of ‘functional perspective’ rather than on ‘institutional perspective’.

Functional perspective is based on the services provided by the financial intermediaries where as in the institutional perspective, intermediaries are evaluated on the basis of the activities of the existing institutions like banks and insurance companies. The consistency of functional needs motivated Oldfield and Santomero (1995) to stress that some financial services such as funding, servicing, distribution, and origination are stable than both the institutions which provide services and the particular products they offer so as to satisfy the requirements of customers. The financial services could be differently packaged both through over time and competitive institutions; however the functions are more stable.

Allen and Santomero (1998) argued that many of the theoretical approaches of on financial intermediation focused mainly on the functions performed by various institutions in reducing frictions of transaction costs and asymmetric information which, according to them, has become increasingly irrelevant. They have provided an alternative view of intermediaries based on their role as facilitators of risk transfer and their ability to deal with complex financial markets and instruments.

2.3 Previous studies on bank performance

Kumbirai and Webb (2010) evaluated the financial performance of five largest commercial banks in South Africa for the period 2005-2009 by using financial ratio analysis. The study also examined whether performance in 2005 and 2006 is significantly different from the performance in 2008 and 2009 by applying the t-test. The independent variables included profitability, liquidity performance and credit quality while performance of banks was used as the dependent variable. The proxies for profitability

included return on asset (ROA) and return on equity (ROE); for liquidity it included credit-income (C/I), net loan-total assets (NLTA), net loan-total deposit (NLDST), liquid asset- total deposit (LADST); while liquid asset- total borrowing was used for credit quality. The findings show that the banks performance increased overall in the first two years (2005 and 2006). There is a significant change in the trend due to the financial crisis in 2007 reaching its peak in 2008 and 2009. This negatively led to low liquidity; fall in profitability, and failing credit quality in the banking industry of South Africa.

Al-Karim and Alam (2013) evaluated the financial performance of private commercial banks in Bangladesh from 2008-2012 using ratio analysis. The dependent variables used for the study included ROA to measure internal-based performance; Tobin's Q to measure market-based performance; and Economic Value Added (EVA) (NOPAT-capital times cost of capital) to measure economic-based performance; while Operational Efficiency (OE), Assets Management (AM), Credit Risk (CR), and Bank Size were used as proxies for independent variables. By employing a multiple regression analysis, their findings show that operational efficiency is significantly and negatively related to EVA and ROA, indicating consistency. Credit risk is significant and negatively related with all the dependent variables, indicating logical effectiveness. Bank size is negatively related with both ROA and Tobin's Q, indicating that increase in bank's assets will decrease bank performance.

Sangmi and Nazir (2010) examined the financial performance of the two main commercial banks in the Northern part of India using the CAMEL model for the period

of 2001-2005. Their findings show that the two banks under review have a satisfactory and sound position based on the results of their management capability and liquidity, asset quality, and capital adequacy. Malhotra, Poteau and Singh (2011) examined the performance of 35 commercial banks in India from the period from 2005-2009. The purpose of their study was to examine efficiency, cost of intermediation, and reliability of the banking sector, industry concentration, and behavior of profitability for both private and public commercial banks in India. After using panel data for the regression, they found that there was intensified competition in the banking industry of India during the period under review. Since there was increase in the net interest margin, the intermediation cost increased and the banks to the increased costs by providing higher efficiency levels.

Almazar (2011) evaluated the financial performance of seven selected commercial banks in Jordan from 2005-2009 using ANOVA and Pearson correlation coefficient for regression analysis. The proxies for financial performance were interest income size and ROA, while operational efficiency, asset management and bank size are proxies for evaluation. The findings show that banks with higher shareholders' equity, total assets, credits, and total deposit did not indicate better performance. Financial performance of the banks is positively related with operational efficiency, asset utilization and asset size. This indicates that these independent factors significantly influence financial performance of the selected banks in Jordan. Alkhatib (2012) used ROA, Tobin's Q and EVA as proxies of financial performance, and asset management, operational efficiency, credit risk as well as bank size to evaluate the financial performance of five commercial

banks listed in the stock exchange of Palestine for the period 2005-2010 using multiple regression analysis. The results show that there is positive significant relationship between the financial performance of these 5 banks and the independent factors (credit risk, asset management, bank size and operational efficiency).

Haque (2013) analyzed the performance of five private conventional banks in Bangladesh for the period 2006-2011 using ratio and descriptive financial analysis. The findings indicate that there is no significant relationship between the banks performance and their generating factors. The banks performances rely more on the ability of the management in formulating and implementing strategic plans. Nedunchezhian and Premalatha (2013) examined the pre-merger (2003-2006) and post-merger (2008-2011) financial performance of banks in India using comparison and ratio analysis, and paired sample t-test. The result indicates that there is better and improved performance of selected banks after the merger.

Ayub, Sohail and Mumtaz (2012) examined the performance of one Islamic and five conventional banks operating in Pakistan for the period 2001-2007 using Ordinary least square (OLS) technique and correlograms. The result shows that there is positive insignificant relationship between evaluation and performance of the Islamic bank, while positive significant relationship exists between evaluation factors and performance of the conventional banks; also the Islamic bank was less profitable as compared to the conventional banks.

Shah and Jan (2014) evaluated the financial performance of 10 private commercial banks in Pakistan for the period 2006-2010 using ROA and interest income as measure of performance; and assets management, operational efficiency and bank size as measures for independent variables. After applying correlation and regression analysis, the findings show that ROA is negatively related with operational efficiency and bank size. Meanwhile, assets management ratio is positively related with ROA. There is positive relationship between bank size and interest-income, and a negative relationship between asset management and operational efficiency with net interest-income.

Ally (2013) used ROA, ROE and NIM as measures of financial performance, and large banks, medium banks, and regional and small banks as measures for the independent variables to examine the financial performance of Tanzanian banks from the period 2006-2012. By applying financial ratios and Analysis of variance (ANOVA), the findings show that the first two years of analysis showed an increase in the overall bank performance, while a significant change in the trend was noticed at the beginning of the global financial meltdown from 2008 till 2009. The banking industry in Tanzania remains stable; the banks are sufficiently capitalized and increase their profitability. ROA shows no significant differences among banks; while ROE and NIM show significant differences among banks.

Jha and Hui (2012) compared the financial performance of 18 commercial banks (includeing public, private and foreign-owned) in Nepal from the period 2005-2010 using CAMEL Model. The ROA and ROE were used as proxies for performance, while Capital

Adequacy Ratio (CAR), Non-performing loans (NPL), Interest expense/total loans (IETTL), Net Interest Margin (NIM), and Credit to deposit ratio were used as proxies for comparison. The findings show that private sector banks are more efficient than the public sector banks. Foreign-owned banks are equally efficient as domestic private owned banks. CAR, NIM and IETTL influenced ROA, while CAR significantly affects ROE.

Choong, Thim and Kyzy (2012) examined the performance of 11 Malaysian Islamic commercial banks from the period 2006-2009 using ROE and ROA as measures of performance, and CAPITAL (Risk Capitalization), SIZE (Bank Size), CONCERN (Concentration) and ECON (Economic conditions) as measures of independent factors. After applying regression analysis, the findings show that concentration and liquidity rate influence financial performance of Islamic commercial banks in Malaysia. In addition, the credit risk has a strong positive relationship with ROA and ROE.

Tarawneh (2006) used ROA and interest-income size as proxies for performance and Bank Size, Asset Management and Operational Efficiency as proxies for independent factors to compare the financial performance of five commercial banks in Oman for the period 1999-2003. The findings indicate that banks with high total assets, high credits, high deposits, and high capital do not necessarily indicate they have better profitability performance. The financial performances of the banks were positively and significantly influenced by asset management, operational efficiency and bank size. The correlation results also show positive relationship among the independent variables.

Ongore and Kusa (2013) examined the financial performance determinants of 37 Kenyan commercial banks from the period 2001 to 2010 using ROE, ROA and NIM as measures of performance, and Liquidity Management, Capital Adequacy, Asset Quality, and Management Efficiency as independent variables, GDP Growth Rate, and Inflation Rate as macroeconomic variables. The aim of the study is was to examine whether the relationship between performance of banks and its determinants is influenced by ownership identity. Applying a multiple linear regression model as well as t-statistics, the findings show that ownership is insignificantly related to ROA, ROE and NIM. Capital Adequacy, Asset Quality, and Management Efficiency are significantly related to ROA, ROE and NIM, while Liquidity Management is insignificantly related to all performance measures. GDP is negatively related to both ROA and NIM, but positively related to ROE. Inflation Rate is negatively related to all performance measures.

Adam (2014) evaluated the financial performance of Erbil Bank for Investment and Finance in Kurdistan region of Iraq from the period 2009-2013. Return on Deposit (ROD), ROE and ROA were used as measures for performance, while capital ratio, bank size and total loans to total assets were used as measures for independent factors. After applying financial ratios, descriptive statistics and multiple regression analysis, the result show that some of the financial factors have impact on the financial performance of the bank. There is improvement in the overall performance of the bank in terms of profitability ratios, asset quality ratios, and liquidity ratios.

In addition, Alrabei (2013) compared the performance of a commercial bank in Jordan (Cairo Arman Bank) and India (State Bank of India) for the period 2006-2007 to 2010/2011 financial year. The profitability of the two banks was evaluated using ROA, Return on Capital Employed Ratio (ROCE), ROE, Operating Profit Ratio (OPR), Net Profit Ratio (NPR) and gross profit ratio (GPR). All the profitability measures were significant except ROE. Haque (2014) compared and evaluated the financial performance of commercial banks in India for the period 2009-2013 using descriptive analysis and ANOVA. The findings show that there is no significant difference in profitability of banks in terms of NIM and ROA, but significant differences in terms of ROE.

Said and Tumin (2011) examined the financial performance of commercial banks in China and Malaysia from 2001-2007, using some profitability ratios and fixed effect model. The independent variables used were divided into internal and external. The internal variables included liquidity risk, credit risk, capital, operating expenses and size; while external variables included GDP, inflation, interest rate and interactive Dummy (China). The findings indicate that the ratios affect the bank performance in different ways, except capital and credit ratios. Banks performance in China is influenced by operating ratios, but there was no influence on Malaysian banks irrespective of the measure of performance.

Dogan (2013) compared the financial performance of foreign and domestic banks in Turkey for the period 2005-2011 using financial ratios. The findings indicate that

management effectiveness, total assets, ROE and asset quality of domestic banks are better than that of foreign banks. Meanwhile, foreign banks have higher capital adequacy ratio than domestic banks. Hazzi and Kilani (2013) evaluated the financial performance of Islamic and traditional banks in Malaysia from 2007-2011 using profitability ratios, liquidity ratios and risk performance and capital adequacy as independent variables. After using the Independent Sample Test (F-test and t-test), the results show that the traditional banks have better profitability than the Islamic banks, but the Islamic banks are less risky and more liquid than traditional banks especially in risk- weighted and capital ratio.

Alam, Raza and Akram (2011) study financial performance comparison between private and public banks in Pakistan from 2006-2009 using bank size or total assets, profitability ratios, liquidity ratios, capital or leverage ratios and asset quality ratios. The findings show that the banks' rankings are affected by the changes in financial ratios. Kumi, Amoama and Winful (2013) evaluated the financial performance of three Ghanaian banks (Barclays Banks Ghana Limited, Ghana Commercial Bank and Agricultural Development Bank) applying financial ratios and comparing with the industry average performance from the period 2005-2009. The findings show that the Ghanaian banking industry is lucrative. They generate more sales revenue with excess cost. The expenses of the banks, specifically impairment charges kept increasing from 2007-2009 that led to decrease in net profits for the periods. Alrafadi and Yusuf (2014) evaluated the performance of banks in Libya from 2005-2009 applying Return on Investment (ROI). The findings show that ROI of the banks increased for a year and decreased in the following year, indicating fluctuation in the performance of banks in Libya during this period under review.

De Young and Rice (2004) examined the noninterest income and financial performance of commercial banks in the US for the period 1989-2001 using noninterest Income, ROE, Sigma ROE and risk-adjusted return referred to as the Sharpe Ratio (SHARPE) as measures of dependent variables; and using RELROE, loan ratio, ratios of loans-to-assets (LOANRATIO), real estate loans-to-total loans (RESHARE), commercial and industrial loans-to-total loans (C&ISHARE), credit card banks (CCBANK), ratio of fulltime-employees-to-deposits (FTERATIO), bank size (ln Assets), bank size (GROWTH) and other ratios as independent variables. The results show that efficient and effective banks expand more gradually into-noninterest line of activities; and non-interest income marginal increase is related to poorer tradeoffs of risk-returns on average. These findings indicate that noninterest income also exists with interest income rather than being changed to interest income in the intermediate activities of the banks, which is the main function of financial services.

Almumani (2014) evaluated and analyzed the financial performance of Saudi commercial banks listed on Saudi stock exchange during 2007-2011. Using the analysis ratio and variables as well as inter company's analysis and trend analysis, the results show that there is negative relationship between total assets, cost to income ratio; and operating expenses with profitability of Saudi banks. The relationship between operating income and profitability is positive. In addition, Saudi joint banks are more able to make the profits, are dominant in ROE and absorb loan losses; however non-joint Saudi banks are more dominant in ROA and in absorbing asset losses.

Almaza (2013) evaluated the cost income ratio, capital adequacy and performance of banks in Saudi Arabia for the period 2007-2011 using ROA and ROE as dependent variables; and Total Equity Capital to Total Assets Ratio (ECA), Cost to Income Ratio and Bank Size as core independent variables. The findings show that ROE and ROA are negatively associated with capital adequacy; efficiency of Saudi Arabian banks is negatively associated with bank profitability.

Almumani (2013) evaluated the liquidity risk management of 10 Saudi and 14 Jordanian banks from 2007-2011 using bank size, investment to asset ratio (IAR), capital to assets ratio, debt to equity ratio and loan to deposit ratio, ROA and ROE as independent variables. The findings show that liquidity position of Jordanian banks is higher than that of Saudi banks; this aided the banks in Jordan to pay off their debts and expose them to more risk in profits. Saudi banks have better ROE, IAR and ROA than Jordanian banks, indicating more profit is being generated by Saudi banks through efficient and effective use of its resources.

Abraham (2013) examined the foreign ownership of 10 Saudi Arabia commercial banks listed during two periods (2008 -2009) using ROA, ROE, Tobin's Q, Tire 1 capital ratio, loan to assets, NIM, profit margin and assets to equity. The aim of the study was to determine the extent of the ability of foreign owners to bring with them performance measures and operating properties. Applying traditional parametric tests and non-parametric tests, the results show that foreign banks are more aggressive, measured by

from where decreased capital adequacy, increased the financial leverage, higher loan to total assets, higher ROE and Tobin's Q.

Akhtar (2014) used interest expenses and non-interest expenses as inputs; and net interest income; non-interest income as outputs to assess the efficiency of 11 domestic banks listed on the stock exchange of Saudi Arabia for the period 2000- 2006 using data envelopment analysis (DEA) Malmquist productivity index (MPI) to examine the change in total productivity. The findings show that there is improvement in the productivity and gains of productivity resulting from technological development, for the findings on MPI; while the findings for DEA show there are technical inefficiencies.

Almumani (2013) evaluated the relative efficiency of 10 Saudi domestic banks (nine of them are listed on the Saudi stock exchange, while one is the national commercial bank which is not listed) from 2007 -2011 using DEA and total deposits and total expense as inputs as well as used total loans and total investment as outputs. The findings of the study show that there is efficiency in resources of banks. Furthermore, the efficiency degree of banks is very stable and high especially for the smaller banks. In addition, the Saudi Arabian banking sector is less risky due to the higher capital adequacy ratio.

Sinha (2008) used the branches, borrowings and net worth as inputs indicators, while the outputs indicators were the ROA, capital-to-risk-weighted assets ratio (CRAR) and non-performing assets (NPA) to compere between two banks (Assurance Region and Reserve Bank of India). Applying the measures of DEA to identify the efficiency of the 28 Indian

commercial banks during two periods from 2002-2003 and 2004-2005, the findings show that the efficiency of Indian private commercial banks is higher than the efficiency of Indian public commercial banks. In addition, ROA is decreasing for Indian commercial banks.

Barr, R. S., Killgo, K. A., Siems, T. F., & Zimmel, S. (2002), examined the productive efficiency of commercial banks in the U.S for the period of 1984-1998. This study used non-interest expenses, fixed assets, interest expenses, salary expenses and purchased funds as inputs indicators; earning assets, interest income and non-interest income as output indicators; and DEA, input-oriented and multiplier effects. The results show that the relationship between the independent indicators and efficiency is positively significant. Furthermore, the economic conditions have an impact on the banks efficiency. In addition, the relationship between the financial health and efficiency is positively.

Faruk (2014) used the profitability ratio (earnings per share (EPS), NIM, net operating margin, net non-interest margin, and net income after tax), liquidity ratio (capital adequacy ratio), debt ratio and current ratio, risk ratio (solvency risk and liquidity risk) and DuPont analysis (ROE, ROA and Efficiency Management) to compare the financial performance between Prime Bank Limited (PBL) with the five major banks in Bangladesh during the period of 2005-2008. The results show that the performance of PBL is better than the performance of other banks according to all the measurements.

Anojan,V & Nimalathasan,B (2014) evaluated the performance of Sri Lankan private and public commercial banks and compared among 2008-2012, applying CAMEL rating. Their findings show that the rating of Sri Lanka commercial banks as the following: PLC rated number 1; BOC rated number 2; while HNB and People's Bank are rated numbers 3 and 4 respectively. Raza, Farhan and Akram (2011) used ratios analysis (ROE, ROA, income before tax, EPS, return on capital employed (ROCE), current ratio, capital divided by leverage ratio, bank size and total owners' equity) to compare between seven investment banks in Pakistan for the period of 2006-2009. Their results show that there are differences in the financial performance of investment banks in.

Furthermore, Bertin, Moya and Perales (2014) use the ROA and NIM as dependent variables and size (logarithm of loans), total deposits to total assets, convertible current assets to total liabilities, non-interest income to total assets, capital equity divided by total assets, credit loss provisions divided by total loans, total operational expenses divided by total assets, percentage of total assets (CANBANK), financial crisis = 1 for years 1998-2000, and 2008-2009, and zero otherwise and inflation as independent variables for the period of 1995 to 2010 , to analyze the effect of macro-economic-factors for 78 commercial banks in Latin America (Colombia, Venezuela, Paraguay, Brazil, Peru, Chile and México). The findings show that there relationship of bank' financial performance is positively significant with specialization degree, size, diversification and macro-economic conditions; but the relationship of bank performance with credit risk, operational inefficiencies and liquidity risk is negative.

Kapunda and Molosiwa (2012) used NIM as dependent variable, while the independent variables were lending rate, bank size, capital adequacy, reserves, growth rate and concentration rate to evaluate the economic performance of three commercial banks in Botswana for the period of 1992-2006. Applying of OLS technique their results show that there is positive significant relationship between bank performance with lending rate and concentration rate. In addition, the profitability of banks is very high.

Usman and Khan (2012) used ROA, ROE, earning per share (EPS), loan to deposit ratio, cash and portfolio investment ratio and loan to asset ratio to evaluate the financial performance of six commercial banks in Pakistan (three are conventional banks - KASB, Faysal Bank, and Khyber Bank; and the remaining are Islamic Banks - Islamic Bank, Mezan Bank Ltd. and Albaraka Bank) for the period of 2007-2009. Using t-test, their findings show that the profitability and growth rate in Islamic banks is better than the conventional banks; their liquidity is higher than the liquidity in conventional banks.

Funso, Kolade and Ojo (2012) evaluated the credit risk impact on financial performance of five Nigerian commercial banks for the period from 2000-2010 by applying Panel Data regression. The independent variable non-performing loan (NPL) to total loans, loan loss provision to classified loans and total loan to total deposits, while performance of banks, profitability on (ROA) were the dependent variables. The finding show the impact of credit risk on ROA as indicators of bank performance is fixed. In addition, the growth rate NPL and loan loss provision is 100% which reduced the profitability by 6.2% and 0.65 %, respectively.

Moreover, Doyran (2014) identified the relationship among banking variables and bank performance of 62 commercial banks in Argentina for the period from 1994-2011, i.e., 571 ROA and 586 NIM observations. This study used ROA and NIM as dependent variables; and operating expenses, liquidity, leverage (total liabilities to total assets) Inflation, GDP, per capita income and market capitalization as independent variables by applying of multiple regression. Their results show that the relationship among operating expenses, liquidity and leverage (total liabilities to total assets) is positive; the relationship between ROA and debt to total assets ratio is negative; while there is a positive relationship between NIM and operating expenses. In addition, there is a positively significant relationship between inflation and ROA; however, the relationship with NIM is negative. Furthermore, the relationship between banking environment and NIM is positive.

Akhtar, Ali and Sadaqat (2011) used liquidity risk as a dependent variable with ROA, ROE, net working capital, capital adequacy and bank size as independent variables to evaluate the liquidity risk of 12 banks (six Islamic banks and six conventional banks) in Pakistan for period 2006-2009 by applying Statistical Package for the Social Sciences (SPSS). The results illustrate that the relationship between liquidity risk with bank size and net working capital is positively insignificant with ROA and ROE. Moreover, in conventional banks, the relationship of liquidity risk with capital adequacy is positive and significant (10%); while in Islamic banks, the relationship of ROA with liquidity risk is also positive and significant.

Finally, Arif and Anees (2014) evaluated the liquidity risk and impact on the profitability of 22 banks in Pakistan for the period from 2004-2008 by applying multiple regressions. The variables used in this study were profitability, deposits, cash, liquidity gap and NPL as independent variables; with liquidity risk as a dependent variable. Their finding shows that the relationship between profitability and liquidity risk is negative but significant, while the relationship with NPL and liquidity gap is negative.

2.4 Overview of Saudi Arabian banking Industry

2.4.1 Saudi Banking System

The Saudi banking system includes SAMA Commercial banks, Islamic banks and Investment banks. SAMA, the central bank of the Kingdom of Saudi Arabia, was established in 1952. It has been entrusted with many functions pursuant to several laws and regulations. The most important functions are the following: to deal with the banking affairs of the Government; promote the growth of the financial system and ensure its soundness; Supervise commercial banks and exchange dealers; and monitor credit information companies (SAMA, 2013).

A review of the history of commercial banks development in the Kingdom of Saudi Arabia, shows that SAMA through the duties assigned to it and collaboration with banks, has worked to build a solid and modern banking sector, has been unable to meet local needs for funding and provision of banking and financial services. SAMA has been keen since its inception tasks, to provide the best overall banking services to various parts of

Saudi Arabia, and to compete at the regional and international levels. SAMA emphasizes that its banks works on the principles of sound banking according to the best international standards and practices. SAMA has been focusing on strengthening the financial structure of the banks and development of internal systems: administrative, accounting and control. SAMA also focuses on human capital development to ensure management and staffs are up-to-date with modern and efficiency banking services and system.

The number of commercial banks in Saudi Arabia is currently 12 banks, including the Alinma Bank, in addition 12 branches of Gulf and foreign banks, including the Industrial and Commercial Bank of China (ICBC). Currently there are about 1,862 branches from these banks spread in over the Kingdom. A Foreign bank includes some of the well-known international names, such as "Deutsche Bank, BNP Paribas and JP Morgan," as well as some strong regional banks. (SAMA Report, Q1, 2014). It is expected that all banks will be competitive and provide the products and services to clients, in addition to improving the quality and level of services provided.

Over the past decade, the Saudi banking sector has significantly expanded to provide many services, such as murabaha, speculation, participation, forward contracts and securitization, etc. Banks have also made significant strides in providing asset management services, such as portfolios investment accounts and investment funds that target stocks and bonds of local, regional and international markets, monetary instruments markets and real estate investment. During the past decade, assets management in mutual funds has increased by more than 10 times, from 21 billion SAR

to 100 billion SAR. Currently, banks put more than 120 investment funds (SAMA Report, Q1, 2014).

Over the past ten years, the banking sector witnessed huge developments, both quantitatively and qualitatively. Money supply (M3) rose by 270 percent to SAR 1,669.3 billion at the end of July 2014 against an increase of SAR 451.3 billion at the end of July 2004. Total bank deposits also went up by 284.5 percent to SAR 1,520.6 billion in the same period. Total commercial banks' claims on the private and public sectors grew by 193.3 percent to SAR 1,314.4 billion at the end of July 2014 compared to SAR 447.8 billion at the end of July 2004. All these developments contributed to the growth of the Kingdom's economy and enhanced the stability of its financial sector (SAMA Report, Q2, 2014).

Domestic banks' CAR (Basel Standard) stood at 17.8 percent at the end of the second quarter of 2014, exceeding the prescribed rate of 8 percent. In addition, stress tests conducted periodically by SAMA on commercial banks showed good results. In recognition of the importance of using latest technological developments in the banking field, SAMA worked with domestic banks on the introduction of the latest secure banking technology. In this regard, the value of transactions carried out through the Saudi Arabian Riyal Interbank Express (SARIE) system picked up to SAR 54.6 trillion in 2013 from SAR 8.1 trillion in 2004.

Moreover, the total number of transactions executed through ATMs went up to SAR 1,335.5 million in 2013 from SAR 412.1 million in 2004. During the same period, the total number of transactions carried out through point of sales (POS) terminals increased to SAR 294.1 million with a total value of SAR 144.3 billion from SAR 52.1 million with a total value of SAR 23.9 billion. The number of bills paid through Saudi Arabia payment system (SADAD) increased to SAR 160.8 million with a value of SAR 176.6 billion in 2013 from 43.5 million with a value of SAR 22.0 billion in 2007. As a result of these huge developments in the banking sector, several important international institutions, strongly endorsed the Saudi banking system and practices.

One of the positive results of the Financial Sector Assessment Program (FSAP), which was carried out by a team from the International Monetary Fund (IMF) and World Bank in 2005, found that the banking supervision exercised by SAMA met fully the 25 basic Basel principles, which represent the best international practices for banks and banking supervision. Also, in March 2014 the external rating agencies including S & P Fitch issued positive reports on the strength of the Saudi banking system. As a result, the credit rating of the Kingdom of Saudi Arabia has been upgraded. Fitch upgraded the Kingdom's sovereign credit rating to AA from AA- with a stable outlook (SAMA, 2014).

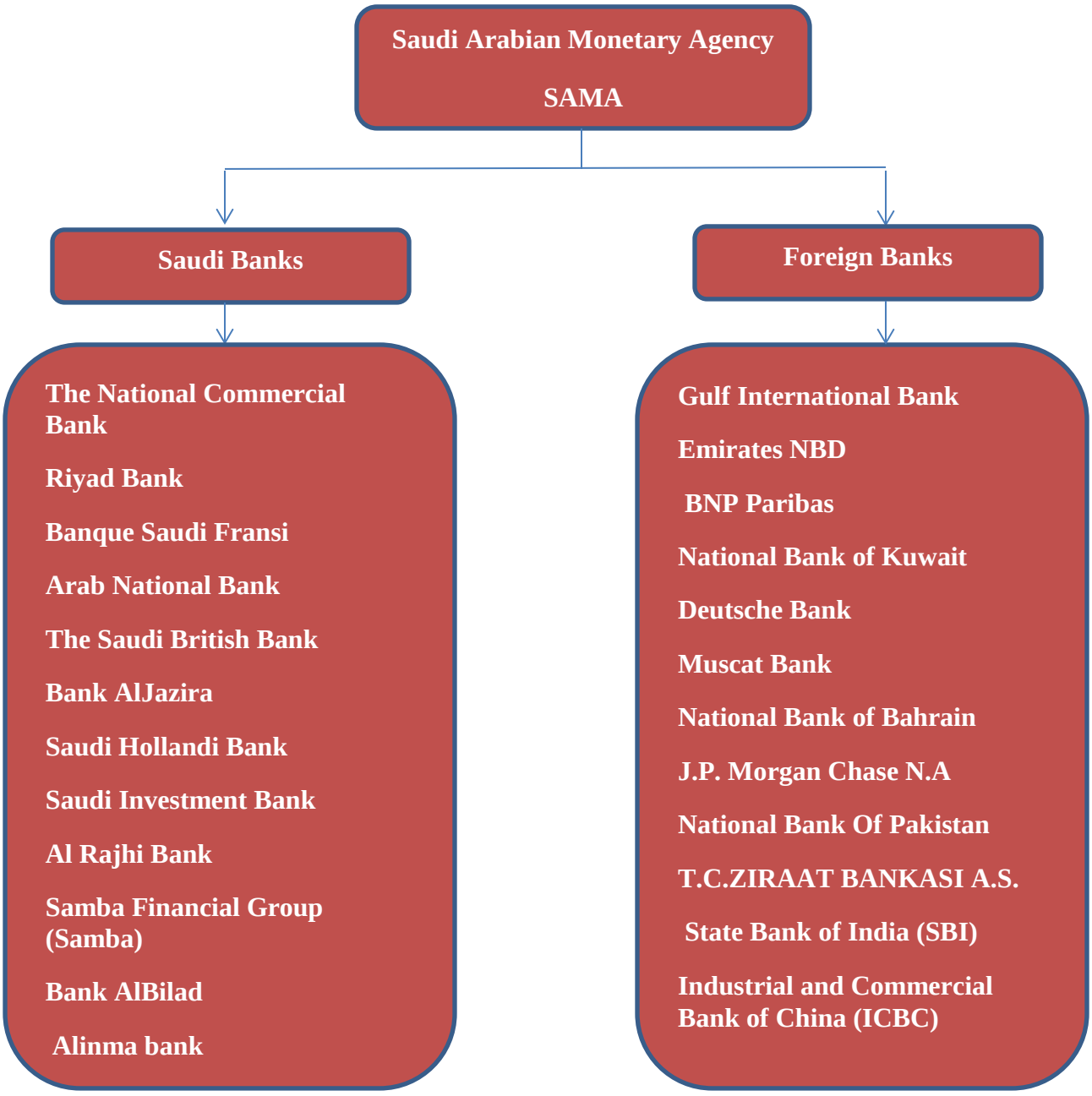

Figure 2.1: Structure of Saudi Banking System
Source: SAMA Report, 2014

2.4.2 Bank Branches Operating in Saudi Arabia 2000-2013

Table 2.1:
Number of Bank Branches Operating in Saudi Arabia during 2000 - 2013

NO	Bank's Name	Date of Establishment	abbreviation	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1	The National Commercial Bank	1953	NCB	246	245	246	246	246	243	260	266	275	284	287	295	299	322
2	Riyad Bank	1957	RIBL	196	193	193	193	193	195	198	200	201	216	241	248	252	252
3	Banque Saudi Fransi	1977	BSFR	56	56	56	58	62	61	68	74	75	77	81	83	86	83
4	Arab National Bank	1979	ANB	114	115	117	117	117	116	116	123	131	139	139	142	145	150
5	Saudi Arabia British Bank	1978	SABB	69	71	69	69	68	60	61	63	68	72	80	80	79	80
6	Bank AlJazira	1975	ALJazira	13	13	13	15	17	21	23	24	24	48	50	51	54	65
7	Saudi Hollandi Bank	1926	SHB	37	37	37	37	38	40	41	42	43	42	44	44	45	48
8	Saudi Investment Bank	1976	SIB	13	13	15	15	15	16	23	26	33	43	45	48	48	48
9	Al Rajhi Bank	1976	ALRajhi	375	392	391	393	393	385	390	403	425	442	451	455	467	479
10	Samba Financial Group (Samba)	1980	Samba	64	63	65	65	65	62	63	65	65	67	68	69	72	72
11	Gulf International Bank	2000	GIB	1	1	1	1	1	2	2	2	2	2	2	2	2	3
12	Emirates NBD	2004	E.NBD	--	--	--	--	1	1	1	1	1	1	1	1	1	1
13	Bank AlBilad	2005	AlBilad	--	--	--	--	--	21	40	60	61	67	75	82	88	102
14	BNP Paribas	2005	PARIBAS	--	--	--	--	--	1	1	1	1	1	1	1	1	1
15	National Bank of Kuwait	2006	NBK	--	--	--	--	--	--	1	1	1	1	1	1	1	1
16	Deutsche Bank	2006	Deutsche	--	--	--	--	--	--	1	1	1	1	1	1	1	1
17	Muscat Bank	2007	Muscat	--	--	--	--	--	--	--	1	1	1	1	1	1	1
18	National Bank of Bahrain	2008	NBB	--	--	--	--	--	--	--	--	1	1	1	1	1	1
19	J.P. Morgan Chase N.A	2008	J.P.Morgan.A	--	--	--	--	--	--	--	--	1	1	1	1	1	1
20	Alinma bank	2008	ALINMA	--	--	--	--	--	--	--	--	---	13	20	37	49	54
21	National Bank Of Pakistan	2010	NBP	--	--	--	--	--	--	--	--	---	---	1	1	1	1
22	T.C.ZIRAAT BANKASI A.S.	2011	T.C.ZBA.S.	--	--	--	--	--	--	--	--	---	---	---	1	1	1
23	State Bank of India	2011	SBI	--	--	--	--	--	--	--	--	---	---	---	1	1	1
Total				1184	1199	1203	1209	1216	1224	1289	1353	1410	1519	1591	1646	1696	1768

Source: SAMA reports 2000 -2013

Figure 2.2 shows that banking services witnessed further expansion throughout the Kingdom. Commercial banks's branches increased by 50 persent approximately to 1768 at the end of December 2013, compared to 1,184 at the end of December 2000. Also, according to SAMA's expectation, the commercial banks' branches will increase to 57percent at the end of 2014.

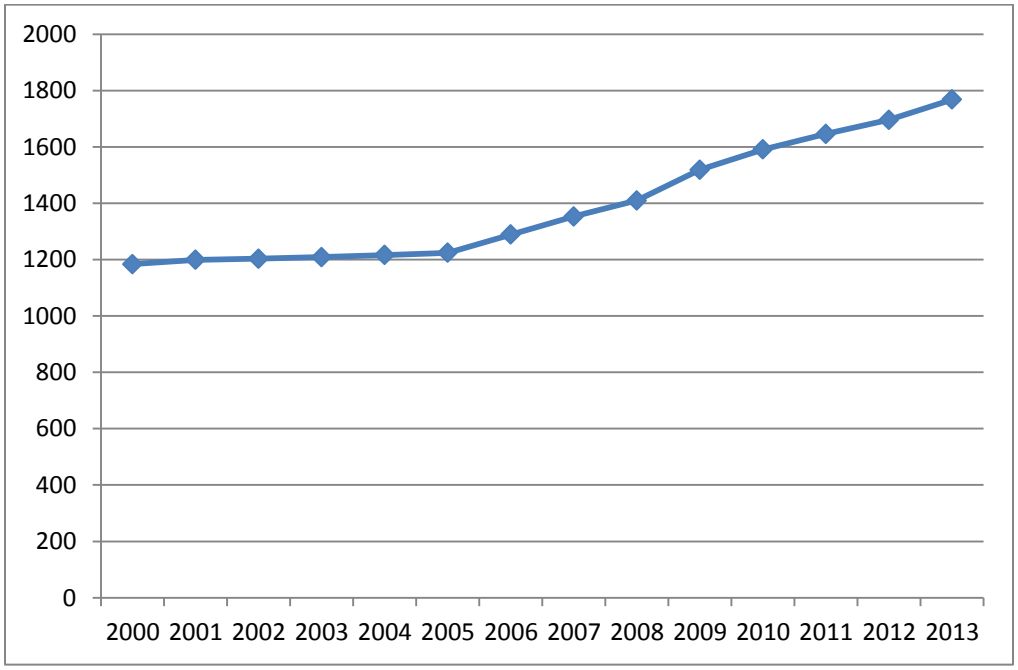

Figure 2.2: Growth Rate of Saudi Banking sector during 2000-20013

Source: SAMA reports 2000 -2013

2.4.3 Development of Saudi Commercial Banks

The good performance of commercial banks during 2013 was reflected in a rise in their general activity and enhancement of their financing position. Their assets went up by 201.5 percent, bank deposits by 148.8 percent, capital and reserves by 7.8 percent and profit by 15.6 percent.

2.4.3.1 Bank Deposits

Saudi bank deposits have increased year by year; total deposits increased by a 148.8 percent, i.e., SAR 1,133.7.0 billion to SAR 1,401.9 billion in 2013 compared to an increase of 26.1 percent or SAR 17 billion in 2000 (Table 2.2).

A review of bank deposits by type shows that demand deposits rose by 83.0 percent (SAR 743.0 billion) to SAR 857.0 billion in 2013, compared to an increase of 10.7 percent (SAR 12.0 billion) in 2000. Their share in total deposits went up from 42.7 percent at the end of 2000 to 61.1 percent at the end of 2013. Time and saving deposits increased by 43.71 percent (SAR 254 billion) to SAR 354.4 billion compared to an increase of 9.3 percent (SAR 5 billion) in 2000. However, their share in total deposits in 2013 dropped to 24.6 percent from 33.9 percent in 2000 (Table 2.2).

Other quasi-monetary deposits in 2013 (the bulk of which is residents' foreign currency deposits) went up by 20.0 percent (SAR 136.7 billion) to SAR 199.7 billion in 2000. Their share in total deposits decreased from 23.5 percent in 2000 to 14.2 percent in 2013 (Table 2.2)

Table 2.2 :
Bank Deposits

(Million Riyals)

End of Period	Demand Deposits	Time & Savings Deposits	Other Quasi-Monetary Deposits	Total Deposits	Growth Rate %
1999	101605	85341	63935.071	250881.071	0
2000	114481	90832	62903.183	268216.183	6.9%
2001	130192.5	91685	69115.298	290992.36	8.5%
2002	150009.9	108028	80059.323	338097.38	16.2%
2003	167578	113382	81061.236	362021.117	7.1%
2004	211170.2	136673	88121.88	435964.998	20.4%
2005	219251	165266	104869.331	489386.764	12.3%
2006	243417.7	226027	121814.929	591259.365	20.8%
2007	311365.1	283059	123139.628	717563.815	21.4%
2008	342487.7	367624	136006.62	846118.179	17.9%
2009	433162.2	323377	184009.189	940548.43	11.2%
2010	530072.2	298283	156495.171	984849.944	4.7%
2011	641056.3	305441	157136.01	1103633.61	12.1%
2012	753969.9	324428	182210.721	1260608.368	14.2%
2013	857280.4	345035	199664.452	1401980.205	11.2%

Source: SAMA Reports1999 - 2013

2.4.3.2 Bank Claims on the Private and Public Sectors

Total bank claims on the private and public sectors (loans and advances, bills discounted and investments) rose by 146.8 percent (SAR 1,099.6 billion) to SAR 1,396.5 billion in 2013 compared to an increase of 6.9 percent (SAR 269.1 billion) in 2000. Total claims of the private and public sectors at the end of 2013 accounted for 99.6 percent of total bank deposits compared to 110.7 percent 2000.

Total bank claims on the private sector increased by 125.8 percent (SAR 951.4 billion) to SAR 1123.6 billion in 2013, compared to a rise of 6.2 percent (SAR 10.0 billion)

in 2000. These claims represented 80.1 percent of total bank deposit at the end of 2013, compared to 65 percent in 2000.

Bank claims on the public sector (loans to public institutions and investment in government securities) increased by 25.0 percent (SAR 148.2 billion) to SAR 272.9 billion in 2013 compared to an increase of 6.9 percent (SAR 8.0 billion) in 2000 . They constituted 19.0 percent of total bank deposits in 2013 compared to 46.0 percent at the end of 2000 (Table 2.3).

Table 2.3:
Bank Claims on Public and Private Sectors

(Million Riyals)

End of Period	Claims on Public Sector	Claims on Private Sector	Total Claims	Growth Rate%	Total Claim / Total Deposit	Claims Public / Total Deposit	Claims Private / Total Deposit
1999	116613	162190	278803	0		_	65%
2000	124712	172238	296950	6.5%	110.70%	46%	64%
2001	134650	187064	321714	8.3%	110.60%	46%	64%
2002	150610	205829	356439	10.8%	105.40%	45%	61%
2003	176566	228486	405053	13.6%	111.90%	49%	63%
2004	175794	313928	489722	20.9%	112.30%	40%	72%
2005	159478	435926	595404	21.6%	121.70%	33%	89%
2006	158218	476020	634238	6.5%	107.30%	27%	81%
2007	181613	577882	759495	19.7%	105.80%	25%	81%
2008	241986	734557	976543	28.6%	115.40%	29%	87%
2009	182324	734237	916561	-6.1%	97.40%	19%	78%
2010	214333	775756	990088	8.0%	100.50%	22%	79%
2011	209634	858365	1067999	7.9%	96.80%	19%	78%
2012	220761	999127	1219888	14.2%	96.80%	18%	79%
2013	272869	1123645	1396515	14.5%	99.60%	19%	80%

Source: SAMA Reports1999 - 2013

2.4.3.3 Commercial Banks Assets and Liabilities

Total assets and liabilities of Saudi commercial banks stood at SAR 1,893.3 billion at the end of the of 2013, increasing by 346.7 percent (SAR 1,440 billion) compared to a rise of 6.5 percent (SAR 38.0 billion) in 2000 and recording an annual growth rate of 201.5 percent (Table 2.4 and Figure 2.3). Foreign assets of commercial banks went up by108.2 percent (SAR 109.5 billion) to SAR 210.7 billion in 2013 compared to a rise of 11.2 percent (SAR 10.2 billion) in 2000. Foreign liabilities of commercial banks also increased by 15.5 percent (SAR10.0 billion to SAR 74.4 billion in 2013 compared to a fall of 26.0 percent (SAR13.3 billion) in 2000 (Table 2.4, and Figure 2.3). As a result, commercial banks' net foreign assets (foreign assets less foreign liabilities) increased by 270.4 percent (SAR 99.5 billion) to SAR 136.3 billion in 2013 compared to a fall of 8.7 percent (SAR 3.5 billion) in the preceding year of 2000 (Table 2.4 and Figure 2.3).

Table 2.4 :
Commercial Banks' Assets and Liabilities *(Million Riyals)*

End of Period	Total Assets & Liabilities	Foreign Assets	Foreign Liabilities	Net Foreign Assets
2000	453.2723	101.2043	64.44376	36.76052
2001	472.4312	99.36402	59.61403	39.74999
2002	508.2373	95.48984	42.99887	52.49097
2003	545.2077	81.08192	40.06341	41.01851
2004	655.3819	92.79824	45.74767	47.05057
2005	759.0754	91.42984	65.03973	26.39011
2006	861.0884	129.7958	59.19854	70.59729
2007	1075.221	147.7121	105.2127	42.49938
2008	1302.271	153.9865	112.466	41.52048
2009	1370.258	210.9183	99.68295	111.2354
2010	1415.267	193.1266	94.70575	98.42083
2011	1544.434	208.723	75.45006	133.2729
2012	1734.141	212.8286	79.39553	133.4331
2013	1893.283	210.6914	74.40536	136.286

Source: SAMA Reports1999 - 2013

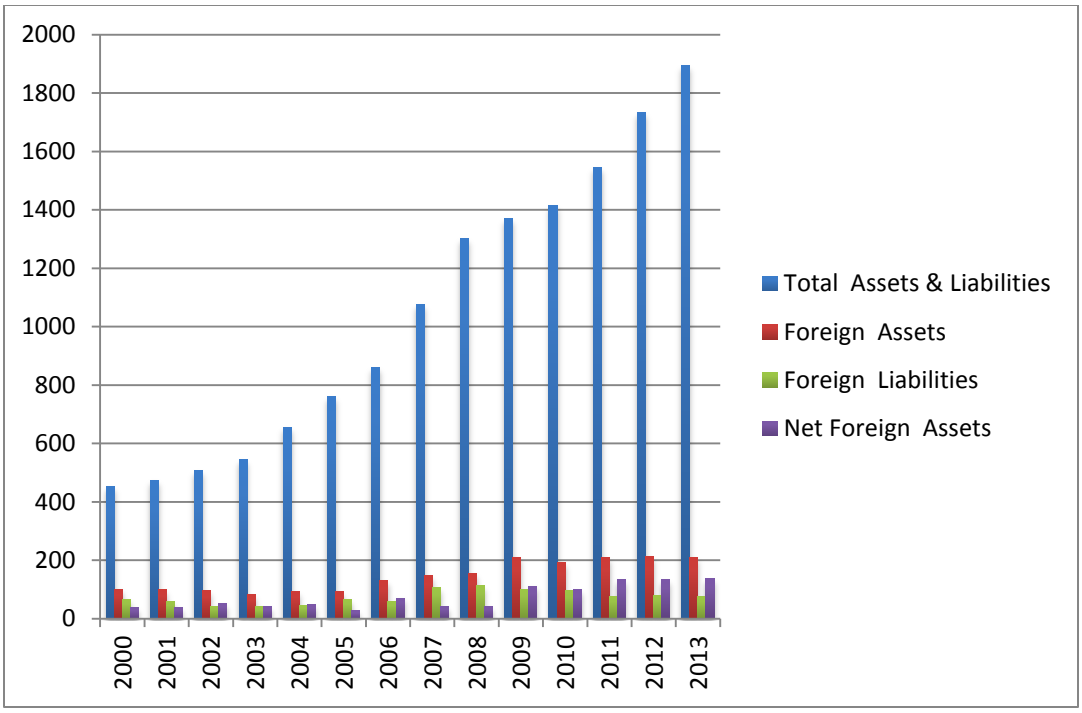

Figure 2.3 .Commercial Banks' Assets and Liabilities (Billion Riyals)

Source: SAMA Reports1999 - 2013

2.4.3.4 Bank Credit by Maturity

An analysis of bank credit by maturity (extended to the private and public sectors) during 2013 indicates that Short-term credit (less than one year) increased by 325.9 percent (SAR 488.4 billion) to SAR 603.8 billion in 2013 compared to an decrease of 1.5 percent (SAR 1.7 billion) in 2000. Medium- term credit (1-3 years) increased by 562.1 percent (SAR 179.9 billion) to SAR 212.0 billion compared to a rise of 17.6 percent (SAR 4.8 billion) in the preceding year of 2000. Long -term credit (more than 3 years) also went up by 1073.0 percent (SAR 278.6 billion) to SAR 305.2 billion compared to an increase of 18.8 percent (SAR 4.2 billion) in 2000 (Table2.5 and Figure 2.4).

Table 2.5 :
Bank Credit Classified by Maturity

(Million Riyals)

End of Period	Short Term	Medium Term	Long Term	Total	Growth Rate %
1999	116,622	27,281	22,420	166,323	-
2000	114,858	32,049	26,626	173,533	4.33
2001	113,453	31,951	42,216	187,620	8.12
2002	124,578	31,646	54,433	210,657	12.28
2003	146,040	37,758	63,170	246,967	17.24
2004	192,481	42,990	96,664	332,136	34.49
2005	250,841	53,495	148,164	452,501	36.24
2006	276,232	64,633	156,202	497,067	9.84
2007	347,593	83,210	164,037	594,840	19.67
2008	476,606	104,610	163,586	744,802	25.21
2009	449,634	117,155	170,117	736,905	-1.06
2010	456,160	126,833	192,349	775,342	5.21
2011	485,685	136,070	234,872	856,626	10.48
2012	536,776	200,271	263,011	1,000,057	16.74
2013	603,313	211,958	305,249	1,120,520	12.05
Average	13.19%	16.40%	21.85%	15.06%	15%

Source: SAMA Reports1999 - 2013

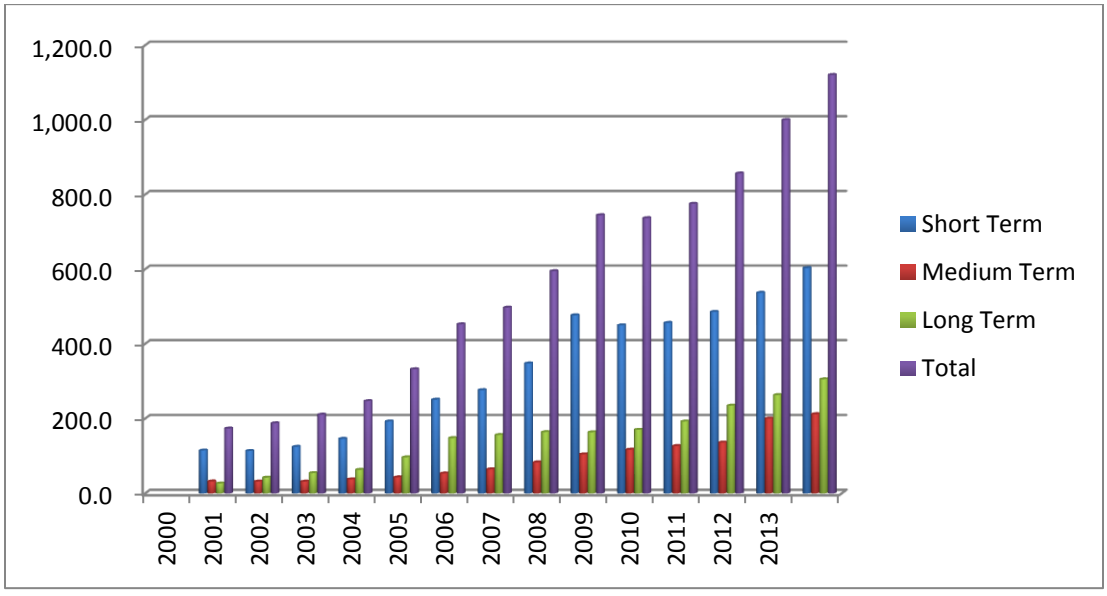

Figure 2.4: Bank Credit Classified by Maturity (Billion Riyals)

Source: SAMA Reports1999 - 2013

2.4.3.5 Bank Capital and Reserves

Capital and reserves of Saudi banks increased by SAR 182.3 billion or 418.9 percent to SAR 225.9 billion in 2013 compared to a rise of SAR 1.2 billion or 2.8 percent in 2000. Their ratio to total deposits fell from 16.2 percent in 2000 to 16.1 percent in 2013, but to total assets, it went up from about 9.6 percent in 2000 to 11.9 percent in 2013 (Table 2.6). Capital ratio to risk weighted assets (Basel Standard) stood at 18.1 percent at the end of 2013, which is more than double the international standard of 8.0 (Table 2.6 and IMF 2013).

Table 2.6 :
Banks' Capital and Reserves

(Million Riyals)

End of Period	Capital& Reserves	Growth Rate	Capital & Reserve / Total Deposit	Capital & Reserve / Total Assets
1999	42338.2	-	-	-
2000	43524.7	2.8%	16.20%	9.60%
2001	43792.8	0.6%	15.00%	9.30%
2002	47297.9	8.0%	14.00%	9.30%
2003	47023.3	-0.6%	13.00%	8.60%
2004	52237.6	11.1%	12.00%	8.00%
2005	66608.4	27.5%	13.60%	8.80%
2006	79947.1	20.0%	13.50%	9.30%
2007	106026	32.6%	14.80%	9.90%
2008	131822	24.3%	15.60%	10.10%
2009	163642	24.1%	17.40%	11.90%
2010	178025	8.8%	18.10%	12.60%
2011	190140	6.8%	17.20%	12.30%
2012	209494	10.2%	16.60%	12.10%
2013	225855	7.8%	16.10%	11.90%

Source: SAMA Report1999 – 2013 and IMF 2013

2.4.3.6 Saudi Banks Performance Indicators

The Saudi economy has witnessed a comprehensive growth of the various sectors and activities over the past 14 years where most of the indicators recorded significant growth rates. The annual real growth of GDP averaged at about 5.2 percent; and the contribution of the private non-oil sector was high, rising its GDP at an annual rate of 6.7 percent, it is expected that this pace of growth will continue in future years. However, the contribution of the oil sector is low, increasing its GDP at an average annual growth of 1.5 percent, which is more volatile.

Saudi Arabia has a high liquidity in the banking sector due to the increase in the oil price during 2000 until 2013, except the years of 2001, 2002 and 2009, when the GDP growth of the oil sector declined to one percent. This reflects that the Saudi bank deposits represent about 90.5 percent of money supply money supply (M3) at the end of 2013 (SAMA Report, 2013). Non-interest expenses to income ratio increased from 25 percent in 2000 to 47 percent in 2013, meaning that banks are making considerably more than there are spending, and is therefore on sound fiscal footing. Total commercial bank assets as percentage of GDP went up by 77 percent to 149.9 percent in 2013 compared to 72.7 percent in 2000. Bank deposits as percentage of GDP grew from 43 percent to 111 percent during the same period, whereas the total bank' loans as percentage of GDP rose by 61.4 percent to 89 percent in 2013 compared to 27.6 in 2000.

Banking intermediation is still the preferred option in the Kingdom of Saudi Arabia, as in most emerging markets. Bank credit ratio to GDP went up by 61 percent in 2013

compared to 2000. The banking system's performance has continued to strengthen over the years with proactive monitoring and guidance from SAMA. Saudi banks achieved good profits, such as the average ROE and average ROA. They have not been affected by turmoil in global markets. The banks also have average Basel Capital Adequacy Ratios of over 16 percent during the analysis period of this study which is well above the mandated international standard of eight percent, due to banks' continuing to accord high priority to appropriate prudential regulations and close supervision of banks (Table 2.7).

The IMF noted that the Kingdom was among the first countries to implement Basel III capital standards, and saw no difficulties for banks in meeting capital, liquidity and leverage ratios set out by the Basel committee. Saudi banks continue to enjoy strong asset quality metrics. The non-performing loans to total gross loans ratio reached a post-global crises low of 1.3 percent at the end of December 2013, depicting a steady yearly decline over the past few years (1.9 percent at the end of 2012 and 3.3 at the end of 2009).

NPLs remain comfortably covered, with the provisions to NPLs ratio at 157.4 percent at the end of 2013 (145.1 percent at the end of 2012) as per the IMF. Those ratios are likely to remain favorable overall amidst positive macro-economic conditions, ameliorating underwriting standards and government related project lending, as banks seize the opportunity to act as a partner to the real sector in the development of the domestic economy in the period ahead.

Table 2.7.
Bank performance indicators

Indicators	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bank performance indicators														
Non-interest expenses/total income ratio	25.0	25.0	30.0	36.0	45.0	45.0	43.0	38.7	51.1	55.4	55.4	52.7	46.9	47.0
Assets (percent of GDP)	72.7	75.1	80.7	80.4	88.4	95.4	102.5	120.8	135.0	139.4	134.0	134.6	142.8	149.9
Deposits(percent of GDP)	43.0	46.2	53.7	53.4	58.8	61.5	70.4	80.6	87.7	95.7	93.2	96.2	103.8	111.0
Loan/ GDP	27.6	29.7	32.7	33.7	42.3	54.8	56.7	64.9	76.2	74.7	73.4	74.8	82.3	89.0
Bank credit (percent of GDP)	27.8	29.8	33.4	36.4	44.8	56.9	59.2	66.8	77.2	75.0	73.4	74.7	82.4	88.7
ROE	0.2	18.8	28.8	20.4	23.6	30.4	32.6	0.3	0.2	0.2	0.1	0.2	0.1	14.5
ROA	0.0	2.0	2.0	2.1	2.5	3.8	5.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Capital risk-weighted assets (%)	19.9	20.3	21.3	19.4	17.8	17.8	21.9	24.9	20.7	16.0	16.5	17.1	19.6	18.7
Economic indicators														
Growth of real GDP %	4.9	1.0	0.1	7.7	9.3	7.3	5.6	6.0	8.3	1.9	7.5	8.6	5.8	4.0
Growth of real GDP (oil sector %)	6.9	3.9-	7.5-	17.2	3.5	6.3	1.0-	3.8-	4.3	8.0-	0.3	11.0	5.7	1.0-
Growth of real GDP (non-oil sector %)	4.0	3.5	3.7	3.6	12.1	7.7	8.5	10.0	9.8	5.3	9.6	8.0	5.8	5.4

Source: SAMA Reports1999 - 2013

2.5 Summary

This chapter is a discussion on the theories of financial intermediation; financial performance of commercial banks; overview of the Saudi Arabian banking industry; and a summary of the main findings in the empirical studies. This section discusses the literature on the financial performance of commercial banks. The development of Saudi Arabian banking system, including, bank branches, banks deposits, bank claims, commercial banks' assets and liabilities, bank credit by maturity, bank capital and reserves and other bank performance indicators are provided.

Table 2.8: Summary of the Main previous studies on financial performance of commercial banks

Authers	DV	IVs	Methodology	Finding
Al Karim , & Alam (*2013)*	ROA Tobin's Q: (MV/BV), EVA : (NOPAT - (Capital * Cost of Capital)	Bank Size , Credit Risk (CR) , Operational Efficiency (OE) , Asset Management (AM)	Used sample of five banks listed in stock exchanges of Dhaka and Chittagong to evaluate the financial performance of commercial banks for the period of 2008-2012 –secondary data) were employed in multiple regression analysis.	The result is consistent in case of operational efficiency having negative correlation with ROA and EVA. Credit risk has a negative correlation with all three dependent variables, which is logically correct. Bank size has negative correlation with both P/B ratio and ROA, which also seems logical, as with increase in size of bank's assets, the chance of dependent variables decreasing is higher.
Malhotra, Poteau, and Singh (2011)	Interest spread, ROE net interest income/total funds ratio, net profit margin, interest income/total funds, interest expended/interest earned, ROA, capital adequacy, advances/total funds ratio, efficiency ratio, and asset utilization Time		Sample consists of 20 state owned banks and 15 private banks. - panel data analysis to evaluate the performance of public and private sector banks from 2005 to 2009 . They include a dummy variable (private bank =1 and 0 otherwise) . Panel data regression to use the fixed effects model with time as dummy variable.	That the Indian banking sector remained relatively healthy during the current economic crisis and the performance of the banks was not impacted negatively in a significant manner. Both public and private sector banks show healthy capital adequacy ratios throughout the sample period.
Almazari (2011)	ROA and Interest	bank size, asset management,	studied seven commercial banks in Jordan. The study covers the period from 2005- 2009.	- It was found that banks having higher total deposits, credits, assets and shareholders' equity does not always mean that has better profitability performance.

	income size	and operational efficiency	- analyze the financial performance of seven selected Jordanian commercial banks using simple regression (ANOVA) and Pearson correlation coefficient (SPSS).	- It was also found that there exists a positive correlation between financial performance and asset size, asset utilization and operational efficiency, which was also confirmed with regression analysis that financial performance is greatly influenced by these independent factors.
Alkhatib *(2012)*	ROA , Tobin's Q: (MV/BV), EVA : (NOPAT - (Capital * Cost of Capital)	Bank Size (Log TA), Credit Risk (CR) , Operational Efficiency (OE) , Asset management (AM)	Used sample of five commercial banks listed on stock exchange of Palestine for peiod of 2005 - 2010 -The study employed the correlation and multiple regression analysis of annual time series .	The study rejected the hypothesis claiming that "there exist statistically insignificant impact of bank size, credit risk, operational efficiency and asset management on financial performance of Palestinian commercial banks".
Shah And Jan (2014)	ROA, Interest income (IN)	Bank size , Operational Efficiency, Assets Management	Data was collected from Financial Statement Analysis of Financial Sector 2006-2010. The sample size consists of top ten private commercials banks of Pakistan. They used Regression analysis and correlation technique .	Bank size and Operational Efficiency is negatively related with ROA and positive relationship was found with Assets Management ratio. While, Bank Size is positively related with Interest Income and Assets Manageent and Operational Efficiency is negatively related with Interest Income
Said and Taemin (2011)	Profitability: ROAA or ROAE	Internal : Liquidity risk Credit risk, Capital, Operating expenses, Size External :	Sample 23 banks four of them from China; others are local banks in Malaysia. The BankScope database for the period 2001 to 2007. Empirical analysis is	<table><tr><td>Variable</td><td>relation</td></tr><tr><td>Liquidity risk</td><td>-</td></tr><tr><td>Credit risk</td><td>-</td></tr><tr><td>Capital</td><td>+</td></tr><tr><td>Operating expenses,</td><td>-</td></tr><tr><td>Size</td><td>?</td></tr></table>

		(GDP), Inflation, interest rate, Interactive Dummy (China):	based on panel data fixed effect model.	
Jha And Hui (2012)	ROA ROE	(Tier 1 Capital + Tier 2 Capital / risk weighted assets) NPL IETTL = Interest expense / total loans NIM Credit to deposit ratio.	18 commercial banks for the period 2005 to 2010 were financially analyzed. In addition, econometric model (multivariate regression analysis) by formulating two regression models.	That public sector banks are significantly less efficient than their counterpart are; however domestic private banks are equally efficient to foreign-owned (jointventure) banks. Furthermore, the estimation results reveal that ROA was significantly influenced by capital adequacy ratio, interest expenses to total loan and NIM, while capital adequacy ratio had considerable effect on ROE.
Choong Thim and Kyzy (2012)	ROA , ROE	LIQ =Liquidity CR = Credit Risk CAPITAL= Capitalization SIZE - Size of the bank, Concentration Economic conditions	- Total of 11 local Islamic Banks in Malaysia - The data collected from Central Bank of Malaysia and Thomson DataStream Advance 4.0 online database from 2006 to 2009 - A regression model comprising of dependent variable	That credit risk has the most significant meaning in performance of local Islamic Commercial Banking in Malaysia. Other contributing factors are liquidity rate and concentration of Islamic commercial Banking.
Tarawneh (2006)	ROA and	Bank Size = TA Asset	- The period is (1999-2003)	He concludes that the financial performances of the banks as identified by ROA and NIM were positively and significantly influenced by

<table>
<tr><td></td><td>interest income size</td><td>Management = operational income / TA

Operational Efficiency =

total operating expenses / net interest income</td><td>the sample is : five Omani commercial banks from 14 banks.

- correlations, ratio analysis, and simple regression

- Analysis of variance (ANOVA) to test the hypotheses</td><td>assets management, operational efficiency and bank size. The correlation results also show positive relationship among the independent variables.</td></tr>
<tr><td>Ongore and Kusa

(2013)</td><td>Bank Performance Indicators:

ROA

ROE

NIM

Moderating variable: Foreign vs Domestic ownership</td><td>Bank Specific Variables :

□ Capital Adequacy

□ Asset Quality

□ Management Efficiency

□ Liquidity Management

Macroeconomic Variables:

□ GDP Growth Rate

□Inflation Rate</td><td>-In this study, 37 commercial banks of these, 13 are foreign owned banks and 24 are owned by locals.
- the period 2001-2010

-Data collected from the statements of the commercial banks and World Bank database.

A multiple linear regression model and t-statistic were used to determine the relative importance (sensitivity) of each explanatory variable in affecting the performance of banks.</td><td><table><tr><td>IV</td><td>ROA</td><td>ROE</td><td>NIM</td></tr><tr><td>CA</td><td>Sign</td><td>Sign</td><td>Sign</td></tr><tr><td>AQ</td><td>Sign</td><td>Sign</td><td>Sign</td></tr><tr><td>ME</td><td>Sign</td><td>Sign</td><td>Sign</td></tr><tr><td>LIQ</td><td>insig</td><td>insig</td><td>insig</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>GDP</td><td>-</td><td>+</td><td>-</td></tr><tr><td>INF</td><td>-</td><td>-</td><td>-</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>ownership</td><td>insig</td><td>insig</td><td>insig</td></tr></table></td></tr>
<tr><td>Mustafa Hassan Mohammad Adam

2014</td><td>ROA

ROE

ROD</td><td>E/TA = capital ratio

SIZE = Bank size

L/TA = total</td><td>-The period of 2009-2013.
Used financial ratios analysis..
- Descriptive statistics:
- Correlations
- Multiple regression</td><td>Show the positive behavior of the financial position for Erbil Bank and some of their financial factors variables influence the financial performance of the bank.</td></tr>
</table>

		loans on total assets	analysis in order to know whether these variables are significantly correlated with the financial performance for the bank.	
Haque1 (2014)	ROA ROE NIM	evaluated the financial performance of commercial banks in India for the period 2009-2013. - A descriptive financial analysis - Analysis of variance (ANOVA) to examine the truth/ likelihood of the proposed hypotheses.		He concluded that there is no significant difference between profitability of banks in terms of NIM and ROA, but significant differences in terms of ROE
ALMAZAI 2013	ROA ROE	1.Total Equity Capital to Total Assets Ratio (ECA) 2. Cost to Income Ratio (CIR) 3. Bank size (BS) 4.Capital to Weighted-Risk Assets Ratio (TCA)	Data collected from the financial statements of nine Saudi banks over the period of 2007-2011. Analysis methods: -financial ratios - linear regression technique - descriptive financial analysis to describe - Analysis of variance (ANOVA) -Pearson correlation coefficient (SPSS)	He concluded that there is significant relationship among ROA, ROE with capital adequacy, bank size and cost to income ratio and a negative relationship in the case of Capital adequacy and cost to income ratio.
Almumani 2013	DV= liquidity risk IVs= 1. Bank Size (SZE), 2. Investment to Asset Ratio (IAR), 3. Capital to Asset Ratio (CAR), 4. Debt to Equity Ratio (DER), 5. Loan to Deposit Ratio 6. ROA 7. ROE		-The sample included 10 Saudi banks and 14 Jordanian banks. The selection criterion was all the banks listed in Saudi stock exchange (Tadawul) and Amman Stock Exchange (ASE). -Mulitiple Regression analysis	The ratio analysis indicates that Jordanian bank's liquidity position is higher as compared to the Saudi banks which help the Jordanian banks to pay off its obligations and expose itself to more risk. The ROA, ROE and IAR proved to be more for the Saudi banks than the Jordanian ones, which indicates that Saudi banks are generating more profits through efficient

				employment of its resources than the Jordanian banks
Almumani 2013	Inputs Total Deposits Total Epense Outputs Total Loans Total Investment		- 10 banks operating in Saudi Arabia during the period (2007–2011). The measurement of efficiency used in this study is the Data Envelopment Analysis approach - a basic DEA model like CCR and BCC	Another important result is that the relative efficiency of Saudi smaller banks significantly performs much better than medium and larger size banks. However, banks with higher capital adequacy ratio are less efficient. Thus, banks in Saudi Arabia with higher capital adequacy ratio are less risky, managing safer and lower-earning portfolios.
Almumani (2014)	ROA, ROE	total assets, cost to income ratio, and operating expenses and operating income	Used sample of Saudi commercial banks listed on Saudi stock exchange from 2007-2011.	The results for the study showed that there is negative relationship between total assets, cost to income ratio and operating expenses with profitability of Saudi banks, whereas that the relationship between operating income and profitability is positive. In addition, Saudi joint banks have more ability in creating the profits, dominance in ROE and absorbing loan losses, however Saudi banks (not joint) are more dominant in ROA and absorbing asset losses.
Bertin, Moya and Perales (2014)	ROA, NIM	specialization degree, size, diversificatio n , macr-oeconomic conditions, credit risk, operational inefficiencies	Studied 78 commercial banks in Latin American from Colombia, Venezuela, Paraguay, Brazil, Peru, Chile and México. The study covers the period of 1995-2010 to analyze the effect of macr-oeconomic factors	. They found that relationship of bank financial performance as identified by ROA and NIM is positive and significant with specialization degree, size, diversification and macroeconomic-conditions. But the relationship of bank performance with credit risk, operational inefficiencies, and liquidity risk is negative.

Arif and Anees (2014)	Bank's Earnings	Deposits Cash Liquidity NPLs	Used sample of 22 banks in Pakistan for the period from 2004 to 2008. -Multiple regressions are applied.	They found that liquidity risk is negative but significant with banks profitability, while the relationship with non-performing loan and liquidity gap is exacerbating.
Akhtar, Ali and Sadaqat (2011)	Liquidity Risk	Bank Size, Networking Capital, ROE, Capital Adequacy and (ROA),	Examined 12 banks in Pakistan between of 2006-2009. Used mulitiple regression models	The study found positive but insignificant relationship of size of the bank and net-working capital to net assets with liquidity risk in both models. In addition CAR in conventional banks and ROA in Islamic banks is found to be positive and significant at 10% significance level.
Doyran (2014	ROA NIM	Operating expenses Liquidity TL/TA Inflation GPD and Market capitalization	Used sample of 62 banks in Argentina for the period from 1994 – 2011. Used mulitiple regression modles	Found that relationship between operating expenses, liquidity, leverage is important, while the relation between ROA and debt to total assets ratio is negative; there is positive relationship between net interest margin and operating expenses. in addition there is positive significant relationship between inflation and ROA however the relationship with NIM is negative. Furthermore, the relationship between banking environment and NIM is positive.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methodology adopted in the study to investigate the financial performance of commercial banks. It also provides the variables that are used, the theoretical framework, hypothesis development, research design, data collection, models specification, multiple regression analysis and other measurements of the variables.

3.2 Research Framework

The main objective of this study is to examine the relationship between financial performance of commercial banks and the four dependent variables, which are return on assets(ROA), return on equity (ROE), net interest margin (NIM) and Tobin's Q (measured by market value to book value of the bank). The independent variables are Liquidity risk which is measured by Net Loan to Total Deposit and Short-Term Debt, liquidity assets to total assets ratio, capital adequacy which is measured by total capital, operational efficiency, assets quality and bank Size which measured by logarithm of total assets.

Figure 3.1 illustrates the research model of this study and all the specific variables. The explanation and discussion of the variables and the hypothesis development is presented in detail in the following paragraphs.

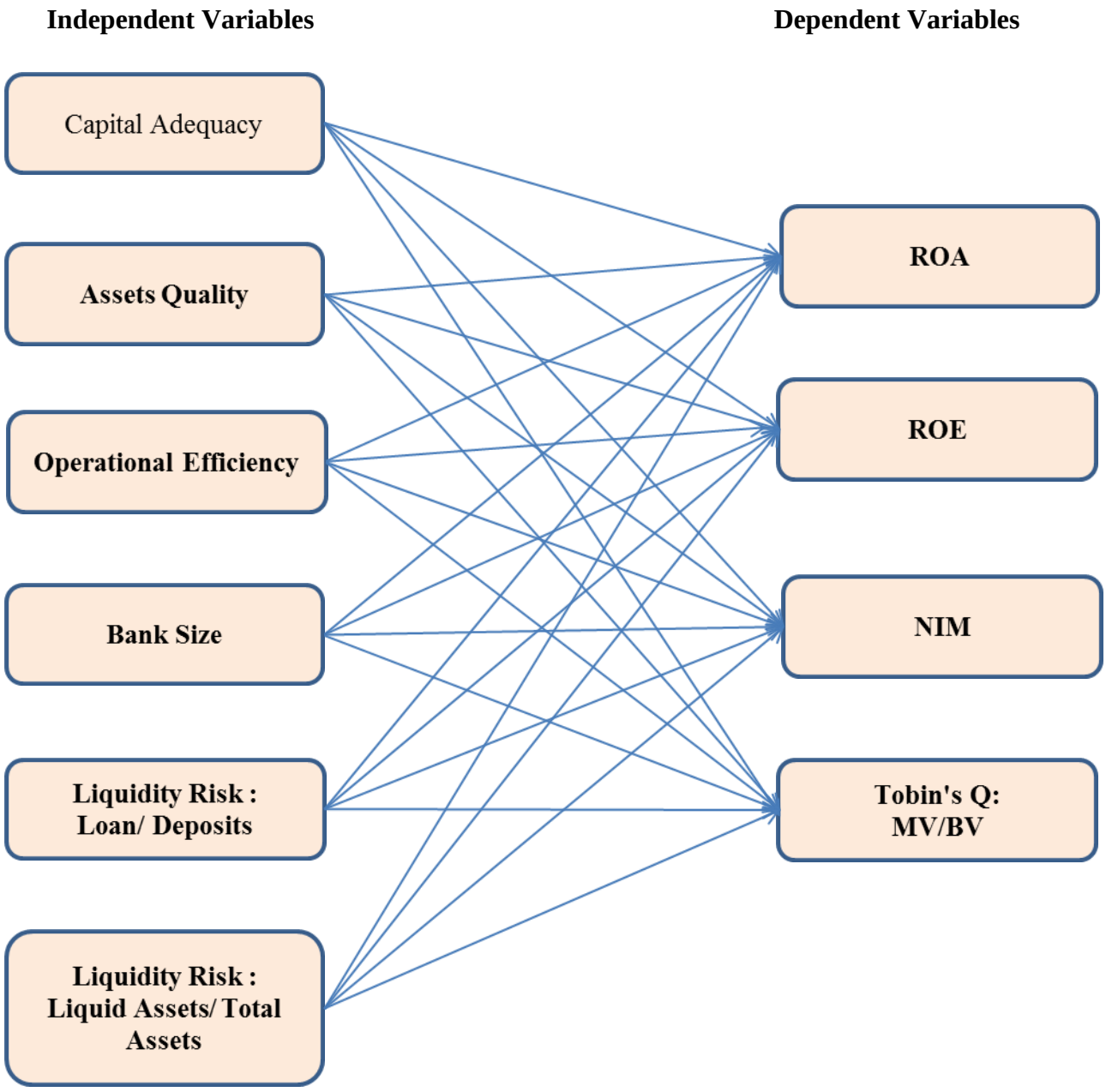

Figure 3.1: The Theoreticle Framework of the Study

3.3 Operational Definition of Variables

3.3.1 Bank Performance Indicators (Dependent Variables)

There is no doubt that the main and final target of commercial banks is profitability. But this does not mean that banks have no other targets. The purpose of this paper is to measure the first goal which is profitability. There are many ratios used to evaluate the profitability of commercial banks which Return on Equity (ROE), Return on Assets (ROA), Net interest Margin (NIM) and Tobin's Q, as major measurements (Murthy and Sree, 2003, , 2013; Alexandru , 2008; Alkatib ,2012; Karim and Alam, 2013; ; Ongole and Kusa, 2013; Doyran, 2014; Bertin, Moya and Perales, 2014; Oral, M. and Yolalan, R, 1990; Sufian, F. & Chong, R.R, 2008; Vong, A, Hoi, S, 2009).

3.3.1.1 Return on Assets (ROA)

ROA is ratio of net income to total assets (i.e., fixed assets and current assets) (Khrawish, 2011), where total assets or average of total assets can be used. It refers to banks' efficiency making profits. It measures the ability of bank management in investments of its assets, buildings and land, inventory and stocks. If the ROA is high that's means the bank is more efficient and capable of using the funds (Wen, 2010).

3.3.1.2 Return on Equity (ROE)

ROE is net income after tax divided by common equity. It measures the efficiency of the bank in generating profits from every unit of shareholders' equity (also known as net assets minus liabilities or capital, reserves and retained earnings). ROE shows the extent

of success of the bank investing funds to generate earnings. It also refers to profits in return for money invests. The higher the ROA, the higher the ability and efficiency of the bank (Khrawish, 2011).

3.3.1.3 Net interest Margin (NIM)

NIM is used to evaluate the change between interest income obtained from the bank loans (borrowers) and the value of interest paid or return on deposits (lenders). It is measured by dividing the interest revenue generated from investment in loans to earnings which is collected from the investments in assets on average. (Gul et al, 2011; Maudos, J. and Solı´s, L, 2009, and Doyran, 2014) NIM is net interest revenue divided by total earning assets. (Saunders, A. and Schumacher, L, 2000; SaId and Tumin, 2011; Okoth and Kusa, 2013) NIM is net interest income to average earning assets.

NIM identifies the gap between interest revenue received from bonds and loans and the cost of interest from borrowed funds and deposits. Its measure must be higher for banks since it represents the income a bank has through the use of its assets (Khrawish, 2011). The higher the NIM the higher the ability and efficiency of banks to generate the profits from assets.

3.3.1.4 Tobin's Q (MV/BV)

Tobin's Q is may measure to identify the banks performance. This ratio is based on Jams Tobin's work. He posited that the market value for all companies in the stock market as a package should be equal to their costs (price = total assets). Tobin's Q ratio is calculated by market value of equity divided by book value of the bank. If the Tobin' Q less than 1,

it means that bank is undervalued due to the market value of the banks is being below its total assets. Similarly, if the ratio is more than one, it means that the bank is overvalued because the market value of bank is higher than the book value of the bank's total assets (Al-karim and Alam, 2013; Alkhatib, 2012; and Ang, J.S. and Beck, K.L, 2000). Tobin's Q is bank market value of equity divided by book value of equity. Thus, the higher the Tobin's Q ratio the higher the bank performance in terms of market value.

3.3.2 Determinants of Banks (Independent Variables)

3.3.2.1 Capital Adequacy Ratio

Capital Adequacy is one of the determinants that impacts on the bank's financial performance. This ratio is bank's capital to its risks. Athanasoglou et al. (2005) said that capital adequacy is the value of money provided to support the business in the banks in case of negative situation. It shows the relationship between the bank's capital sources and the risks surrounding the bank's assets. It also measures the bank's solvency, i.e.., the bank's ability to repay its obligations and meet any losses that may accrue in the future (Dang 2011). In addition, Capital adequacy ratio determines the percentage of bank's ability and risks, such as credit risk, operational risk and protects bank depositors, thereby maintaining confidence in the banking system. Sangmi and Nazir, (2010) capital adequacy ratio has positive relationship with bank's flexibility in the case of crisis. Ongore and Kusa (2013) capital adequacy ratio is total capital to total assets. Navapan, K. & Tripe, D. (2003), Hazzi and Al- Kilani (2013) capital adequacy define as Tire Capital divide by risk weighted assets. Onaolapo, A.A. & Olufemi and A.E. (2012). Jha and Hui

(2012) posit that capital adequacy is Tire 1 Capital + Tire 2 Capital divided by risk weighted assets**.**

3.3.2.2 Assets Quality

Assets quality is another independent variable that influences a bank's profitability. Assets quality of banks consists of fixed assets, investment portfolio, current assets and others. Loans are the main avenues to collect profits for the banks. So, if the bank loans have quality, the performance of banks is will be high due to the quality of the loan having a direct impact on the profitability of commercial banks (Dang, 2011). Currently, losses from loans are the highest risks in commercial banks. Consequently, the best ratio to measure assets quality is nonperforming loan (NPL) divided by total loans (Ongore and Kusa, 2013). There have been many ratios to evaluate the assets quality used by different researchers. Samad, A, 2004; Tarawan (2006; and Alkhatib (2012) define assets quality as operational income divided by total assets. Adam (2014) defines assets quality as total loans to total assets. Loan is the main concern of commercial banks in any country and the size of nonperforming loans (NPL) must be decreased so that is does not affect banks' profitability (Ongore and Kusa, 2013). If the NPL to total loans are lower, the performance of the bank will be better.

3.3.2.3 Operational Efficiency

Operational Efficiency is another factor that impacts on profitability of banks. It is one of ratios used to evaluate how well a bank uses its internal assets and liabilities. There are different ratios to measure the operational efficiency. One of them is cost to income ratio

(Osborne 1995), which uses the following formula: Cost to income ratio = 1- {[ROA/ (1-tax rate)] * Equity/ Income} - (Bad debt expenses/ income). He concluded that the relationship between cost to income ratio and banks' profitability is weak. Rahman et al. in Homovich (2009); Ongore and Usa (2013); and Sangmi and Nazir (2010) opine efficiency ratio is operating revenue divided by total profit Almaza (2013) says operational efficiency is defined as operating expenses to operating income. Tarawneh (2006); Saha and Jan (2014); Al Karim and Alam (2013); and Alkatib (2012) use the measure of total operating expenses divided by net interest income, where the higher the operating expenses to net interest income, the higher the operational efficiency to generate income.

3.3.2.4 Bank Size

Bank size is one of factors that affect banks' profitability positively. When the bank size is larger the profitability is higher (Athanasoglou, Brissimis and Delis, 2005). Bank size is identified by the number of shares outstanding or it may be determined by number of branches (Ta Ho and Zhu , 2004). Al-Kaarim (2013); Almazar (2011); AlKhatib (2012); Almazari (2013),; and Saha and Jan (2014), posit that bank size is identified by logarithm of total assets. However, Said and Tumin (2011) used total assets without logarithms to measure bank size; they found there is no relationship between bank size and profitability of banks. Most researchers conclude that there is direct relationship between financial performance and bank size.

3.3.2.5 Liquidity Risk

Liquidity risk is one of the most important factors that influences on banks' financial performance. Liquidity risk is measured by a bank's ability to fulfill its current obligations through the conversion of some of its assets into cash without loss. On the other hand, a bank's liquidity is representative of its ability to meet its customers' requests relating to withdrawal of various deposits or provide the necessary facilities. Further, if the bank's liquidity ratio is very high, there is risk due to the bank not being able to face the unforeseen withdrawals, as well as when the bank has high liquidity as money, that is mean that the bank loss more profit. Liquidity risk has become a serious concern and challenge for the modern era banks (Comptroller of the Currency, 2001). High competition for consumer deposits, a wide array of funding products in wholesale and capital markets with technological advancements have changed the funding and risk management structure (Akhtar, 2007). A bank having good asset quality, strong earnings and sufficient capital may fail if it is not maintaining adequate liquidity (Crowe, 2009).

Banks should be equip enough to adjust with the changing monetary policy that shapes the overall liquidity trends in the financial market, the banks' own transactional requirements and repayment of short term borrowing (Akhtar, 2007). There are a number of other risks faced by banks such as credit risk and interest rate risk, which may culminate in the form of liquidity risk (Brunnermeier and Yogo, 2009). This has become more apparent during the Global Financial crisis which saw credit crisis resulting into massive liquidity squeeze in the market that triggered the crisis.

There are many ratios to measure liquidity. Alam,Raza and Akram (2011); and Almuman (2013) say liquidity risk is liquid assets to total assets; the first researcher found that the

relationship between bank performance and liquidity risk is negative, while the second researcher found it is positive. Choong, Thim and Kyzy (2012); Ongore and Kusa (2013); and Said and Tumin (2011) used the measure of net loans to total deposits and short-term debt and current portion; some concluded that the liquidity risk is not significant in commercial banks, while the others found it is significant in Islamic banking.

3.4 Hypotheses Development

This section provides the hypothesized relationship between financial performance of commercial banks by return on assets (ROA), return on equity (ROE), net interest margin (NIM) and Tobin's Q with the chosen variables namely, Capital adequacy, Assets quality, Operational efficiency, bank size, and liquidity risk representative by net loans to total deposits with short term debt and ratio of liquid assets divided by total assets.

Ongore and Kusa (2013) examined the financial performance determinants of 37 Kenyan commercial banks from the period 2001 to 2010, the findings show that Capital Adequacy has positive significant relationship with ROA and NIM while negative but significant relationship with ROE. Adam (2014) evaluated the performance of Erbil Bank in Kurdistan region of Iraq revealed during the period 2009-2013, he found that the ROA and ROE have positive relationship with capital adequacy ratio. Almumani (2013) evaluated the relative efficiency of 10 Saudi domestic banks from 2007 -2011. The findings show that there the Saudi Arabian banking sector is less risky due to the higher capital adequacy ratio. Based on empirical evidence, therefore, it is hypothesized:

H1: There is positive significant relationship between Capital adequacy ratio and ROA.

H2: There is positive significant relationship between Capital adequacy ratio and ROE.

H3: There is positive significant relationship between Capital adequacy ratio and NIM.

H4: There is positive significant relationship between Capital adequacy and Tobin's Q.

Ha and Hui (2012) compare the financial performance of different ownership structured commercial banks in Nepal based on their financial characteristics and identify the determinants of performance exposed by the financial ratios, their results that the asset quality has negative but significant relationship with ROA and ROE. Ongore and Kusa (2013) found that Asset Quality has negative significantly related to ROA, ROE and NIM. Adam (2014) investigates the financial performance of Erbil Bank for Investment and Finance, Kurdistan Region of Iraq during the period of 2009-2013. He found that the NPL TO total loan has negative and insignificant relationship with ROA and ROE. Based on empirical evidence, therefore, it is hypothesized:

H5: There is negative significant relationship between Assets quality and ROA.

H6: There is negative significant relationship between Assets quality and ROE.

H7: There is negative significant relationship between Assets quality and NIM.

H8: There is negative significant relationship between Assets quality and Tobin's Q.

Al Khatib (2012) examined the financial performance commercial banks listed in the stock exchange of Palestine for the period 2005-2010. The results show that there is positive significant relationship between the financial performance (ROA and Tobin's Q)

and operational efficiency. Tarawneh (2006) studied the financial performance of commercial banks in Oman for the period 1999-2003. The findings indicate that the financial performances of the banks (ROA and NIM) were positively and significantly with operational efficiency. Ongore and Kusa (2013) found that operational efficiency has positive and significant relationship with ROA, ROE and NIM. Based on empirical evidence, therefore, it is hypothesized:

H9: There is positive significant relationship between Operational efficiency and ROA.
H10: There is positive significant relationship between Operational efficiency and ROE.
H11: There is positive significant relationship between Operational efficiency and NIM.
H12: There is positive significant relationship between Operational efficiency and Tobin's Q.

Bertin, Moya and Perales (2014) Studied of 78 commercial banks in Latin America for the period of 1995 to 2010. They found that bank size has positive relationship with ROA and NIM. Tarawneh (2006) found that bank size has positive and significant relationship with ROA and NIM. Adam (2014) and Al Khatib (2012) found that the bank size has positive and significant relationship with ROA and Tobin's Q. Based on empirical evidence, therefore, it is hypothesized:

H13: There is positive significant relationship between Bank size and ROA.
H14: There is positive significant relationship between Bank size and ROE.
H15: There is positive significant relationship between Bank size and NIM.

H16: There is positive significant relationship between Bank size and Tobin's Q.

Arif and Anees (2014) evaluated of 22 banks in Pakistan for the period from 2004-2008, their findings show that the relationship between profitability and liquidity risk is negative but significant. Ongore and Kusa (2013) found that the Liquidity risk is (net loan to total deposits) has positive but not significantly related with ROA, ROE and NIM. Bertin, Moya and Perales (2014) found that there relationship of bank' financial performance with credit risk and liquidity risk is negative. Based on empirical evidence, therefore, it is hypothesized:

H17: There is positive significant relationship between Net loans to total deposits and ROA.

H18: There is positive significant relationship between Net loans to total deposits and ROE.

H19: There is positive significant relationship between Net loans to total deposits and NIM.

H20: There is positive significant relationship between Net loans to total deposits and Tobin's Q.

Akhtar, Ali and Sadaqat (2011) to evaluate the liquidity risk of 12 banks (six Islamic banks and six conventional banks) in Pakistan for period 2006-2009. The results illustrate that the relationship of liquidity risk (liquid asset to total assets) is positively insignificant with ROA and ROE in conventional banks, while in Islamic banking the relationship of

ROA with liquidity risk is positive and significant. Said and Tumin (2011) investigated the impact of bank-specific factors which include the liquidity of commercial banks on their performance, their findings that the liquidity risk (liquid assets to total assets) has negative relationship with ROA and ROE. Based on empirical evidence, therefore, it is hypothesized:

H21: There is positive significant relationship between Liquid assets to total assets and ROA.

H22: There is positive significant relationship between Liquid assets to total assets and ROE.

H23: There is positive significant relationship between Liquid assets to total assets and NIM.

H24: There is positive significant relationship between Liquid assets to total assets and Tobin's Q.

3.5 Research Design

To achieve the objective of the study, correlation used to decipher the relationship between capital adequacy, assets quality, operational efficiency, bank size, liquidity risk (net loan to total deposit and short-term debt) and liquid assets to total assets ratio as independent variables and ROA, ROE, NIM and Tobin's Q as dependent variables.

3.6 Sample Description and Data Collection

The sample of this study covers all banks listed and not-listed on the Kingdom of Saudi Arabian stock exchange, including foreign owned banks and local banks (24 banks). The banks are chosen to fulfill of the main purpose of this study which is to examine the relationship between financial performances of all these banks in Saudi Arabia. In this study, the final sample comprises 21 commercial banks, i.e., 10 foreign banks and 11 domestic banks. Three banks are excluded- one is a domestic bank the National Commercial Bank (NCB) and the other two foreign banks, T.C.ZIRAAT BANKASI A.S. and Industrial and Commercial Bank of China (ICBC), due to unavailability of its financial statements in DataStream and SAMA reports. Also, the ICBC is licensed but has not commenced operations.

Data of 11 listed domestic banks on the Saudi Arabia Stock Exchange were retrieved from Thomson DataStream provided by the library of Universiti Utara Malaysia, while data for the remaining 10 foreign banks were obtained from their financial statements, SAMA. All data used in the study are therefore secondary data but provided all the needed information required by the researcher in addressing the research problem.

3.7 Model Specification

The multiple regression method is used to examine the relationship between financial performances of Saudi commercial banks. The main indicators (dependent variables) of financial performance of commercial banks used were ROA, ROE, NIM and Tobin's Q. The main determinants (independent variables) were CAR, AQ, OE, SIZE, LIQR1 and LIQR2. In this study, the four regression models are estimated as follows:

$$ROA = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit$$

$$ROE = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit$$

$$NIM = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit$$

$$TQ = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit$$

Where,

- ROA = Return on Assets
- ROE = Return on Equity
- NIM = Net Interest Margin
- TQ = Tobin's Q
- CAR = Capital Adequacy Ratio
- AQ = Assets Quality
- OE = Operational Efficiency
- SIZE = Bank Size (Total Assets)
- LIQR1 = Liquid Risk Ratio (Loan to Deposits)
- LIQR2 = Liquid Risk Ratio (Liquid Asset to Total Assets)

3.8 Measurements of the Study Variables

This table shows the measurements which were used to run the study variables

Table 3.1

Measurements of the Study Variables

Variable	Measurements
Return on Assets (ROA)	Net income / Total Assets
Return on Equity (ROE)	Net income / Common Equity
Net Interest Margin (NIM)	Net interest income / Average Earning Assets
Tobin's Q	Market Value of Bank / Book Value of Equity
Capital Adequacy Ratio(CAR)	(Tire 1 Capital + Tire 2 Capital) / Risk Weighted Assets
Assets Quality (AQ)	Non-Performing Loan / Total Loan
Operational Efficiency (OE)	Cost / Income Ratios = Total Operating Expenses/ Net Interest Income
Bank Size	Logarithm of Total Assets
Liquidity Risk 1 (LIQR1)	Net Loans/ Total Deposits and Short-term debt & Current Portion
Liquidity Risk 2 (LIQR2)	Cash and Cash Equivalent / Total Assets

3.9 Data Analysis

Data was analyzed by using two statistical packages: statistical package for social sciences (SPSS) Version 21.0 and gretl. The analysis described below:

3.9.1 Regression Assumption

Hair, Anderson, Tatham and Black, (1998) posit that linearity, normality, multicollinearity and heteroscedasticity are four main assumptions, tested right through from data sample to verify the validity of the variables of a study in order to identify the best linear unbiased estimate.

3.9.1.1 Normality

In statistics the normality test is used in determine whether a data set is well modeled by normal distribution.

3.9.1.2 Multicollinarity

To measure the impact of multicollinearity there are two tests which are tolerance value and the variance inflation factor (VIF). According to Guajarati (2007), if the variable is higher than 10 which will happen if R^2 higher than 0.90, that means there is highly multicollinearity between the variables.

3.9.2 Descriptive Analysis

Descriptive analysis was used to analyze the data (Dodge, Y., 2003). The mean, minimum, maximum and the standard deviation of ROA, ROE, NIM, Tobin's Q, capital adequacy, asset quality, operational efficiency, bank size, liquidity risk (net loan to total deposit and short term debt) and liquid assets to total assets ratio were analyzed to get an indication of the general overview of the financial performance of banks in the Kingdom of Saudi Arabia.

3.9.3 Correlation Analysis

Correlation analysis is one of the most common and most useful statistical analyses (Filed, 2005). It is a measure of the relationship between variables (Rodgers and Nicewander, 1988). It also technically refers to any of the more specialized types of relationship between mean values. This study determined the relationship between the variables. The result of analysis shows the nature, direction and significance of the correlation of the variables in the research.

3.9.4 Multiple Linear Regression Analysis

Regression analysis is a statistical instrument to measure the relationship between variables (Sykes, 2000). Through regression analysis, several variables that focus on the relationship between one or more independent variables with a dependent variable can be analyzed (Freedman, 2005). Regression analysis is widely used for forecasting, predicting and identifying the relationship between dependent and independent variables.

3.10 Summary

The present chapter describes the methodology that is used in this study and the hypotheses formulated for testing the objectives. It also research design and data sources, and explains the analytical framework of the study.

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.1 Introduction

This chapter provides the analysis and findings of the study on financial performance of Saudi commercial banks. The present chapter is organized as follows: Section 4.2 presents the analysis and findings of all Saudi banks. Section 4.3 is the analysis of findings for Saudi domestic banks and foreign banks in section 4.4. Section 4.5 compares between domestic banks and foreign banks. Section 4.6 describes the results from the hypothesis testing. Section 4.7 summarizes the chapter.

4.2 Analysis and Findings for All Saudi Banks

4.2.1 Regression Assumption

4.2.1.1 Normality

To make sure of the normality for data of Saudi domestic banks, The test reflects the shape of Skewness and Kurtosis distribution (see -Table 4.2).

4.2.1.2 Multicollinarity

Table 4.1 shows the VIF, tolerance and R^2 are not more than 10 and 0.90. This depicts that there is no problem of multicollinearity and that interpretation of the regression covariate coefficient should not be affected adversely.

Table 4.1:
Testing of Multiconllinearity (All Saudi Banks)

Variables	Coefficient Of Determination on other Repressors and VIF		
	Tolerance	R^2	VIF
CAR	.637	0.53	1.570
AQ	.806	0.33	1.240
OE	.760	0.28	1.316
SIZE	.662	0.51	1.510
LIQR1	.704	0.47	1.420
LIQR2	.785	0.40	1.274

4.2.2 Descriptive Statistics

Table 4.2 shows a summary of the descriptive statistics for the dependent and independent variables for the financial performance of Saudi commercial banks. Based on the Table, the average of RO), ROE, NIM and Tobin's Q for all the banks are 1.87, 15.64, 2.85 and 2.63, respectively with the highest values of 13.21, 57.52, 7.79 and 18.11; and lowest values of -2.53, -34.19, 0.55 and 0.48, respectively. The standard deviations for these variables are 1.62, 10.89, 1.32, and 2.42, respectively. This reflects that there is high degree of volatility.

Table 4.2:
Descriptive Statistics, using the observations 1 – 294 (All Saudi Banks)

Variable	Mean	Median	Minimum	Maximum	Std. Dev.	Skewness	Kurtosis
ROA	1.86512	1.70000	-2.52821	13.2100	1.62300	2.23746	12.7396
ROE	15.6422	15.0150	-34.1850	57.5200	10.8866	0.103187	3.06562
NIM	2.85451	2.79000	0.550000	7.79000	1.32418	0.713091	1.55971
Tobin's Q	2.63193	1.79000	0.480000	18.1100	2.42077	2.93893	12.9011
CAR	18.3012	16.3500	10.0600	183.000	12.9511	10.0166	120.531
AQ	3.04418	1.85500	0.000000	25.1600	3.81943	3.13510	10.8891
OE	148.498	123.006	44.5400	579.080	82.4145	1.55581	3.05693
SIZE	18.1980	18.4860	9.62374	23.7832	2.95743	-1.07401	1.57509
LIQR1	76.5396	78.6858	3.17609	202.429	23.9096	0.673079	3.84767
LIQR2	11.1041	6.91330	0.461678	44.5601	10.4728	1.35664	0.917500

As can be seen from Table 4.2, the mean score of the capital adequacy ratio (CAR) of all commercial banks in Saudi Arabia was 18.30, which indicate that this figure is more than double the 8 percent statutory requirement set by SAMA, according to the requirement of Basel Standard II (SAMA, 2014). The standard deviation of this variable is 12.95 with maximum CAR of 183.00 and minimum of 10.06. This may mean that commercial banks in the Kingdom of Saudi Arabia prefer investment in less risky assets.

Assets quality (AQ) which is measured by the amount of non- performing loan divided by to total loans has an average value of 3.04 during the period of 2000 until 2013. This means that the credit risk is low and also the expected relationship with profits is to be positive. The highest value of AQ ratio is 25.16 and the lowest value is 0.00. Another important variable, operational efficiency (OE), that is determined by cost to income ratio or total operating expenses to net interest income is found to be 148.50 on average. It depicts that more than 140 percent of income (net interest income) of Saudi commercial banks is derived from operating expenses (traditional function). The minimum value of

operational efficiency is 44.54 and the maximum is 579.08 with the standard deviation of 82.41. Based on the logarithm figures for the mean score for banks' total assets (SIZE), it appears that total assets of Saudi banks is in fact large with an average value of 18.20. There are significant variations among the selected banks in this study as indicated by the standard deviation statistics for this variable at 2.96.

The fifth independent variable in this study is liquidity risk (LIQR1) which is determined by net loans to total deposits with short-term debt and current portion. The lowest value for this variable is 3.18 and the maximum value is 202.43. The Table also presents the mean value for net loan divided by total deposits of 76.54 and the standard deviation is 23.91%. This reflects that Saudi commercial banks use 76.54 percent of customer deposits in lending operations and have high liquidity. In addition, this indicator shows that the commercial banks in Saudi Arabia depend on the customers' deposits to operate the banking business. Finally, the mean of the liquid assets to total assets (LIQR2) of is 11.10, showing the banks keep 11 percent only of cash, due from banks and treasury bills (liquid assets). The maximum value of this variable is 44.56 and the minimum value is 0.46, while its standard deviation is 10.47.

4.2.3 Correlation Analysis

This section shows the relationship between the financial performance of Saudi commercial banks by applying ROA, ROE, NIM and Tobin's Q with the independent variables. The coefficients provide the size and direction of the relationship, whether it is

weak, strongly negative or positive. The lower the values, the weaker the relationship and vice versa.

Table 4.3:

Correlation Analysis for all Saudi Arabia Banks

		ROA	ROE	NIM	Tobin's Q
CAR	Corr	.291**	0.062	.279**	0.012
	Sig	0.000	0.375	0.000	0.863
AQ	Corr	-.127	-.003	.270**	-.245**
	Sig	0.094	0.97	0.000	0.000
OA	Corr	-.105	0.013	-.041	-.148*
	Sig	0.156	0.849	0.545	0.025
SIZE	Corr	-.016	.147*	0.111	-.302**
	Sig	0.833	0.029	0.103	0.000
LIQR1	Corr	.272**	-.002	.372**	0.047
	Sig	0.000	0.981	0.000	0.476
LIQR2	Corr	0.088	.319**	.472**	0.008
	Sig	0.237	0.000	0.000	0.906

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.3 shows the correlation analysis at the aggregate level of all Saudi banks (domestic and foreign banks). Based on the Table, Capital adequacy ratio (CAR) is significantly and positively related (corr= .291 and corr =.279 at 0.01 level) with ROA and NIM. This correlation may reflect that Saudi commercial banks face no problems in profits because of leverage. Meanwhile, CAR has a positive but insignificant relationship with ROE and Tobin's Q (corr= 0.062, p-value= at 0.375 and corr =0.012, p-value = 0.863 respectively). This is consistent with the argument that higher adequacy ratio leads to banks investing more in less risky assets, like loans or treasury securities.

Asset quality (AQ), measured by non-performing loan divided by total loans is negatively correlated with all the four financial bank performance indicators: ROA, ROE, NIM and Tobin's Q; but only significantly with NIM and Tobin's Q (corr = -.127, p-value =0.094; corr = -.003, p-value = 0.97; crr =-.270 , p-value = 0.000; corr = -.245 , p-value = 0.000 respectively). This indicates that poor AQ or high NPL to total assets related to poor bank performance. The negative correlation between AQ with NIM and Tobin's Q is very strong. This reflects that the loans represent the highest assets to generate income from investments.

Another independent variable is operational efficiency (OE). It has a weakly positive but insignificant relationship with ROE (corr= 0.013, p-value = 0.849). At the same time, it has a weakly negative relationship with the other indicators: ROA, NIM and Tobin's Q (corr = -.105, p-value =0.156; corr = -.041, p-value = 0.545 and corr = -.148, p-value = 0.025 at level 0.05 respectively). Bank size which is measured by logarithm of total assets has negative but insignificant relationship with ROA (corr = -.016, p- value = 0.833); and a negative and significant relationship with Tobin's Q (corr= -.302 at level 0.01). Meanwhile, it has positive and significant relationship with ROE and NIM (corr = .147 at level o.05 and 0.111 at level 0.10).

Finally, liquidity risk by applying net loans to total deposits with short-term debt (LIQR1) has a positive and significant relationship with ROA and NIM (corr = .272; corr = .372 at level 0.01); and also positive but insignificant relationship with Tobin's Q (corr= 0.047, p-value= 0.476). It also has a negative and insignificant relationship with

ROE (corr= -.002, p-value = 0.981). However, liquidity risk by using liquid asset to total assets (LIQR2) has positive relationship with all four indicators of financial performance: ROA, ROE, NIM and Tobin's Q; where the relationship with ROA and Tobin's Q is positive but insignificant; and positive and significant with ROE and NIM but the relationship is very weak.

4.2.4 Regression Results

The main objective of this study is to identify the relationship and factors that affect financial performance of Saudi banks, based on the following models:

$$\boldsymbol{ROA = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit}$$

$$\boldsymbol{ROE = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit}$$

$$\boldsymbol{NIM = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit}$$

$$\boldsymbol{TQ = \beta_0 + \beta_1 CAR + \beta_2 AQ + \beta_3 OE + \beta_4 SIZE + \beta_5 LIQR1 + \beta_6 LIQR2 + eit}$$

Table 4.4 presents the results of analysis and relationship between financial performance (ROA, ROE, NIM and Tobin's Q) with capital adequacy ratio, asset quality, operational efficiency, bank size , liquidity risk 1 (net loans/ total deposits) and liquidity risk 2 (liquid Assets / total assets).

Table 4.4.
Regression Results for All Saudi Banks

VARIABLES	MODEL 1 **(ROA)**	MODEL 2 **(ROE)**	MODEL 3 **(NIM**	MODEL 4 **(Tobin's Q)**
Constant	-2.46176	-4.25922	-0.982018	6.60196
	(-2.856) ***	(-0.739)	(-1.784) *	(6.352)***
CAR	0.108841	0.284984	0.0251483	-0.000347
	(4.23) ***	(1.769) *	(1.633)	(-0.0122)
AQ	-0.124042	-0.779386	0.046008	-0.161156
	(-2.184) **	(1.769) ***	(1.947)*	(-3.591)***
OE	0.000633	-0.002449	-0.002198	-0.001117
	(-0.389)	(-3.152)	(-2.449)**	(-0.665)
SIZE	0.0727026	0.598909	0.0481286	-0.22043
	(1.771) *	(-0.261) **	(1.952)*	(-4.732)***
LIQRI	0.016927	0.0337102	0.028254	-0.0013804
	(2.417) **	(0.863)	(7.570)***	(-0.198)
LIQR2	0.027284	0.347865	0.050056	0.054745
	(2.108) **	(4.302) ***	(6.479)***	(4.028)***
Observation	159	192	192	201
R^2	0.291	0.174	0.496	0.228
Adjusted R^2	0.263	0.147	0.48	0.204
F	10.384	6.489	30.372	9.533
Sig. (F- Value)	.000	.000	.000	.000
Durbin-Watson	1.453	1.337	2.064	1.40

Note The figures in parentheses are t-Statistics
* Statistically significant at the 1% level
** Statistically significant at the 5% level
*** Statistically significant at the 10% level

As shown in Table 4.4, the F-value in model 1, model 2, model 3 and model 4 are 10.384, 6.489, 30.37 and 9.5, respectively and statistically significant at 0.000. The R^2 for the four models is 0.291, 0.174, 0.496 and 0.228, respectively, which show that 29.1 percent , 17.4 percent, 49.6 percent and 22.8 percent of the variance of Saudi bank's financial performance using ROA, ROE, NIM and Tobin's Q, are significant explained by the six independent variables.

As can be observed, capital adequacy ratio (CAR) has positive and significant relationship with ROA and ROE with confidence level of 90 percent, and 99 percent. However, the relationship with NIM is positive but insignificant; while Tobin's Q has a negative and insignificant relationship. The coefficient relationship between assets quality ratio (AQ) with ROA, ROE, NIM and Tobin's Q is -0.124, -0.779, 0.046 and -0.161, with 95 percent, 90 percent, 99 percent and 90 percent confidence levels, respectively. These show that AQ has negative but significant relationship with ROA, ROE and Tobin's Q; and positive and significant relationship with NIM with a confidence level of 99 percent.

The relationship of operational efficiency (OE) with financial performance is 0.0006, -0.002, -0.002, and -0.0011. These show that OE has insignificant relationship with ROA, ROE and Tobin's Q; while the relationship with NIM is significant but negative with confidence level of 95 percent. Furthermore, bank size that measured by logarithm of total assets has significant relationship with all dependent variables: ROA, ROE, NIM and Tobin's Q at 0.073, 0.599, 0.048, -0.220 with 99 percent, 95 percent, 99 percent and 90 percent confidence levels, respectively. This show the relationship with ROA, ROE and NIM was significant and positive, but negative and significant relationship with Tobin's Q, which means the higher the total assets, the lower the market to book value.

The other independent variable is liquidity risk by applying net loan to total deposit (LIQR1). The relationship is 0.016927, 0.0337102, 0.028254 and -0.0013804 with ROA, ROE, NIM and Tobin's Q. This shows that LIQR1 has significant and positive

relationship with ROA and NIM with 95 percent and 99 percent confidence levels, respectively. At the same time, its relationship with ROE and Tobin's Q is positive but insignificant with ROE; and negative and insignificant relationship with Tobin's Q.

Finally, the relationship of liquid assets to total assets (LIQR2). LIQR2 has 0.027284, 0.347865, 0.050056 and 0.054745 correlation coefficients with ROA, ROE, NIM and Tobin's Q with confidence levels of 95 percent, 90 percent, 90 percent and 90 percent, respectively. This means that LIQR2 has positive and significant relationship with the financial performance of commercial banks in Saudi Arabia.

4.3 Analysis and Findings for Saudi Domestic Banks

4.3.1 Regression Assumption

4.3.1.1 Normality

To make sure of the normality for data of Saudi domestic banks, the researcher used the Skewness and Kurtosis of data distribution (see table 4.6).

4.3.1.2 Multicollinarity

Table 4.5 shows the VIF, tolerance and $R^2$of the variables, all the variables are not more than 10 and 0.90. This depicts that there is no problem of multicollinearity and that interpretation of the regression covariate coefficient should not be affected adversely.

Table 4.5:

Testing of Multiconllinearity (Domestic Banks)

Variables	Coefficient Of Determination on other Repressors and VIF		
	Tolerance	R^2	VIF
CAR	.441	0.822	2.267
AQ	.829	0.489	1.207
OE	.412	0.612	2.427
Bank Size	.350	0.732	2.858
LIQR1	.520	0.609	1.922
LIQR2	.769	0.504	1.300

4.3.2 Descriptive Statistics

Table 4.6 presents a summary of the descriptive statistics for the dependent and independent variables which identify the financial performance of Saudi domestic commercial banks. According to the table, ROA, ROE, NIM and Tobin's Q for Saudi domestic banks are 2.71291, 18.9452, 3.29958 and 3.52173, average respectively with the minimum values of -1.48, -7.99, 2.12 and 0.880 and the maximum values of 13.21, 57.52, 7.79 and 18.11, respectively; while, The standard deviation is 1.89, 11.77, 1.05 and 3.04; the highest standard deviation for ROE reflects that there is high volatility.

Table 4.6:
Descriptive Statistics, using the observations 1 – 154 (Domestic Banks)

Variable	Mean	Median	Minimum	Maximum	Std. Dev.	Skewness	Kurtosis
ROA	2.71291	2.39000	-1.48000	13.2100	1.88929	2.33383	10.9829
ROE	18.9452	16.9600	-7.99000	57.5200	11.7696	0.570725	0.440692
NIM	3.29958	2.97500	2.12000	7.79000	1.05438	2.29771	6.38751
Tobin’s Q	3.52173	2.41000	0.880000	18.1100	3.04146	2.34075	7.33087
CAR	20.4686	17.4000	11.2400	183.000	17.5823	7.80154	67.4819
AQ	1.98304	1.59000	0.0300000	6.39000	1.34234	1.20986	0.990822
OE	125.320	110.480	44.5400	277.710	49.2847	0.869890	0.429481
SIZE	18.0828	18.1661	15.7770	19.4498	0.791862	-0.600330	-0.187247
LIQR1	83.1797	81.0819	3.17609	202.429	22.6162	1.32704	9.93718
LIQR2	10.1746	5.96290	0.816264	40.0822	9.20412	1.54569	1.57965

From Table above, that mean of capital adequacy ratio (CAR) for Saudi domestic banks is 20.47 with standard deviation of 17.58, which means that Saudi domestic commercial banks prefer to invest in less risky assets, which results in lower profits. Further, the average of non-performing loan to total loan (AQ) is 1.98 with standard deviation of 1.34 that reflects that NPL is very low. The minimum and maximum values of this ratio are 0.03 and 6.39, respectively. Cost to income ratio as a measure of OE has average of 125.32 with minimum value 44.54 and maximum value of 77.710. The standard deviation of this ratio is 49.28 percent. This shows that more than125 percent of income of Saudi domestic commercial banks is derived from operating traditional functions. The Table also shows that the average size of Saudi domestic banks is 18.08 percent with standard deviation of 0.79 which reflects the variation between Saudi domestic banks.

In addition, the minimum value of total loan to total deposits (LIQR1) is 3.18 and the maximum value is 202.43. The average value of this ratio is 83.18 with high standard deviation of 22.62. The liquid asset to total assets (LIQR2) has average of 10.17 with minimum and maximum values of 0.81and 40.08, respectively and standard deviation of 9.20 percent.

4.3.3 Correlation Analysis

This section shows the relationship between the financial performance of Saudi domestic commercial banks using ROA, ROE, NIM and Tobin's Q with independent variables.

Table 4.7:
Correlation Analysis for Saudi Domestic Banks (Domestic Banks)

		ROA	ROE	NIM	Tobin's Q
CAR	Corr	.155	-.053	.224*	-.079
	Sign	.178	.605	.029	.419
AQ	Corr	-.215	-.290**	-.036	-.120
	Sign	.062	.005	.729	.230
OE	Corr	-.093	-.115	-.301**	.156
	Sign	.417	.260	.003	.109
SIZE	Corr	.040	.171	.075	-.187
	Sign	.724	.091	.467	.051
LIQR1	Corr	-.158	-.400**	.040	-.151
	Sign	.166	.000	.700	.122
LIQR2	Corr	.126	.261**	.176	.188*
	Sign	.269	.009	.087	.049

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.7 shows that relationship between capital adequacy ratio (CAR) is positive but insignificant with ROA and positively significantly with NIM (corr = .155 p-value and corr =.178,at 0.01 level). However, this ratio has negative and insignificant relationship with ROA and Tobin's Q (corr = -.053, p-value =.605 and corr = -.079, p- value =.419).

Asset quality (AQ) has negative and insignificant relationship with all indicators of financial performance, except the ROE is negative but significantly related with ratio of NPL to total loans at 0.01 levels. This indicates that poor AQ or high NPL to total assets is related to poor bank performance. Further, there is negative and insignificant relationship between the operational efficiency (OE) with ROA and ROE (cor = -.093, p-

value = -.115 and corr = .417, p-value =.260) and negative but significant with NIM (corr =-.301 at 0.01 level).

The relationship with Tobin's Q is positive but not-significant (corr =.156 at p- value .109). The correlation between bank size with ROA, ROE and NIM is positive but insignificant. There is an insignificant and negative relationship with Tobin's Q. Loans to total deposit (LIQR1) has positive but insignificant relationship with NIM, and significantly and negative relationship with ROE. At the same time, the relationship with ROA and Tobin's Q is negative and not-significant.

Finally, the relationship between liquid assets to total assets (LIQR2) is positive with all measures of financial performance of commercial banks; the relationship with ROE and Tobin's Q is positive and significant at 0.01 and 0.05 levels, respectively; while the relationship with ROA and NIM is positive but insignificant.

4.3.4 Regression Results

Table 4.8 below shows the results of regression analysis which identifies the relationship between the financial performances of Saudi domestic banks with the determinants of bank performance.

Table 4.8:

Regression Results for Saudi Domestic Banks

VARIABLES	MODEL 1 (ROA)	MODEL 2 (ROE)	MODEL 3 (NIM	MODEL 4 (Tobin's Q)
Constant	-4.241	51.215	-2.793	26.2
	(-.450)	(1.019)	(-.632)	(2.836)***
CAR	0.171	0.189	0.017	-0.059
	(-3.373)***	(0.675)	(0.671)	(-1.032)
AQ	-0.352	-3.528	0.029	-0.608
	(-1.991)*	(-4.117)***	(0.384)	(-3.524)***
OE	0.003	-0.004	-0.003	-0.002
	(0.431)	(-.108)	(-.889)	(-.365)
SIZE	0.305	-0.971	0.177	-1.066
	(0.683)	(-.411)	(0.855)	(-2.401)**
LIQRI	-0.021	-0.178	0.03	-0.025
	(-1.117)	(-1.623)	(-3.157)***	(-1.270)
LIQR2	0.033	0.41	0.025	0.095
	(1.349)	(-3.087)***	(2.108)***	(3.865)***
Observation (154)	73	91	91	99
R^2	0.268	0.272	0.276	0.25
Adjusted R^2	0.201	0.22	0.225	0.201
F	4.02	5.228	5.343	5.108
Sig. F-value	0.002	0.000	0.000	0.000
Durbin-Watson	1.568	1.223	1.487	1.253

Note The figures in parentheses are t-Statistics

* Statistically significant at the 1% level

** Statistically significant at the 5% level

*** Statistically significant at the 10% level

According to the Table above, it is found the F-values in the four models are 4.02, 5.228, 5.343 and 5.108 and statistically significant at 0.002, 0.000, 0.000 and 0.000, respectively. Also, R^2 is 26.8 percent, 27.2 percent, 27.6 percent and 25 percent, respectively. This reflects that differences of financial performance of Saudi domestic banks using ROA, ROE, NIM and Tobin's Q are significantly explained by the determinants of bank performance.

It noted that the relationship of capital adequacy ratio (CAR) for domestic banks with ROA is positive and significant at 90 percent level of confidence. Meanwhile, there are positive but not-significant relationships with ROE and NIM; and negative and insignificant relationship with Tobin's Q. Asset quality ratio (AQ) has negative but significant relationships with ROA, ROE and Tobin's Q with 99 percent, 90 percent and 90 percent confidence levels, respectively. However, the relationship with NIM is positive but insignificant; the relationship between operational efficiency with financial performance of Saudi domestic banks is positive but insignificant with ROA; and negative and insignificant with ROE, NIM and Tobin's Q. Another factor is bank size. It has positive but insignificant relationship with ROA and NIM, and negative and insignificant relationship with ROE. There is also a negative but significant relationship with Tobin's Q at 95 percent confidence level.

Finally, the relationship of LIQR1 (total loan to total deposit) is negative and not-significant with ROA, ROE and Tobin's Q. There is positive and significant relationship with NIM at confidence level of 90 percent. LIQR2 (liquid assets to total assets) is found to have positive and significant relationship with ROA, ROE, NIM and Tobin's Q with 90 percent confidence levels. NIM is not significant with 90 percent confidence level.

4.4 Analysis and Findings for Saudi Foreign Banks

4.4.1 Regression Assumption

4.4.1.1 Normality

To make sure of the normality for data of Saudi foreign banks, the researcher used the Skewness and Kurtosis of data distribution (see Table 4.10).

4.4.1.2 Multicollinarity

Table 4.5 shows the VIF, tolerance and R^2 of the variables. It is found that all independent variables are not more than 10 and 0.90. This shows that there is no problem of multicollinearity.

Table 4.9:

Testing of Multiconllinearity (Foreign Banks)

Variables	Coefficient Of Determination on other Repressors and VIF		
	Tolerance	R^2	VIF
CAR	.656	0.433	1.525
AQ	.647	0.549	1.546
OE	.583	0.4924	1.715
SIZE	.528	0.806	1.895
LIQR1	.761	0.443	1.314
LIQR2	.552	0.675	1.811

4.4.2 Descriptive Analysis

Table 4.5 presents a summary of the descriptive statistics for the dependent and independent variable which identify the financial performance of foreign Saudi commercial banks. Table 4.10 shows ROA ROE, NIM and Tobin's Q for Saudi foreign banks are 1.227, 12.939, 2.501 and 1.843, averages respectively with standard deviation of 1.0006, 9.316, 1.411 and 1.252 respectively. The minimum values are -2.530, -34.180, 0.550 and 0.480 while the maximum values are 3.990, 41.630, 6.680 and 5.380, respectively.

Table 4.10:
Descriptive Statistics, using the observations 1 – 140 (Foreign Banks)

Variable	Mean	Median	Minimum	Maximum	Std. Dev.	Skewness	Kurtosis
ROA	1.227	1.010	-2.530	3.990	1.0006	-0.037	1.825
ROE	12.939	14.470	-34.180	41.630	9.316	-1.168	6.351
NIM	2.501	2.620	0.550	6.680	1.411	0.629	0.090
TQ	1.843	1.420	0.480	5.380	1.252	1.232	0.603
CAR	16.19	15.070	10.060	32.700	4.760	1.528	2.248
AQ	4.097	2.430	0.000	25.160	4.913	2.218	4.572
OE	168.09	134.60	46.200	579.080	98.380	1.161	1.212
SIZE	18.290	20.270	9.620	23.780	3.969	-0.893	-0.285
LIQR1	71.294	71.700	24.290	139.820	23.838	0.361	-0.309
LIQR2	11.909	7.433	0.462	44.560	11.434	1.184	0.362

Table 4.10 shows that capital adequacy (CAR) average of Saudi foreign banks for the period 2000-2013 is 16.19 with standard deviation of 4.76 percent (less risky); the mean of asset quality (AQ) is 4.097 with standard deviation 4.91percent. Operational efficiency (OE) is 168.1 during the time period of study with a high standard deviation 98.38 percent. The minimum and maximum values are 46.2 and 579.1, respectively. The average of bank size (logarithm of total assets) is 18.29 with minimum value of 9.62 and maximum value of 23.8. The standard deviation of this ratio is 3.97 percent.

In addition, the maximum value and minimum values of total loan to total deposits (LIQR1) is 139.82 and 24.29, respectively. The mean of this variable is 71.29 with standard deviation of 23.83. A liquid asset to total assets (LIQR2) is 11.91 with minimum value of 0.46, maximum value of 44.56 and standard deviation of 11.43.

4.4.3 Correlation Analysis

This section explains the relationship between the financial performances of Saudi foreign commercial banks applying by ROA, ROE, NIM, and Tobin's Q with the determinants as independent variables.

Table 4.11:
Correlation Analysis for Saudi Foreign Banks

		ROA	ROE	NIM	Tobin's Q
CAR	Corr	.340**	.080	.265**	.190*
	Sign	.001	.414	.006	.048
AQ	Corr	.043	.206*	.492**	-.333**
	Sign	.679	.030	.000	.000
OE	Corr	.096	.193*	.140	-.311**
	Sign	.330	.035	.127	.000
SIZE	Corr	-.012	.220*	.147	-.708**
	Sign	.904	.015	.107	.000
LIQR1	Corr	.557**	.206*	.446**	.156
	Sign	.000	.024	.000	.083
LIQR2	Corr	.182	.466**	.682**	-.216*
	Sign	.063	.000	.000	.016

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.11 shows that the capital adequacy ratio (CAR) has positive and significant relationship with all bank performance indicators (ROA, ROE, NIM and Tobin's Q) at 0.01 levels, except ROE is not significant. Similarly, the relationship between non-performing loans to total loan (AQ) with ROA is positive but insignificant, whereas, the relationship with ROE is positive and significant at the 0.05 levels. Meanwhile, this ratio has negative but significant relationship with NIM and Tobin's Q at 0.01 levels.

Operational efficiency (OE) has positive but insignificant relationship with ROA and NIM, while with ROE; it is a positive and significant relationship at the 0.05 level and negative but significant relationship with Tobin's Q at 0.01level. Also, the relationship between Saudi foreign bank sizes with ROA is negative and insignificant, while with Tobin's Q is negative but significant.

The relationship of this factor is positive and significant with ROE at 0.05 level is and it has a positive but insignificant relationship with NIM. Lastly, the relationship of LIQR1 (total loan to total deposit) is positive and significant with ROA, ROE, NIM and Tobin's Q with 0.01, 0.05, 0.01 levels, except Tobin's Q is not significant. Meanwhile, LIQR2 (liquid assets to total assets) has positive and significant relationship with ROA, ROE and NIM at 0.01 level, except ROA is not significant. However, the relationship of this ratio with Tobin's Q is significant but negative at 0.05 significantly level.

4.4.4 Regression Analysis

Table 4.12 shows the results of regression analysis which determines the relationship between the financial performances of foreign banks in Saudi Arabia with the determinants of bank performance.

Table 4.12:

Regression Results for Saudi Foreign Banks

VARIABLES	MODEL 1 (ROA)	MODEL 2 (ROE)	MODEL 3 (NIM	MODEL 4 (Tobin's Q)
Constant	-1.193	-2.506	-0.093	6.484
	(-1.765)*	(1.137)	(-.138)NS	(-.780)
CAR	0.065	0.267	0.027	-0.015
	(2.654)***	(1.27)	(1.124)	(-2.485)**
AQ	0.02	-0.212	0.072	-0.056
	(0.49)	(-.896)	(2.814)***	(11.161)***
OE	0.002	0.012	-0.001	0.001
	(1.748)*	(1.228)	(-.625)	(1.122)
SIZE	-0.004	0.276	-0.005	-0.242
	(-.157)	(-.403)	(-.206)	(-10.417)***
LIQRI	0.013	0.007	0.017	-0.004
	(2.478)**	(0.185)	(4.191)***	(-.964)
LIQR2	0.012	0.303	0.075	0.018
	(1.043)	(3.188)***	(7.292)***	(1.989)**
Observation (140)	85	100	100	101
R^2	0.307	0.212	0.636	0.648
Adjusted R^2	0.254	0.161	0.612	0.625
F	5.768	4.169	27.028	28.8
Sig. F-value	0.000	0.001	0.000	0.000
Durbin-Watson	2.003	1.716	2.399	2.013

Note The figures in parentheses are t-Statistics

* Statistically significant at the 1% level

** Statistically significant at the 5% level

*** Statistically significant at the 10% level

As can be observed from Table 4.12, the F-values for the four models was 5.768, 4.169, 27.028 and 28.8, and statistically significant at 0.000, 0.001, 0.000 and 0.000 levels, respectively. R^2 is 30.7 percent, 21.2 percent, 63.6 percent and 64.8 percent, respectively. This means that the variance in financial performance of foreign banks in Saudi Arabia is significantly explained by ROA, ROE, NIM and Tobin's Q.

The Table shows that Capital adequacy ratio (CAR) for foreign banks has positive but insignificant relationship with ROA, ROE and NIM, except ROA is significant at confidence level 90 percent. However, there is negative but significant relationship with Tobin's Q. Also, NPL ratio (AQ) has positive but insignificant relationship with ROA and positive and significant with NIM at 90 percent confidence level. Meanwhile, this ratio has negative and insignificant correlation with ROE and negative but significant correlation with Tobin's Q at 90 percent confidence level.

Furthermore, the relationship of OE with ROA is positive and significant at 99 percent confidence level, and positive but insignificant with ROE and Tobin's Q. Its relationship with NIM is negative and insignificant. The relationship of foreign bank size is negative and insignificant with ROA, NIM and Tobin's Q, except Tobin's Q is significant with 90 percent confidence level. However, its relationship with ROE is positive but not significant.

Finally, LIQR1 (total loan to total deposit) has positive and significant correlation with ROA and NIM with 95 percent and 90 percent confidence level; whereas the relationship with ROE is positive but not significant. Its relationship with Tobin's Q is negative and insignificant. In addition, LIQR2 (liquid assets to total assets) has positive and significant relationship with all financial performance indicators (ROA, ROE, NIM and Tobin’s Q) with 90 percent, 90 percent and 95, percent confidence levels, except ROA is not significant with 90 percent confidence level.

4.5 Discussion of Regression Results

Table 4.13:
Comparison of Coefficients of Determination for Saudi Banks

	PREDICATORS	MODEL 1 (ROA)	MODEL 2 (ROE)	MODEL 3 (NIM	MODEL 4 (Tobin's Q)
All Saudi Banks	CAR	0.109 ***	0.285	0.025	-0.0003
	AQ	-0.124**	-0.779***	0.046*	-0.161***
	OE	0.001	-0.002	-0.002**	-0.001
	SIZE	0.073*	0.599**	0.048*	-0.220***
	LIQR1	0.017**	0.034	0.028***	-0.001
	LIQR2	0.027**	0.348***	0.050***	0.054***
	R^2	0.291	0.174	0.496	0.228
	Adjusted R^2	0.263	0.147	0.48	0.204
	Sig. F-Value	.000b	.000b	.000b	.000b
	Observation	294	294	294	294
Saudi Domestic Banks	CAR	0.171***	0.189	0.017	-0.059
	AQ	-0.352*	-3.528***	0.029	-0.608***
	OE	0.003	-0.004	-0.003	-0.002
	SIZE	0.305	-0.971	0.177	-1.066**
	LIQR1	-0.021	-0.178	0.03***	-0.025
	LIQR2	0.033	0.41***	0.025***	0.095***
	R^2	0.268	0.272	0.276	0.25
	Adjusted R^2	0.201	0.22	0.225	0.201
	Sig. F-Value	.002b	.000b	.000b	.000b
	Observation	154	154	154	154
Saudi Foreign Banks	CAR	0.065***	0.267	0.027	-0.015**
	AQ	-0.02	-0.212	0.072***	-0.056***
	OE	0.002*	0.012	-0.001	0.001
	SIZE	-0.004	0.276	-0.005	-0.242***
	LIQR1	0.013**	0.007	0.017***	-0.004
	LIQR2	0.012	0.303***	0.075)**	0.018**
	R^2	0.307	0.212	0.636	0.648
	Adjusted R^2	0.254	0.161	0.612	0.625
	Sig. F-Value	.000b	.001b	.000b	.000b
	Observation	140	140	140	140

Note The figures in parentheses are coefficient
* Statistically significant at the 1% level
** Statistically significant at the 5% level
*** Statistically significant at the 10% level

The overall objective of this study is to identify the relationship and factors that affect financial performance of commercial banks in Saudi Arabia for the period of 2000 to 2013. To achieve those goals 14 years panel data for 21 commercial banks was analyzed applying linear multiple regression models. In this study the relationship of the specific factors on banks' financial performance as determined by ROA, ROE, NIM and Tobin's Q was evaluated.

It shows that bank determinants have positive relationship with the financial performance of Saudi commercial banks. For example, based on Table 4.13 capital adequacy ratio (CAR) in all banks has positive and significant relationship with ROA with 90 percent confidence level. However, the relationship of this ratio with ROE and NIM was positive but insignificant. Also, it has significant and negative relationship with Tobin's Q for only foreign banks at 95 percent confidence level and negative but insignificant relationship for domestic banks and all banks. Overall, this reflects that the higher the CAR, the higher the profitability of Saudi banks (ROA, ROE, NIM) and also the lower the Tobin's Q (market value to book value).The banking sector in Saudi Arabia invests in assets more in less risky ventures which leads to lower profit.

The relationship of Asset quality (AQ) is negatively related with ROA, ROE and Tobin's Q, but with NIM, is positive for all banks sector. This indicates that increase NPL lead to poor AQ, where the correlation coefficient between ROE and AQ is negative and very strong at -0.779, -3.528 and -0.212, respectively. So, AQ or NPL to total loans determines the financial performance of Saudi commercial banks. Another determinant is

operational efficiency (OE) applied by total operating expenses to net interest income which also a negative relationship with ROE, NIM and Tobin's Q for only all the banks and domestic banks, while with ROA, it is positively related. However, OE for foreign banks has positive relationship with all the four indicators; except NIM has negative relationship. This presents that OE insignificantly influences financial performance of commercial banks in Saudi Arabia. The bank sizes of all banks have positive and significant relationship with ROA, ROE and NIM, and negative but significant relationship with Tobin's Q. Meanwhile, this ratio for domestic banks is positive but insignificant relationship with ROA and NIM; negative but significant with Tobin's Q; and negative and insignificant relationship with ROE. However, in foreign banks, it is positive but insignificant with ROA and NIM; negative but significant with Tobin's Q; and positive but insignificant with ROE.

Finally, the relationship of total loan to total deposit (LIQR1) for all banks is positive and significant with ROA and NIM; while with ROE, it is positive but insignificant relationship. In domestic banks, this ratio has a negative and insignificant relationship with ROA, ROE and Tobin's Q; whereas it has positive and significant relationship with NIM. However, in foreign banks, the relationship is positive and significant with ROA and NIM; with ROE, it is positive but not significant; and it is negative with Tobin's Q. Liquid assets to total assets (LIQR2) has positive and significant relationship with all four models (ROA, ROE, NIM and Tobin's Q) in the all bank sectors (domestic, foreign and all banks), except ROA was not significant but positive in both sectors domestic and foreign banks.

4.6 Hypothesis Testing

Table 4.13 concludes the relationship of variables the financial performance of all Saudi commercial banks.

Table 4.14.

Summary of Regression Results (All Saudi Banks)

VARIABLES	MODEL 1 **(ROA)**	MODEL 2 **(ROE)**	MODEL 3 **(NIM)**	MODEL 4 **(Tobin's Q)**
CAR	+ Sign	+ Sign	+ Insig	- insig
AQ	- Sign	- Sign	+ Sign	- Sign
OE	+ Insig	- Insig	- Sign	- insig
SIZE	+ Sign	+ Sign	+ Sign	- Sign
LIQR1	+ Sign	+ Insig	+ Sign	- insig
(LIQR2	+ sign	+ sign	+ sign	+ Sign

Note

+ Positive Relationship

- Negative Relationship

The Table shows that CAR has positive and significant relationship with ROA and ROE, while positive but insignificant relationship with NIM, and negative and in significant relationship with Tobin's Q; hence hypotheses H1 and H2 are accepted, while H3 and H4 are not accepted. AQ has negative but significant relationship with all bank performance indicators ROA, ROE, NIM and Tobin's Q; hence hypotheses H5, H6, H7 and H8 are accepted. OE has positive but insignificant relationship with ROA; negative and insignificant relationship with ROE; negative but significant relationship with NIM and negative and insignificant relationship with Tobin's Q; hence hypotheses H9, H10, H11 and H12 are not accepted.

Similarly, bank size has positive and significant relationship with ROA, ROE and NIM, while negative but significant relationship with Tobin's Q; hence hypotheses H13, H14 and H15 are accepted, while H16 is not accepted. Net loan to total deposit (LIQR1) has positive and significant relationship with ROA and NIM. At the same time it has positive but insignificant relationship with ROE and negative but significant relationship with Tobin's Q; hence hypotheses H17 and H19 are accepted, while H18 and H20 are not accepted. Finally, liquid assets to total assets (LIQR2) has positive and significant relationship with all bank performance indicators ROA,ROE, NIM and Tobin's Q; hence hypotheses H21, H22, H23 and H24 are accepted.

Table 4.15.

Summary of Regression Results (Domestic Saudi Banks)

VARIABLES	MODEL 1 **(ROA)**	MODEL 2 **(ROE)**	MODEL 3 **(NIM)**	MODEL 4 **(Tobin's Q)**
CAR	+ Sign	+ Insig	+ Insig	- Insig
AQ	- Sign	- Sign	+ Insig	- Sign
OE	+ Insig	- Insig	- Insig	- Insig
SIZE	+ Insig	- Insig	+ Insig	- Sign
LIQR1	- Insig	- Insig	+ Sign	- Insig
(LIQR2	+ Insig	+ sign	+ sign	+ Sign

Note

+ Positive Relationship

- Negative Relationship

According to the regression of domestic banks The Table shows that CAR has positive and significant relationship with ROA and positive but insignificant relationship with ROE and NIM, while negative and insignificant relationship with Tobin's Q; hence hypotheses H1 is accepted, while H2, H3 and H4 are not accepted. AQ has negative but significant relationship with ROA, ROE and Tobin's Q, while positive but insignificant

relationship with NIM; hence hypotheses H5, H6 and H8 are accepted, while H7 is not accepted. OE has positive but insignificant relationship with ROA; negative and insignificant relationship with ROE, NIM and Tobin's Q; hence hypotheses H9, H10, H11 and H12 are not accepted.

However, bank size has positive but insignificant relationship with ROA and NIM, while negative and insignificant relationship with ROE; and negative but significant relationship with Tobin's Q; hence hypotheses H13, H14, H15 and H16 are not accepted. Net loan to total deposit (LIQR1) has negative and insignificant relationship with ROA, ROA and Tobin's Q; while positive and significant relationship with NIM; hence hypotheses H17, H18 and H20 are not accepted, while H19 is accepted. Finally, liquid assets to total assets (LIQR2) has positive and significant relationship with all bank performance indicators ROA,ROE, NIM and Tobin's Q; except with ROA is not significant. Hence a hypothesis H21 is not accepted, while hypotheses H22, H23 and H24 are accepted.

Table 4.16.

Summary of Regression Results (Foreign Saudi Banks)

VARIABLES	MODEL 1 **(ROA)**	MODEL 2 **(ROE)**	MODEL 3 **(NIM)**	MODEL 4 **(Tobin's Q)**
CAR	+ Sign	+ Insig	+ Insig	- Sign
AQ	- Insig	- Insig	+ Sign	- Sign
OE	+ Sign	+Insig	- Insig	+Insig
SIZE	- Insig	+Insig	- Insig	- Sign
LIQR1	+ Sign	+ Insig	+ Sign	- Insig
(LIQR2	+ Insig	+ sign	+ sign	+ Sign

Note

+ Positive Relationship

- Negative Relationship

According to the regression of foreign banks The Table shows that CAR has positive and significant relationship with ROA and positive but insignificant relationship with ROE and NIM, while negative but significant relationship with Tobin's Q; hence hypotheses H1 is accepted, while H2, H3 and H4 are not accepted. AQ has negative and insignificant relationship with ROA and ROE, meanwhile, positive and significant relationship with NIM; and negative but significant relationship with Tobin's Q; hence hypotheses H5, H6 and H7 are not accepted, while H8 is accepted.

OE has positive and significant relationship with ROA; positive and insignificant relationship with ROE and Tobin's Q; negative and insignificant relationship with NIM; hence hypothesis H9 is accepted, while H10, H11 and H12 are not accepted. Bank size has negative and insignificant relationship with ROA and NIM, while POSITIVE and insignificant relationship with ROE; and negative but significant relationship with Tobin's Q; hence hypotheses H13, H14, H15 and H16 are not accepted.

Net loan to total deposit (LIQR1) has positive and significant relationship with ROA and NIM; while positive but insignificant relationship with ROE; and negative insignificant with Tobin's Q; hence hypotheses H17 and H19 are accepted, while H18 and H20 are not accepted, while H19 is accepted. Finally, liquid assets to total assets (LIQR2) has positive and significant relationship with all bank performance indicators ROA,ROE, NIM and Tobin's Q; except with ROA is not significant. Hence a hypothesis H21 is not accepted, while hypotheses H22, H23 and H24 are accepted.

4.7 Summary

This chapter discusses the findings on financial performance of commercial banks in the Kingdom of Saudi Arabia. The study finds that the independent variables are significantly and positively related to ROA, ROE and NIM, the indicators of financial performance of Saudi commercial banks, except Tobin's Q which has a negative relationship with all bank performance indicators.

CHAPTER FIVE

CONCLUSION

5.1 Introduction

This chapter provides a summary of the findings from the analysis conducted during the study. It also gives the contribution of the study, limitations and suggestions for future research.

5.2 Summary of observations

Empirical results show that the variables of the study have significant and positive effect on financial performance of commercial banks in Saudi Arabia. Results reflect that variables of capital adequacy ratio (CAR), asset quality (AQ), operational efficiency (OE), bank size, net loan to total assets (LIQR1 and liquid assets to total assets (LIQR2) have impact on the ROA, except the effect of OE is not significant. These findings are in line with the findings of Alkhatib (2012). They also have an effect on ROE, except the OE and LIQR1 are not significant in line with the findings of Alkhatib (2012); and Ongore and Kusa (2013). Meanwhile, all the variables excluding CAR of banks have an impact on NIM. CAR is not significant. In addition, it is found that AQ, bank size and LIQR2 have significant impact on Tobin's Q, while others have negative and insignificant effect, which is in line with the findings of Almazari (2013); Alkarim and Alam (2013); Almazar (2011); Alkhatib (2012); and Ongore and Kusa (2013).

In all Saudi banks, five determinants variables out of six variables (CAR, OE, bank size, LIQR1 and LIQR2) are positively and significantly correlated to ROA, while AQ has a negative and significant relationship with ROA. For the ROE, there are four variables have positive relationship; three have positive and significant relationship (CAR, bank size and LIQR2), while LIQR2 has positive but insignificant relationship. Meanwhile AQ has negative but significant relationship with ROE and OE has negative and insignificant relationship with ROE. Six variables have positive and significant relationship with NIM, except CAR is not significant. OE has negative but significant relationship with NIM. For Tobin's Q only one variable has positive and significant relationship which is LIQR2, while CAR, OE and LIQR1 have negative and insignificant relationship. AQ and bank sizes have negative and significant relationship with Tobin's Q.

Domestic banks have four determinant variables out of six variables that related with ROA positively, which are the CAR, OE, bank size and LIQR2. AQ has negative but significant relationship and LIQR1 has negative and insignificant relationship with ROA. Two variables have positive relationship with ROE (CAR and LIQR2). Others have negative relationship with ROE. In addition, for NIM, of five variables, CAR, AQ, bank size, LIQR1 and LIQR2 are found to have positive relationship. Similarly, it is found that CAR, AQ, OE, bank size and LIQR1 have negative relationship with Tobin's Q; LIQR2 has positive relationship with Tobin's Q.

In foreign banks, four determinants, which are CAR, OE, LIQR1 and LIQR2, have significant and positive relationship with ROA. AQ and bank size have negative and

insignificant relationship. For ROE, five variables have positive relationship, which are CAR, OE, bank size, LIQR1and LIQR2. Further, four variables have positive relationship with NIM (CAR, AQ, LIQR1 and LIQR2). OE and bank size have negative and insignificant relationship. In addition, only two variables have positive relationship with Tobin's Q, i.e., OE and LIQR2; while other five variables have negative and significant relationship, except LIQR1 is not significant.

In general, it can be concluded from this empirical study that bank specific factors (factors under the control of managers) are the most positive significant determinants of the financial performance of commercial banks in the Kingdom of Saudi Arabia. This evidence supports and is in line with the Efficiency Structure theory which states that enhanced managerial efficiency leads to higher performance.

5.3 Contribution of the Study

Among the East countries, this study is considered as one of the very few studies conducted in the financial performance of commercial banks in the Kingdom of Saudi Arabia to examine differences in the performance metrics of all banks and domestic vs. foreign owned banks in Saudi Arabia.

In trying to determine the commercial banks performance in Saudi Arabia at the three levels; Internal, market and Economic performance, the following conclusions can be drawn:

The expected contributions to this study to the management field is to help decision makers pay more attention to the relevant activities that exert potential and strong impact on their banking performance as well as help the management of the commercial banks of Saudi Arabia in setting up plans and financial strategies.

The expected contribution of this study to the academic filed is to provide a comprehensive four models for evaluating banking performance and to fill an important gap in literature. Also this research provides a new perspective in evaluating the financial performance of leading Saudi Arabian commercial banks as well as the finding of this study can be added to the present literature and it can help researchers in their future studies.

Some of the distinct findings of the study are:

- Capital Adequacy has significant impact on ROA. Asset quality and Liquid asset to total assets have significant effect on ROA, ROE, NIM and Tobin's Q.

- Among the four models used in the study, in Model-3, R-square of the driver variables is highest with NIM as dependent variable explaining variation of 50%, 28% and 64% in the dependent variable.

- ROA of Foreign banks is higher than that of the domestic banks.

- ROE, NIM and Tobin's Q of domestic banks are higher than that of the foreign banks. Meaning that Domestic banks proved to have a better performance when compared to foreign banks with regard to ROE, NIM and Tobin's Q.

- Capital adequacy ratio of domestic banks is higher than that of the foreign banks, which means that the domestic banks are less risky of foreign banks.

- Non-performing loan ratio and operational efficiency of foreign banks are higher than the domestic banks. Meaning that the foreign banks more effective compared to domestic banks.

- Total assets of foreign banks are higher than that of the domestic banks. In other words, foreign banks are larger in size.

- Net loans to total deposits of domestic banks are higher than that of the foreign banks. However, liquid assets to total assets of foreign banks are higher than that of the domestic banks.

5.4 Limitation of the Study

The sample of the study did not include the National Commercial Bank (NCB), one of the largest banks in the Kingdom of Saudi Arabia. Unfortunately, all the annual reports for the period under reference are not available in website of the Bank including that of SAMA. The e-mail sent to the Bank did not find appropriate response. However, the researcher did not have sufficient time to follow-up correspond with the Bank to fill-in

the gaps. Given the time avaiable to the researcher, only four models were tested. Robustness could have been increased by including additional models.

5.5 Recommendations for Future Research

Based on the findings of the study, future research may aim at covering data for longer period and more comprehensive database to arrive at more generic results. Future research can study the comparative financial performance between private banks and public banks in Saudi Arabia. Future study may include other variables such as total assets to total liabilities, EPS, economic value added, return on deposits and NPL to total equity which may have significant effect on financial performance of commercial banks. Apart from financial parameters, future research can also include economic variables like Average per capita income, GDP, Inflation. which may bearings on the financial performance of commercial banks in the country. Finally, a survey of the opinion profile the management of Saudi banks and its customers would greatly enrich the results of such evaluation stuides.

REFERENCES

Abraham (2013). Foreign ownership and bank performance metrics in Saudi Arabia International. *Journal of Islamic and Middle Eastern Finance and Management,* 6(1), , 43-50.

Adam (2014). Evaluating the Financial Performance of Banks using Financial Ratios- A Case Study of Erbil Bank for Investment and Finance. *European Journal of Accounting Auditing and Finance Research* 2(2), 156-170.

Akhtar, M. F., Ali, K., & Sadaqat, S. (2011). Liquidity risk management: a comparative study between conventional and Islamic banks of Pakistan.Interdisciplinary. *Journal of Research in Business,* 1(1), 35-44.

Akhtar, S. (2007), "Pakistan: changing risk management paradigm – perspective of the regulator", ACCA Conference – CFOs: The Opportunities and Challenges Ahead, Karachi, p. 8.

Alam, H. M., Raza, A., & Akram, M. (2011). A financial performance comparison of public vs private banks: The case of commercial banking sector of Pakistan. *International Journal of Business and Social Science,* 2(11), 56-64.

Alam, T. An Evaluation of Financial Performance of Private Commercial Banks in Bangladesh: Ratio Analysis. *Journal of Business Studies Quarterly* 013, Volume 5, Number 2 ISSN 2152-1034.

Alexandru, C. G., & Romanescu, M. L. (2008). The Assessment of Banking Performances-Indicators of Performance in Bank Area. *University Library of Munich, Germany.*

Alkhatib, A., & Harasheh, M. (2012). Financial performance of Palestinian commercial banks. *International Journal of Business and Social Science,* 3(3).

Allen, F., & Santomero, A. M. (1999). The theory of financial intermediation.Journal of Banking & Finance, 21(11), 1461-1485.

Ally, Z. (2013). Comparative Analysis of Financial Performance of Commercial Banks in Tanzania. *Research Journal of Finance and Accounting,* 4(19), 133-143.

Almazari, A. A. (2011). Financial performance evaluation of some selected Jordanian commercial banks. *International Research Journal of Finance and Economics*, 68(8), 50-63.

Almazari, A. A. (2013). Capital Adequacy, Cost Income Ratio and the Performance of Saudi Banks (2007-2011). *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(4), 284-293.

Almumani, M. A. (2013). Liquidity Risk Management: A Comparative Study between Saudi and Jordanian Banks. *Interdisciplinary Journal of Research in Business*, 3(02), 01- 10.

Almumani, M. A. (2013). The Relative Efficiency of Saudi Banks: Data Envelopment Analysis Models. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(3), 152-161.

Almumani, M. A. (2014). A Comparison of Financial Performance of Saudi Banks (2007-2011). *Asian Journal of Research in Banking & Finance*, 4(2).

Alrabei, A. M. (2013). Evaluate the Profitability in Commercial Bank-Comparative Study of Indian and Jordanian Banks. *Asian Journal of Finance & Accounting*, 5(1), 259-273.

Alrafadi, K. M., & Md-Yusuf, M. (2014). Evaluating The Performance Of Libyan Banks Using Return On Investment. *American Journal of Economics and Business Administration*, 5(2), 84.

Ang, J.S. and Beck, K.L. (2000), "A comparison of marginal and average Tobin's Q ratios", *International Journal of Business*, Vol. 5, pp. 27-54.

Annual Financial Statements of the Saudi domestic Banks. (2000-2013).

Annual Financial Statements of the Saudi foreign Banks. (2000-2013).

Anojan,V & Nimalathasan,B. (2014). A Comparative Study of Financial Performance of State and Private Sector Commercial Banks in Sri Lanka: An Application of CAMEL Rating System. ICCM, *Faculty of Management Studies and Commerce, University of Jaffna, Sri Lanka.*

Arias, J., Jara-Bertin, M., & Rodriguez, A. (2013). Determinants of Bank Performance: Evidence for Latin America. *Available at SSRN, Academia Revista Latino Americana.*

Arif, A., & Anees, A. N. (2012). Liquidity risk and performance of banking system. *Journal of Financial Regulation and Compliance,* 20(2), 182-195.

Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money,* 18(2), 121-136.

Bank Audi (2014). *Saudi Arabia economic report*. Fundamental, strengths outpacing, key and challenges for the kingdom's economy.

Barker, David, and Holdsworth, David (1993). "The Causes of Bank Failures in the 1980s". *Research Paper No. 9325*, Federal Reserve Bank of New York.

Barr, R. S., Killgo, K. A., Siems, T. F., & Zimmel, S. (2002). Evaluating the productive efficiency and performance of US commercial banks. *Managerial Finance*, 28(8), 3-25.

Beck, T. and Demirguc-Kunt, A. (2009), "Financial Institutions and markets across countries andover time: data and analysis", *Working Paper No. 4943, World Bank Policy Research,The World Bank, Washington, DC, May.*

Benston G.W., C.W. SMITH (1976) "A transaction cost approach to the theory of financial intermediation" The Journal of Finance, Vol. XXXI (1), pp. 215-231.

Bhattacharya, S. and A. V. Thakor, 1993, Contemporary banking theory, Journal of Financial Intermediation 3, 2-50.

Brigham, E. F., & Houston, J. F. (2011). Fundamentals of Financial Management. (10th Ed.). *Ohio, USA: Thomson South Western.*

Brunnermeier, M., Dong, G. and Palia, D. (2012), Banks' Non-Interest Income and Systemic Risk (*AFA 2012), Chicago Meetings, Chicago, IL.*

Brunnermeier, M.K. and Yogo, M. (2009), "A note on liquidity risk management", AEA Session on Liquidity, Macroeconomics, and Asset Prices, p. 12.

Choong, Thim and Kyzy (2012). Performance of Islamic Commercial Banks in Malaysia: An Empirical Study. *Journal of Islamic Economics, Banking and Finance,* 8(2) 68-80.

Crowe, K. (2009), "Liquidity risk management – more important than ever", Harland Financial Solutions, p. 3.

Curry, Timothy J., Elmer, Peter J., and Fissel, Gary S. (2009, September 11). "*Using Market Information to Help Identify Distressed Institutions: A Regulatory Perspective"*. Retrieved October 10, 2011]. Available at: http://www.fdic.gov/bank/analytical/banking/2003sep/1_15n3.pdf

Dang, U. (2011). The Rating System in Banking Supervision: a Case Study of Arcada University of Applied Sciences. *International Business.*

Darškuvienė, V. (2010). Įmonių finansinė analizė. Rodiklių skaičiavimo metodika [Financial analysis for companies. Methodology of ratios]. *NASDAQ OMX. Vilnius. ISBN 978-609-95195-0-0.de Administration* 27(2), 164-182.

Demirgüç-Kunt, A., Detragiache, E. 1999. Monitoring banking sector fragility: a multivariate logit approach. *IMF Working Paper*, No. 106.

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy, 93*(6), 1155-1177. Retrieved November 30, 2006, from the Business Source Complete database.

DeYoung, R., & Rice, T. (2004). Noninterest income and financial performance at US commercial banks. *Financial Review,* 39(1), 101-127.

Dhanabhakyam M. & Kavitha, M. (2012). Financial Performance of selected Public sector banks in India. *International Journal of Multidisciplinary Research,* 2(1), pp 255- 269.

Diamond D., P. Dybvig (1983) "Bank runs, deposit insurance and liquidity", *Journal of Political Economy* 91, pp. 401-419.

Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. The Journal of Finance, 55(6), 2431-2465.

Diamond, D., 1984, Financial intermediation and delegated monitoring, *Review of EconomicStudies* 51, 393-414.

Dionne, G., 1991, Contributions to Insurance Economics (*Kluwer Academic Publishers*).

Doğan, M (2013). Comparison of Financial Performances of Domestic and Foreign Banks: The Case of Turkey. *International Journal of Business and Social Science,* 4(1), 233-240.

Doyran, M. A. (2013). Net interest margins and firm performance in developing countries: Evidence from Argentine commercial banks. *Management Research Review,* 36(7), 720-742.

Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57-74. Retrieved November 10, 2006, from the Business Source Complete database.

Elizabeth, D., & Elliot, G. (2004). Efficiency customer service and financial performance among australian financial institutions. International Journal of Bank Marketing , Vol.22, No. 5, 319-342.

Fama, E. F. (1978). The effects of a firm's investment and financing on the welfare of its security holders. *American Economic Review,* 68(3), 272-284. Retrieved November 23, 2006, from the EBSCOhost database.

Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307. Retrieved November 10, 2006, from the Business Source Complete database.

Fama, E. F. (1995). Random walks in stock market prices. *Financial Analysts Journal*, 51(1), 75-80. Retrieved June 7, 2008, from ABI/INFORM Global database.

Fama, E.F., 1980, Banking in the theory of finance, *Journal of Monetary Economics* 6, 39-58.

Faruk, M. O., & Alam, R. (2014). A Comparative Financial Performance Analysis of Bangladeshi Private Commercial Banks. *Business and Management,* 6(1). 129-147.

Flamini, C., Valentina C., McDonald, G., Liliana, S. (2010) The Determinants of Commercial Bank Profitability in Arab countries. *IMF Working Paper.*

Flamini, V.C., McDonald & Schumacher, L. (2009). The determinants of commercial bank profitability in sub-saharan Africa. *IMF Working Paper, (International Monetary Fund, African Department,* WP/09/15).

Gaytán, A., and Johnson, C.A. (2002). "*A Review of the Literature on Early Warning Systems for Banking Crises"*. Central Bank of Chile Working Papers, No. 183. Santiago, Chile.

Ghoch, A. 2012. Managing Risks in Commercial and Retail Banking. *John Wiley & Sons, 111 River Street, Hoboken,* NJ 07030, USA.

Guisse, M. L. (2012). Financial Performance of the Malaysian Banking Industry: Domestic vs Foreign Banks (Doctoral dissertation, *Eastern Mediterranean University (EMU).*

Gujarati, D.N. (2003) Basic Econometrics. United States Military Academy, West Point. Published by McGraw-HiII/lrwin, *a business unit of The McGraw-Hili Companies, Inc. 1221 Avenue of the Americas, New York,* NY, 10020.

Gul, S., Faiza, I., Khalid, Z. (2011) Factors Affecting Bank Profitability in Pakistan. *The Romanian Economic Journal,* 2(3), 6-9.

Gurley, J.G. and E.S. Shaw, 1960, Money in a theory of finance, Washington, D.C.: The Brookings Institution.

Guttentag, J. M., Lindsay, R. (1968). "The uniqueness of commercial banks", Journal of Political Economy, Vol. 71, 991-1014.

Haque, A. (2014). Comparison of Financial Performance of Commercial Banks: A Case Study in the Context of India (2009-2013). *Journal of Finance,* 2(2), 01-14.

Haque, S. (2013). The Performance Analysis of Private Conventional Banks: A Case Study of Bangladesh. *IOSR Journal of Business and Management (IOSR-JBM) e-*ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 12, Issue 1 PP 19-25.

Hazzi, O. A., & Kilani, M. I. A. (2013). The Financial Performance Analysis of Islamic and Traditional Banks: Evidence from Malaysia. *European Journal of Economics, Finance and Administrative Sciences,* (57).

Ilhomovich, S. E. (2009). Factors affecting the performance of foreign banks in Malaysia : A thesis submitted to the fulfillment of the requirements *for the degree Master of Science (Banking) College of Business (Finance and Banking.).*

IMF Staff. (2012). Saudi Arabia on economic developments and policies. *Report for the Article IV consultation, prepared by a staff team of the IMF.* June 13, 2012.

IMF Staff. (2013). Saudi Arabia on economic developments and policies. *Report for the Article IV consultation, prepared by a staff team of the IMF.* June 24, 2013.

Iqbal, M.J. (2012). Banking sector's performance in Bangladesh- An application of selected CAMELS ratio. A project submitted in partial fulfillment of the requirements for the degree of Professional Master in Banking and Finance, *Asian Institute of Technology, Thailand.*

Javaid, S., Anwar, J., Zaman, K., & Gaffor, A. (2011), "Determinants of Bank Profitability in Pakistan: Internal Factor Analysis". *Mediterranean Journal of Social Sciences,*2(1): 59-78.

Jha, S., & Hui, X. (2012). A comparison of financial performance of commercial banks: A case study of Nepal. *African Journal of Business Management,* 6(25), 7601-7611.

Kapunda, S. M., & Molosiwa, T. K. (2012). Economic Performance Of Commercial Banks In Botswana: A Structure-Conduct-Performance Approach. *International Journal of Economics & Business Studies,* 2(1).

Khaddaj, W.W. (2010). Evaluating Banks Efficiency in Syria: An Empirical Study Using Data Envelopment Analysis. *Social Science Research Network,* 1-23.

Khizer Ali, Muhammad Akhtar and Hafiz Ahmed, (2011) Bank-Specific and Macroeconomic Indicators of Profitability - Empirical Evidence from the Commercial Banks of Pakistan . *International Journal of Business and Social Science.*

Koch, T., & MacDonald, S. (2009). *Bank management. Cengage Learning*.

Kolapo, T. F., Ayeni, R. K., & Oke, M. O. (2012). Credit risk and commercial banks' performance in Nigeria: A panel model approach. *Australian Journal of Business and Management Research,* 2(2), 31-38.

Kole, S. R., & Lehn, K. M. (1999). Deregulation and the adaptation of governance structure: The case of the U.S. airline industry. *Journal of Financial Economics, 52*(1), 79-117.

Kumbirai, M. & Webb, R. (2010). A financial ratio analysis of commercial performance in South Africa. *African Review of Economics and Finance,* 2(1), 30-53.

Kumi, P. K., Amoamah, M. O., & Winful, E. (2013). Evaluation of the Performance of Banks in Ghana Using Financial Ratios: A Case Study of Barclays Bank Ghana Limited (BBGL), Ghana Commercial Bank (GCB) and Agricultural Development Bank (ADB). *European Journal of Business and Management,* 5(28), 126-138.

Kyereboah-Coleman, A., Adjasi, C., & Abor, J. (2006). Corporate governance and performance: Evidence from Ghanaian listed companies. Corporate Ownership & Control, 4(2), 123-132. Retrieved May 10, 2008, from Business Source Complete database.

Leland, H.E. and D.H. Pyle, 1977, Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32, 371-387.

Lin, W. C., Liu, C. F., & Chu, C. W. (2005). Performance efficiency evaluation of the Taiwan's shipping industry: an application of data envelopment analysis. *In Proceedings of the Eastern Asia Society for Transportation Studies (Vol. 5, pp. 467-476). The Poznan University of Economics.*

Malhotra, D. K., Poteau, R., & Singh, R. (2011). Evaluating the Performance of Commercial Banks in India. *Asia Pacific Journal of Finance and Banking Research* Vol, 5(5).

Maudos, J. and Solı´s, L. (2009), "The determinants of net interest income in the Mexican bankingsystem: an integrated model", *Journal of Banking and Finance*, Vol. 33 No. 10, pp. 1920-1931.

Medhat Tarawaneh, (2006), a comparison of financial performance in the banking sector, evidence from Omani commercial banks, *international research journal of finance and banking*, Issue 3.

Merton, R. (1995). Influence of mathematical models in finance on practice: Past, present, and future. *Financial Practice & Education,* 5(1), 7-15. Retrieved November 11, 2006, from the MasterFILE Premier database.

Merton, R. C., 1987, Presidential Address: A simple model of capital market equilibrium withincomplete information, Journal of Finance 42, 483-510.

Merton, R. C., 1989, On the application of the continuous-time theory of finance to financial intermediation and insurance, Geneva Papers on Risk and Insurance Theory 14, 225-261.

Merton, R. C., 1993, Operation and regulation in financial intermediation: a functional perspective, in: P. England, ed., Operation and Regulation of Financial Markets (The Economic Council, Stockholm).

Merton, R.C. (1995), "Financial Innovation and the Management and Regulation of Financial Institutions," Journal of Banking and Finance (July), 461-482.

Miller, M. (1977). Debt and taxes. *Journal of Finance*, *32*(2), 261-275. Retrieved November 23, 2006, from the EBSCOhost database.

Modigliani, F. (1982). Debt, dividends policy, taxes, inflation, and market valuation. Journal of Finance, 37(2), 255-273. Retrieved November 23, 2006, from the EBSCOhost database.

Modigliani, F., &. Miller, M. (1958). The cost of capital, corporation finance and the theory of investment. American Economic Review, 48(3), 261-297. Retrieved November 23, 2006, from the EBSCOhost database.

Mohammad Hanif Akhtar, 2014. Are Saudi banks productive and efficient? *International Journal of Islamic and Middle Eastern Finance and Management,* 3 (2), 95-112.

Muhammad, Haidar (2009). "*Banks and Camels"*. [Retrieved October 15, 2011]. Available at: http://ezinearticles.Com/?Banks-And-CamelsandId=2565867

Murthy, Y., & Sree, R. (2003). A Study on Financial Ratios of major Commercial Banks. Research Studies, *College of Banking & Financial Studies, Sultanate of Oman*.

Navapan, K. & Tripe, D. (2003). An exploration of the relationship between bank capital levels and return on equity. *Proceeding of the 16th Australasian Finance and Banking Conference*, December 2003, Palmerston North, pp: 1-15.Direct Link.

Nazir, T. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model. *Pakistan Journal of Commerce & Social Sciences*, 4(1).

Nedunchezhian, D., & Premalatha, K. (2013). Analysis and Impact of Financial Performance of Commercial Banks after Mergers in India. *International Journal Of Marketing, Financial Services & Management Research*, 2(3), 150-162.

Oldfield, G. and A. Santomero, 1995, The place of risk management in financial institutions, Working Paper, 95-05 Wharton Financial Institutions Center.

Onaolapo, A.A. & Olufemi, A.E. (2012). Effect of Capital Adequacy on the Profitability of the Nigerian Banking Sector; *Journal of Money, Investment and Banking*. ISSN 1450-288X Issue 24 © EuroJournals Publishing, Inc. 2012.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial* Issues, 3(1), 237-252.

Oral, M. and Yolalan, R. (1990), "An empirical study on measuring operating efficiency and profitability of bank branches", *European Journal of Operational Research*, Vol. 46 No. 3, pp. 282-94.

Part of BMIs Industry Report & Forecasts Series (2013). Saudi Arabia Autos Report Q1 2014 Includes 5-Year Forecasts TO 2017 . *Business Monitor International.*

Peter. S. Rose, Commercial bank management, fifth edition. *Chapter five "measuring and evaluating bank performance.*

Plochan, P. (2007), "Risk management in banking", Master thesis, University of Economics, Bratislava.

Raza, A., Farhan, M., & Akram, M. (2011). A comparison of financial performance in investment banking sector in Pakistan. *International Journal of Business and Social Science*, 2(9), 72-81.

Rose, P., & Hudgins, S. (2006). *Bank management and financial services*. The McGraw−Hill.

Said, R. M., & Tumin, M. H. (2011). Performance and financial ratios of commercial banks in Malaysia and China. *International Review of Business Research Papers*, 7(2), 157-169.

SAMA. (2000- 2013) Central Bank of Saudi Arabi Bank Supervision Annual Report, Saudi Arabi.

Samad, A. (2004). Bahrain Commercial Bank's Performance during 1994-2001. Credit and *Financial Management Review* Vol. 10 No.(1), 33-40.

Sangmi, M., Tabassum, N. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL *Model. Pakistan Journal Commercial Social Sciences.*

Santomero, A., 1984, Modeling the banking firm, Journal of Money, Credit, and Banking 16, Part 2, 576-602.

Saunders, A. and Schumacher, L. (2000), "The determinants of bank interest rate margins: an international study", Journal of International Money and Finance, Vol. 19 No. 6, pp. 813-832.

Searle, P. (2008). What is the role of finance? And what exactly is decision support? *Finance director Europe, Cornhill Publication Limited.*

Shah, S. Q., & Jan, R. (2014). Analysis of Financial Performance of Private Banks in Pakistan. *Procedia-Social and Behavioral Sciences*, 109, 1021-1025.

Siems, T. F., & Barr, R. S. (1998). Benchmarking the productive efficiency of US banks. *Financial Industry Studies*, 11-24.

Sinha, R. P. (2008). Performance Evaluation of Indian Commercial Banks in the Prompt Corrective Action Framework: An Assurance Region Approach.ICFAI. *Journal of Financial Risk Management,* 5(1), 29-40.

Sinkey Jr, Joseph F (1992). Commercial bank financial management.In: Financial-Service Industry, 4th Ed, Macmillan Publishing Company, Ontario.

Stankevičienė, J., & Mencaitė, E. (2012). The evaluation of bank performance using a multicriteria decision making model: a case study on Lithuanian commercial banks. *Technological and Economic Development of Economy,*18(1), 189-205.

Sturm, J.E. and Williams, B. (2004), "Foregn bank entry, deregulation and bank efficiency: lesson from the Australian experience", *Journal of Banking and Finance,* Vol. 8, pp. 1775-99.

Sufian, F. & Chong, R.R. (2008). Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from Philippines. *Asian Academy of Management Journal of Accounting and Finance.* [Online] 4(2) pp.91-112.

Sun, C. C. (2011). Assessing Taiwan financial holding companies performance using window analysis and Malmquist productivity index. *African Journal of Business Management,* 5(26), 10508-10523.

Sundas Ayub, N. S., & Mumtaz, R. (2012). Performance Evaluation of Islamic and Conventional Banks in Pakistan. *World Applied Sciences Journal,* 20(2), 213-220.

Tarawneh, M. (2006). A comparison of financial performance in the banking sector: Some evidence from Omani commercial banks. *International Research Journal of Finance and Economics,* 3, 101-112.

Trade Policy Review-Report by the kingdom of Saudi Arabia, WT/TPR/G/256-14 December 2011).

Treynor, J. (1981). What does it take to win the trading game? *Financial Analysts Journal*, *37*(1), 55. Retrieved June 7, 2008, from Business Source Complete database.

Tufan, E., Bahattin H., Mirela C., Laura, G.V. (2008) Multi-criteria evaluation of domestic and foreign banks in Turkey by using financial ratios, *Banks and Bank Systems Journal*, 3(2), 20-28.

Usman, A., & Khan, M. K. (2012). Evaluating the financial performance of Islamic and conventional banks of Pakistan: A comparative analysis. *International Journal of Business and Social Science,* 3(7), 253-257.

Vidzbelytė, S., Jasevičienė, F., & Povilaitis, B. (2013). Commercial Banks Performance 2008–2012. *Business, Management and Education*, (2), 189-208.

Vong, A, Hoi, S. (2009) Determinants of Bank Profitability in Macao. *Faculty of Business Administration, University of Macau.*

Wen, W. (2010). Ownership Structure and Banking Performance: New Evidence in China. *Universitat Autònoma de Barcelona Departament D'economia de L'empresa.*

Yildirim, H.S. and Philippatos, G.C. (2007), "Efficiency of banks: recent evidence from the transition economies of Europe: 1993-2000", *European Journal of Finance*, Vol. 13, pp. 123-43.

Further Reading

Abdulrahman, Qader and Al-Sabaawee (2011) Evaluating the Performance of Islamic Banks By Using Financial Analysis Composite: A Comparative Study of the Iraqi Islamic Bank Performance with the Jordan Islamic Bank for the Period (2000-2008). *Journal of Kerkuk University for Administrative and Economic Sciences*, Vol. 2 No 1, pp: 152-171.

Allen, L. (1988), "The determinants of bank interest margins: a note", *Journal of Financial and Quantitative Analysis*, Vol. 23 No. 2, pp. 231-235.

Berger, A.N. (1995b), "The relationship between capital and earnings in banking", *Journal of Money*, Credit, and Banking, Vol. 27 No. 2, pp. 432-456.

Claudiu CICEA, 2009 Performance evaluation methods in commercial banks and associated risks for managing assets and liabilities. *Academy of Economic Studies Bucharest, Romania.*

Elyasiani, E. and Meinster, D.R. (1988), "The performance of foreign owned, minority owned, and holding company owned banks in the US", *Journal of Banking and Finance*, Vol. 12, pp. 293-313.

Molyneux, P. and Thornton, J. (1992), "Determinants of European bank profitability: a note",*Journal of Banking and Finance*, Vol. 16 No. 6, pp. 1173-1178.

Yap B. C. F., Munuswamy S. & Mohamed Z. B. (2012). Evaluating Company Failure in Malaysia Using Financial Ratios and Logistic Regression. *Asian Journal of Finance & Accounting*, 4(1), 330-334.