Impact of Internal Factors on Bank Profitability: Comparative Study between Saudi Arabia and Jordan

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Abstract

This paper investigated the internal factors that affecting profitability of banks. The main objective was to compare the profitability of the Saudi and Jordanian banks by using the internal factors for estimations. The necessary data was collected from secondary sources. A sample of twenty three Saudi and Jordanian banks was considered with 161 observations for the period 2005-2011. Financial ratios were calculated and statistical tools including Pearson's correlation, descriptive analysis of variance and regression analysis were utilized in testing the hypotheses and to measure the differences and similarities between the sample banks according to their different characteristics. The factors influencing the profitability were tested empirically. However, the results indicated that there is a significant positive correlation between ROA of Saudi banks with TEA, TIA and LQR variables, as well as a negative correlation with NCA, CDR, CIR and SZE variables. Meanwhile, there is a significant positive correlation between ROA of Jordanian banks with LQR, NCA, TEA and CDR variables, also there is a negative correlation of return on assets with CIR, TIA and SZE. It is recommended that empirical studies should be undertaken in the same field to find out what more internal factors could affect profitability of banks.

1 Introduction

A strong banking sector is able to confront negative shocks and contribute to the stability of the financial system. The financial institutions are affected by numerous of factors, among these factors are internal and external factors which has direct impact on it is performance.

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The internal factors such as the management decisions on (balance sheets and/or profit and loss accounts), size of the bank, capital, risk management and expenses management affect the profitability of the bank directly, because most of these factors remain confidential. Other internal factors, such as credit or liquidity are considered as bank specific factors, which

Closely related to bank management, especially the risk management. The need for risk management in the banking sector is inherent in the nature of the banking business. Low asset quality and poor liquidity are the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine their impact on bank profitability.

The external factors affecting the profitability of banks are represented in economic situations and institutional background. The macroeconomic environment, such as inflation, interest rates and cyclical output, and variables that represent market characteristics such as market concentration, industry size and ownership status.

Saudi Arabia is one of the world's fastest growing banking markets. Commercial banks that are operating in the competitive environment are likely to be more efficient in near future in the region. The Saudi banking industry has enjoyed a steady growth and stability during the last decade. Stress tests conducted recently also demonstrate that Saudi banks are sound and well-equipped to withstand any shocks. In addition, the Jordanian banking sector play very important role in supporting the gross domestic product, and works as an engine to assist the Jordanian economy. However, the efficient functioning of the banking sector has become one of the most important objectives of financial reforms in Jordan. The profitability and efficiency also become one of the challenges faced by the banks to strengthen their financial positions in order to meet the risks associated with openness and globalization.

The objective of this paper is to examine the internal factors that affect the profitability of the Saudi and Jordanian banks and make a comparison between the two sectors. Previous studies used some internal factors variables to measure profitability, while this study used more than one measure to find out the affect of internal factors on the profitability of both sectors. During the period of study both banking sectors witnessed many challenges and difficulties internally and externally. However, very little empirical studies has been carried out in the same area, an empirical investigation is required which could be of interest to academics, bankers, and policy makers. Also this study may add new value on the finance literature as regards the profitability on banking systems.

The paper is organized as follows: after introduction which is provided in Section 1, literature review is carried out in Section 2, section 3 presents overview on the Saudi and Jordanian banking system. Section 4 defines the data and explains the study methodology including the study sample and period, the variables under examination, and models of the study. Statistical results and analysis are shown in Section 5. Final section concludes the study.

2 Literature Review

According to previous studies, internal and external factors are affecting the profitability of banks. This study is concentrating on internal factors such as bank size, liquidity, credit, investment, capital, risk management and expenses management which affect the

profitability of the bank directly. The following studies could be a source of help in supporting the results of this paper.

Eljelly [1] paper aimed to explore the determinants of profitability of Islamic banks in Sudan, one of the few countries that have total Islamic economic and banking systems. Using a sample of Sudanese banks, the paper found that only the internal factors to these banks have a significant impact on banks' profitability, as measured by return on assets (ROA), return on equity (ROE), and net financing margin (MARG). More specifically, cost, liquidity and size of the bank are found to have positive and significant effects on profitability. However, external macroeconomic factors are classified as redundant and have no significant effects on profitability. These results have precedence in the literature as some country-specific studies found no or very weak effects of macroeconomic variables on performance of commercial banks. Furthermore, the study found that the data are best represented with a random effects model vis-à-vis fixed effects or pooling estimation models. Finally, the study has many implications for banks, regulators and depositors with respect to liquidity, cost and bank structure in Sudan.

Javaid et al. [2] study aimed to give the analysis of the determinants of top 10 banks' profitability in Pakistan over the period 2004-2008. The focus is on the internal factors only. This paper uses the pooled Ordinary Least Square (POLS) method to investigate the impact of assets, loans, equity, and deposits on one of the major profitability indicator return on asset (ROA). The empirical results have found strong evidence that these variables have a strong influence on the profitability. However, the results show that higher total assets may not necessarily lead to higher profits due to diseconomies of scales. Also, higher loans contribute towards profitability but their impact is not significant. Equity and Deposits have significant impact on profitability.

Bintawim [3] paper objective was to provide performance analysis comparison of Saudi banks as well as to examine the impact of banks' internal characteristics indicators on financial performance. A total of eleven banks are financially analyzed between 2005 and 2009. The methodology is used including ratio analysis and panel data regression to test the research hypothesis. The results show that large banks performance has reached the mature growth unlike medium-size banks. They are growing to compete against large banks. Meanwhile, small-size banks are facing some difficulties to achieve a better growth. The results indicate all Saudi banks are doing well to maintain the stability of banking sector. In addition, regression results show that banks' size has a negative impact on financial performance, while asset utilization has a positive impact on Saudi banks profitability. Moreover, increasing banks operating expenses leads to increase the net special commission and decrease ROA and ROE.

Medabesh [4] paper is focused on identifying the determinants of Saudi bank profitability. The economic literature, classifies them into two types: internal and external for the banks. For the empirical investigation, we used solid scientific approach to find the financial and macroeconomic factors affecting generation of profits by Saudi banking sector. In this survey, we estimated an econometric model using the method of ordinary least squares, for a period dating from 1990 to 2008, and we used variables covering several financial and monetary factors, which could be related to creation of value by banks in economic literature. The model elaborated using the effectiveness approach to judge the acting of banking institutions, contribute in consolidating the operating behavior of Saudi banks, which are targeting long run investment, not concentrated on generation of short term profit and avoiding exposure to risk. This attitude gave to Saudi banking sector in international market, a good reputation and solid credibility by borrowers.

Ramadan et al. [5] studied a balanced panel data set of Jordanian banks was used for the purpose of investigating the nature of the relationship between the profitability of banks and the characteristics of internal and external factors. For this purpose 100 observation of 10 banks over the period 2001-2010 were comprised. Two measures of bank's profitability have been utilized: the rate of return on assets (ROA) and the rate of return on equity (ROE). Results showed that the Jordanian bank's characteristics explain a significant part of the variation in bank profitability. High Jordanian bank profitability tends to be associated with well-capitalized banks, high lending activities, low credit risk, and the efficiency of cost management. Results also showed that the estimated effect of size did not support the significant scale economies for Jordanian banks. Finally, the estimation results indicated that individual effects on the profitability are present; this is concluded due to the fact that some of the differential slope coefficients are statistically significant.

Haron [6] investigated the determinants of profitability. For the past three decades, researchers have managed to examine and identify various factors that have a significant influence on bank's profitability. All previous profitability studies, however, have been of conventional banks and until now there has been no study to determine the profitability of Islamic banks. This study examines the effects of the factors that contribute towards the profitability of Islamic banks. This study finds that internal factors such as liquidity, total expenditures, funds invested in Islamic securities, and the percentage of the profit-sharing ratio between the bank and the borrower of funds are highly correlated with the level of total income received by the Islamic banks. Similar effects are found for external factors such as interest rates, market share and size of the bank. Other determinants such as funds deposited into current accounts, total capital and reserves, the percentage of profit-sharing between bank and depositors, and money supply also play a major role in influencing the profitability of Islamic banks.

Scott and Arias [7] developed an appropriate econometric model whereby the primary determinants of profitability of the top five bank holding companies in the United States could be examined and understood. The econometric model was based on internal aspects of the banking organizations as they relate to their return on assets and external aspects of the environment in which they compete as measured by growth in GDP was developed based on guidance provided by economists and industry experts to determine the impact of the external national economy of these five leading banks according to their size as measured by total assets. The results show that profitability determinants for the banking industry include positive relationship between the return on equity and capital to asset ratio as well as the annual percentage changes in the external per capita income.

In another dimension, Gull et al. [8] examined the relationship between bank-specific and macro-economic characteristics over bank profitability by using data of top fifteen Pakistani commercial banks over the period 2005 to 2009. The paper used the pooled ordinary least square (POLS) method to investigate the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on major profitability indicators that is, return on asset (ROA), return on equity (ROE), return on capital employed (ROCE) and net interest margin (NIM) separately. The empirical results showed strong evidence that both internal and external factors have a strong influence on the profitability.

Bashir [9] paper analyzed how bank characteristics and the overall financial environment affect the performance of Islamic banks. Utilizing bank level data, the study examines the performance indicators of Islamic banks across eight Middle Eastern countries between

1993 and 1998. A variety of internal and external banking characteristics were used to predict profitability and efficiency. In general, our analysis of determinants of Islamic banks' profitability confirms previous findings. Controlling for macroeconomic environment, financial market structure, and taxation, the results indicate that high capital-to-asset and loan-to-asset ratios lead to higher profitability. The results also indicate that foreign-owned banks are likely to be profitable. Everything remaining equal, the regression results show that implicit and explicit taxes affect the bank performance and profitability negatively while favorable macroeconomic conditions impact performance measures positively. Our results also indicate that stock markets and banks are complementary to each other.

3 Overview of the Saudi and Jordanian Banking System

The Saudi banking sector consists primarily of 12 domestic banks, 11 of which are listed on Tadawul while National Commercial Bank (NCB) is the only privately held bank. NCB dominates assets and deposits in terms of market share while Rajhi takes over loans and penetration (branches and network). In general, Saudi banks' balance sheet is relatively conservative when compared to regional peers on conservative funding profile, high liquidity and low dependence on foreign liabilities.

Saudi Arabian Monetary Agency (SAMA) has adopted several regulatory frameworks for banks to ensure financial stability. Thus, the branch network grew by 22%, reaching 1,646 branches in 2011. At the end of Dec 2011, total bank assets grew by 44.0% compared to the end of 2007, reaching SR 1.54 trillion. Moreover, bank deposits increased by 54% during the same period to reach SR 1.10 trillion. Bank credit to the private sector increased by 44% to SR 856.6 billion. Banks are well capitalized and the total amount of capital and reserves increased by 79.3% during the same period to reach SR190,14 billion at the end of 2011; their total equity capital to total assets ratio averaged 11.4% which is more than the international standard of 8%.[10].

Meanwhile, there are sixteen Jordanian national banks operating in Jordan, 14 of which are listed in Amman Stock Exchange (ASE) and the rest are excluded. Jordanian banking sector has witnessed significant developments during the past two decades. These developments are mainly attributable to the Central Bank of Jordan (CBJ). Supervisory and regulatory roles, as well as following the latest global financial practices were implemented to develop and upgrade the banking sector performance in Jordan. In Jordan, banking sector plays a key role in Jordan by pushing forward the economic growth rates, through the mobilization of national savings and using them to finance productive economic sectors.

The last seven years have witnessed an unprecedented development in the work of banks in terms of quantity and quality. It is believed that this development is due to the strong and real growth rates recorded by the Jordanian economy during this period, During the period (2003-2010), the work of banks recorded a strong growth reached at the end of the first half of 2010 to JD32.5 billion ($45.9 billion) registering an increase of 3.2% compared with the first half of 2009. [5].

4 Research Methodology

Profitability of commercial banks is influenced by internal and external factors. Internal factors are affected by management decisions and goals of the bank management. Internal factors are divided into the following two variables:

  1. Variables related to the financial statements which are affected by the decisions of the bank management.
  2. Variables unrelated to the financial statements such as the number of branch offices, and the status of bank branches (main, auxiliary, cash offices).

This study aimed at investigating the characteristics of internal factors affecting profitability of the Saudi and Jordanian banks. For the purpose of analysis, financial ratios and statistical tools including (percentages, averages, the natural logarithm, correlation, analysis of variance (ANOVA) and regression) analysis were used in testing the hypotheses and to measure the differences and similarities between the sample banks according to their different characteristics. The internal factors influencing the profitability were tested empirically. For the better comparison, each year average ratios and mean for the selected banks were calculated. In calculating the logarithm of total assets Saudi Riyal was converted into Jordanian dinar at the rate 5.34SR/1JD.

Variables which are taken into consideration for the purpose of analysis are return on assets ratio (ROA), liquidity risk (LQR), net credit facilities to total assets ratio (NCA), total investment to total assets ratio (TIA), total equity to assets ratio (TEA), net credit facilities to total deposits ratio (CDR), cost income ratio (CIR) and the size of the bank (SZE).

4.1 Research Model

Profitability (ROA) = β0 + β1 LQR + β2 NCA + β3 TIA + β4 TEA + β5 LTD + β6 CIR + β7 SZE + ε

Profitability is the dependent variable of this study. Explanation of dependent and independent variables along with their proxies are specified in Table1.

Table 1: Explanation of Dependent and Independent Variables Along with their Proxies

Variables	Symbol	Equations
Return on Assets Ratio	ROA	Net income / Total Assets
Liquidity Risk	LQR	Cash and Cash Equivalent / Total Assets
Net Credit Facilities to Total Assets Ratio	NCA	Net Credit Facilities / Total Assets
Total Investment to Total Assets Ratio	TIA	Total investment / Total assets
Total Equity to Assets Ratio	TEA	Total Equity / Assets
Net Credit Facilities to Total Deposits Ratio	CDR	Net Credit Facilities / Total Deposits
Cost Income Ratio	CIR	Total operating Expenses/ Total operating Income
Bank Size	SZE	Natural logarithm of Total Assets

4.2 Research Hypothesis

The present study seeks to test the following hypothesizes:

H 1: The return on assets of Saudi banks surpasses the Jordanian banks.
H 1.1: There exist no relationship between Liquid assets to assets ratio and profitability.
H 1.2: There exist no relationship between net credit facilities to total assets ratio and profitability.
H 1.3: There exist no relationship between total investment to total assets ratio and profitability.
H 1.4: There exist no relationship between total equity to assets ratio and profitability.
H 1.5: There exist no relationship between net credit facilities to total deposits ratio and profitability.
H 1.6: There exist no relationship between cost-to -income ratio and profitability.
H 1.7: There exists no relationship between bank size and profitability.

4.3 Study Sample

In this study, a sample of twenty three banks were considered with 161 observations, of which nine are Saudi banks with 63 observations, and fourteen are Jordanians banks with 98 observations for the period 2005-2011. The criterion for selecting the banks included only banks listed in Saudi stock exchange (Tadawul) and Amman Stock Exchange (ASE). In model 1 there are twelve Saudi banks operating in Saudi Arabia, three of them are excluded in this study, due to the fact that one of them is not listed in Saudi stock exchange (Tadawul), and the other two are newly established. In model 2 there are sixteen Jordanian banks operating in Jordan two of them are excluded in this study, due to the fact that one of them is not listed in Amman Stock Exchange (ASE), and the other one is a new one established.

4.4 Data Collection

In obtaining the data, the necessary information was gathered from secondary data such as financial statements and balance sheets of the selected banks over the period of 2005-2011. In addition, data was gathered from Saudi stock exchange (Tadawul), Amman Stock Exchange (ASE), Saudi Arabian Monetary Agency (SAMA), Central bank of Jordan (CBJ), Books, papers, articles, specialized international journals, the world wide web (Internet), and relevant previous studies.

5 Statistical Results and Analysis

5.1 Trend Analysis

In order to achieve the purpose of study, financial ratios for both sectors were calculated as it is clear in the following table:

Table 2: Average Ratios of the Study Variables (2005-2011).

Variables	Model	2005	2006	2007	2008	2009	2010	2011	average	SD
ROA	1	3.94%	4.96%	2.79%	2.04%	1.69%	1.72%	1.92%	2.72%	0.0127
	2	2.42%	1.76%	1.50%	1.60%	1.19%	1.30%	1.11%	1.55%	0.0045
LQR	1	12.09%	17.08%	14.67%	11.69%	17.15%	16.29%	17.36%	15.19%	0.0243
	2	37.61%	34.41%	33.93%	28.43%	28.35%	27.36%	24.29%	30.63%	0.0474
NCA	1	50.72%	48.94%	49.59%	52.72%	51.55%	52.00%	52.82%	51.19%	0.0151
	2	42.33%	41.29%	46.15%	49.42%	45.59%	45.48%	45.75%	45.14%	0.0267
TIA	1	33.65%	30.22%	31.23%	31.22%	27.56%	27.83%	26.09%	29.69%	0.0263
	2	14.29%	14.51%	15.08%	17.39%	21.51%	22.50%	24.23%	18.50%	0.0417
TEA	1	12.22%	14.33%	13.30%	12.50%	13.39%	14.23%	14.24%	13.46%	0.0086
	2	12.46%	13.39%	13.88%	14.36%	14.11%	14.00%	14.04%	13.75%	0.0064
CDR	1	61.23%	59.87%	60.24%	63.48%	61.86%	63.26%	64.31%	62.04%	0.0170
	2	58.58%	57.54%	64.14%	69.34%	61.99%	59.73%	66.58%	62.56%	0.0436
CIR	1	33.78%	31.46%	42.39%	48.71%	60.36%	58.26%	49.16%	46.30%	0.1116
	2	65.12%	57.96%	59.35%	50.57%	50.57%	43.81%	41.72%	52.73%	0.0851
SZE	1	10.01	10.08	10.17	10.27	10.26	10.27	10.31	10.20	0.1121
	2	8.99	9.06	9.12	9.15	9.19	9.23	9.25	9.14	0.0935

1. Return on assets ratio: This study use return on assets (ROA) as dependent variable. ROA is the ratio of net income to total assets. For any bank, ROA depends on the bank's as well as the uncontrollable decisions related to economic conditions and government policies [11]. Table 2 shows that the return on assets ratio was more consistent in terms of dispersion for Model 2 (S.D. 0.0045) as compared to Model 1 (S.D. 0.0127). Also, Model 1 reveals that this ratio fluctuated between 1.69% in 2009 and 4.96% in 2006. The average ratio of this model stood at 2.72% during the study period. On the contrary, this ratio fluctuated between 1.11% in 2011 and 2.42% in 2005 for Model 2. The average ratio of this model stood at 1.55%.during the study period.

2. Liquid assets to assets ratio: The risk of loss to a bank resulting from its inability to meet its needs for cash or from inadequate liquidity levels, which must be covered by funds, obtained at excessive cost [12]. This ratio was more consistent in terms of dispersion for Model 1 (S.D. 0.0243) as compared to model 2 (S.D. 0.0474).This ratio fluctuated between 11.69% in 2008 and 17.36% in 2011. The average of this ratio stood at 15.19%. In the contrary, this ratio fluctuated between 24.29% in 2011 and 37.61% in 2005 for model 2. The average ratio of this model is 30.63%.

3. The net credit facilities to total assets ratio: Activities of the bank is to raise funds from surplus units and lend it to deficit units. From these activities the bank will earn net interest margin. The larger the loan, the greater the net interest margin, and the higher bank profits. Aper & Anbar [13] found an inverse relationship between bank loans and profitability, while Gul et al. [8], Sufian [11] and Suzuki [14] reported a direct relationship between the loan and profitability. This ratio was more consistent in terms of

dispersion for Model 1 (S.D. 0.0151) as compared to model 2 (S.D. 0.0267).This ratio fluctuated between 48.94% in 2006 and 52.72% in 2008 in model 1. The average ratio of this model was 51.19%. In the contrary, this ratio fluctuated between 41.29% in 2006 and 49.42% in 2008 in model 2. The average ratio for this model is 45.14%.

4. The total investment to total assets ratio: One source of banking income, excluding interest income, is a non-interest income. Non-interest income consists of commission, services charges, fees and guarantee fees, net profits from sales of investment securities and foreign exchange profits. Increasing non-interest income means that the bank has diversified its activities, not just rely on its traditional activities. Theoretically, it is expected that the larger total investment to total assets ratio the higher bank profits [11]. This ratio was more consistent in terms of dispersion for Model 1 (S.D. 0.0263) as compared to model 2 (S.D 0.0417).This ratio fluctuated between 26.09% in 2011 and 33.65% in 2005 in model 1. The average ratio of this model was 29.69%. On the other hand, this ratio fluctuated between 14.29% in 2005 and 24.23% in 2011 in model 2. The average of this ratio is18.50%.

5. The total equity to assets ratio: The total equity ratio (TEA), which is measured by total equity over total asset, reveals capital adequacy and should capture the general safety and soundness of the financial institution. It indicates the ability of a bank to absorb unexpected losses [2]. Banks that have higher level of equity would decrease the cost of capital so that it has a positive impact on bank profitability. This ratio was more consistent in terms of dispersion for Model 2 (S.D. 0.0064) as compared to model 1 (S.D. 0.0086).This ratio fluctuated between 12.22% in 2005 and 14.33% in 2006 in model 1 with average ratio of 13.46%. On the other side, this ratio fluctuated between 12.46% in 2005 and 14.11% in 2009 in model 2, with average ratio of 13.75%.

6. The net credit facilities to total deposits ratio: Credit risk, in the broadest sense, can be interpreted as the risk of financial loss due to borrower's failure to perform its obligations. Basically, this credit risk can arise either from the activities of banks in extending credit and other activities such as trading and capital market activities [15]. The ratio of loan loss provisions to total loans (LLP / TL) is usually used as a proxy variable to measure credit risk. Expansion in the banking sectors that are considered high risk will increase the credit risk and lower profits to be obtained by banks. Therefore, the relationship between credit risk and bank profit is expected to be negative [11], [15] and [13]. This ratio was more consistent in terms of dispersion for Model 1 (S.D. 0.0170) as compared to model 2 (S.D. 0.0436). This ratio fluctuated between 59.87% in 2006 and 64.31% in 2011 in model 1, with average ratio of 62.04%. In the contrary, this ratio fluctuated between 57.54% in 2006 and 69.34% in 2008 in model 2, with average ratio of 62.56%.

7. The cost income ratio: Bank profits can also be improved by using advanced technologies in communication, information and financial technologies. The use of advanced technologies will improve the efficiency of banking operations. As a result, the cost-to income ratio, as a proxy of operational efficiency, will decline and the impacts on bank profits increase [16]. Trujilo-Ponce [16], Zeitun [17] and Aleksiou & Sofoklis [15] found an inverse relationship between cost-to-income ratio and profitability. This ratio was more consistent in terms of dispersion for Model 2 (S.D. 0.0851) as compared to

model 1 (S.D. 0.1116).This ratio fluctuated between 31.46% in 2006 and 60.36% in 2009 in model 1 around double value, with average ratio of 46.30%. On the other hand, this ratio fluctuated between 41.72% in 2011 and 65.12% in 2011 in model 2 with average ratio of 52.73%.

8. The bank size: Large banks could create economies of scale which lower the average cost and has a positive impact on bank profits. But if the size of bank becomes larger, phenomenon of the diseconomies of scale appears, the more difficult for management to conduct surveillance and the higher the level of bureaucracy that have a negative impact on bank profits [18]. Alper & Anbar [13] and Gul et al [8] found a direct relationship between the size of banks and profitability.

This variable was more consistent in terms of dispersion for Model 2 (S.D. 0.0935) as compared to model 1 (S.D. 0.1121).This ratio fluctuated between 10.01 in 2005 and 10.31 in 2011 in model 1. The average of this variable stood at 10.20. In the contrary, this variable fluctuated between 8.99 in 2005 and 9.25 in 2011 in model 2. The average of this variable stood at 9.14 for this model during the study period.

5.2 Descriptive Statistics

The value of the mean reports the arithmetical average of the variables which are included in the study. The minimum and maximum values indicate the lower and the highest value of the variable. The median indicate numerical value separating the higher half of a data sample. The standard deviation exhibits how much variation or dispersion exists from the mean. A low standard deviation indicates that the data points are inclined to be extremely close to the mean; while high values of standard deviation (SD) indicates that the data set is broaden out over a large range of values. The variance represents how the random variable is distributed near the mean value. Low variance indicates that the random variable is distributed near the mean value. High variance indicates that the random variable is distributed far from the mean value

Table 3 provides summary descriptive statistics analysis for all the variables that are used in the study. The profitability have a mean of 2.72% of total assets and a standard deviation of 0.019 for Saudi banks (Model 1), which was high as compared to a mean of 1.55% and standard deviation 0.0073% of the Jordanian banks (Model 2). The mean value of liquidity assets to assets ratio is 15.19% but with a standard deviation reaching to 0.068 for model 1, meanwhile, the mean value for the same ratio reached to 30.63% with a standard deviation of 0.079 for model 2. The net credit facilities to total assets ratio is, on average, 51.19% of total assets but with a significant variation 0.1899 for model 1, and the mean for model 2 was 45.14% with a standard deviation 0.0866. Furthermore, the total investment to total assets ratio are 29.69% of total assets with standard deviation of 0.205 for model 1, and the mean for model 2 was 18.50% with a standard deviation approaching 0.076. The total equity to assets ratio and the net credit facilities to total deposits ratio have almost similar levels for their mean values, and has the same variability for (TEA) for both models, and higher variability in model 1as regards (CDR). The cost income ratio mean was higher in model 2, at the same time variability was higher in model 1. As regards the bank size, the mean for model 1was higher reached to 10.20%, as compared 9.14% in model 2, however, model 2 has registered higher variability.

Table 3: Descriptive Analysis of All the Dependent and Independent Variables

	Model	ROA	LQR	NCA	TIA	TEA	CDR	CIR	SZE
Mean	1	2.72%	15.19%	51.19%	29.69%	13.46%	62.04%	46.30%	10.20
	2	1.55%	30.63%	45.14%	18.50%	13.75%	62.56%	52.73%	9.14
Median	1	2.27%	13.55%	57.46%	23.04%	12.87%	69.10%	41.72%	10.26
	2	1.45%	30.45%	44.86%	19.73%	13.82%	60.71%	53.69%	9.12
Min	1	0.09%	5.14%	0.17%	7.84%	8.84%	0.21%	21.52%	9.42
	2	-0.17%	14.03%	0.28%	0.39%	5.17%	0.40%	15.29%	8.21
Max	1	12.56%	47.07%	65.72%	88.79%	26.69%	80.94%	97.65%	10.62
	2	4.97%	49.72%	60.28%	38.28%	20.66%	137.08%	102.96%	10.38
SD	1	0.0192	0.0677	0.1899	0.2046	0.0329	0.2283	0.1822	0.2808
	2	0.0073	0.0786	0.0866	0.0760	0.0338	0.1772	0.1454	0.4641

5.3 Pearson's Correlation Analysis

Table 4: Pearson's Correlation Matrix of Saudi and Jordanian Banks

Model 1		ROA	LQR	NCA	TIA	TEA	CDR	CIR	SZE
ROA	Pearson Correlation	1	0.212	-0.487	0.372	0.505	-0.447	-0.676	-0.154
	Sig. (2-tailed)		0.096	0.000	0.003	0.000	0.000	0.000	0.228
LQR	Pearson Correlation		1	0.020	-0.360	**0.526**	0.064	0.280	-0.512
	Sig. (2-tailed)			0.875	0.004	0.000	0.616	0.026	0.000
NCA	Pearson Correlation			1	**-0.938**	-0.429	**0.996**	0.233	-0.191
	Sig. (2-tailed)				0.000	0.000	0.000	0.067	0.134
TIA	Pearson Correlation				1	0.206	-0.949	-0.298	**0.349**
	Sig. (2-tailed)					0.106	0.000	0.018	0.005
TEA	Pearson Correlation					1	-0.361	-0.071	-0.226
	Sig. (2-tailed)						0.004	0.582	0.075
CDR	Pearson Correlation						1	0.217	-0.214
	Sig. (2-tailed)							0.088	0.092
CIR	Pearson Correlation							1	-0.308
	Sig. (2-tailed)								0.014
SZE	Pearson Correlation								1
Model 2		ROA	LQR	NCA	TIA	TEA	CDR	CIR	SZE
ROA	Pearson Correlation	1	0.073	0.023	-0.163	0.101	0.048	-0.803	-0.159
	Sig. (2-tailed)		0.478	0.821	0.108	0.324	0.639	0.000	0.119
LQR	Pearson Correlation		1	**-0.557**	**-0.473**	**-0.450**	-0.378	-0.217	**0.148**
	Sig. (2-tailed)			0.000	0.000	0.000	0.000	0.032	0.147
NCA	Pearson Correlation			1	-0.157	0.217	**0.791**	0.048	-0.061
	Sig. (2-tailed)				0.123	0.032	0.000	0.639	0.553
TIA	Pearson Correlation				1	0.264	-0.254	**0.193**	0.121
	Sig. (2-tailed)					0.009	0.012	0.057	0.237
TEA	Pearson Correlation					1	0.269	-0.045	-0.050
	Sig. (2-tailed)						0.007	0.658	0.625
CDR	Pearson Correlation						1	-0.026	-0.091
	Sig. (2-tailed)							0.796	0.373
CIR	Pearson Correlation							1	0.039
	Sig. (2-tailed)								0.703
SZE	Pearson Correlation								1

Table 4 presents the correlation matrix for the study variables. Independent variables in the order of highest correlation with the dependent variable will be selected first, and the lowest correlation with dependent variable will be selected later. However, it was found from the analysis that there is a significant positive correlation of ROA for Saudi banks (model1) with TEA and TIA variables, as well as a low significant positive correlation with LQR variables and negative with the NCA, CDR, CIR and SZE variables. Also there is a strong positive correlation between TEA with LQR, CDR with NCA, and SZE with TIA.

Also, it was found that there is a significant positive correlation of ROA for Jordanian banks (model 2) with LQR, NCA, TEA and CDR variables. Meanwhile, there is a strong negative correlation of return on assets with CIR and low negative correlation with TIA and SZE. Furthermore, there is a positive correlation between; CDR with NCA, CIR with TIA, SZE with LQR. As well as there is a strong negative correlation between; LQR and NCA, TIA, TEA.

5.4 Regression Analysis

Regression analyses were calculated by using enter method and the following results have been drawn:

Table 5: Regression Analysis of Saudi Banks (model 1) and Jordanian Banks (model 2)

	Model 1				Model 2				Comments		
	Standardized Coefficients				**Standardized Coefficients**				**Model 1**	**Model 2**	More Impact On
	B	**Beta**	**t**	**Sig.**	**B**	**Beta**	**t**	**Sig.**	**Relation**	**Relation**	
Constant	0.232		2.193	0.033	0.057		5.353	0.000			
LQR	0.099	0.351	1.063	0.293	-0.011	-0.119	-1.079	0.283	positive	negative	model 1
NCA	-0.018	-0.175	-0.111	0.912	0.003	0.040	0.331	0.742	negative	positive	model 1
TIA	0.047	0.497	0.521	0.605	-0.008	-0.078	-0.880	0.381	positive	negative	model 1
TEA	0.079	0.136	1.117	0.269	0.009	0.042	0.587	0.558	positive	positive	model 1
CDR	0.027	0.320	0.294	0.770	-0.004	-0.090	-0.867	0.389	positive	negative	model 1
CIR	-0.078	-0.740	-10.68	0.000	-0.041	-0.813	-12.88	0.000	negative	negative	model 2
SZE	-0.021	-0.310	-4.453	0.000	-0.002	-0.104	-1.630	0.107	negative	negative	model 1
R			0.905				0.821				model 1
R Square			0.818				0.674				model 1
Adjusted R Square			0.795				0.649				model 1
F			35.362				26.617				model 1
Sig.Prob (Fstatistic)			0.000				0.000				same
Durbin-Watson			2.173				1.569				model 1

The two sub-samples comprise of 23 large banks or 161 observations. The explanatory power of the two models, the R-square, is at the satisfactory level of 0.82 and 0.67 respectively. The reported R-squared is higher in model 1 than model 2. All the variables

are significant at the 5% level in the regression with the predictions. The t statistics is much more significant in the case of Jordanian banks. Since the Durbin-Watson statistic is 2.17 for model 1 and 1.57 for model 2, one may assume that there is no first-order autocorrelation, either positive or negative. The interesting points in this study are that, the liquidity risk variable has positive impact on Saudi banks (model 1), while a significant negative one on Jordanian banks (model 2), and the level of net credit facilities to total assets ratio has a negative impact on Saudi banks and positive on Jordanian banks. Total investment to total assets ratio variable has a positive impact on Saudi banks and negative one on Jordanian banks. Total equity to assets ratio variable has a positive impact on the two models. Net credit facilities to total deposits ratio variable has a positive impact on Saudi banks and negative one on Jordanian banks. Cost income ratio variable has a negative impact on both models. Bank size variable has a negative impact on both models. This result gives support to the recent papers that mention the diseconomies of scale that exist from a level of size upwards. Growing banks may face diminishing marginal returns so average profits would decline with size. Information advantage and the enforcement power gain from size are insignificant for large banks.

5.5 Hypotheses Assessment Summary

While reviewing the results, the researcher comes to take a decision on the study hypothesis as it appears in the following table:

Table 6: The Hypotheses Summary for Both Models

Hypotheses	Model 1	Model 2
H 1: The return on assets of Saudi banks surpasses the Jordanian banks.	Accepted	
H 1.1: There exist no relationship between Liquid assets to assets ratio and profitability.	Rejected	Rejected
H 1.2: There exist no relationship between net credit facilities to total assets ratio and profitability.	Accepted	Rejected
H 1.3: There exist no relationship between total investment to total assets ratio and profitability.	Rejected	Accepted
H 1.4: There exist no relationship between total equity to assets ratio and profitability.	Rejected	Rejected
H 1.5: There exist no relationship between net credit facilities to total deposits ratio and profitability.	Accepted	Rejected
H 1.6: There exist no relationship between cost-to -income ratio and profitability.	Accepted	Accepted
H 1.7: There exists no relationship between bank size and profitability.	Accepted	Accepted

6 Conclusion

The main purpose of this study was to find out the most important internal factors that affecting the profitability of the Saudi and Jordanian banks. The necessary data was collected from secondary sources. Financial ratios were calculated and statistical tools including; (percentages, averages, the natural logarithm, Pearson's correlation, descriptive analysis of variance and regression analysis) were utilized in testing the hypotheses and to

measure the differences and similarities between the sample banks according to their different characteristics. Variables which were taken into consideration are return on assets ratio (ROA), liquidity risk (LQR), net credit facilities to total assets ratio (NCA), total investment to total assets ratio (TIA), total equity to assets ratio (TEA), net credit facilities to total deposits ratio (CDR), cost income ratio (CIR) and the size of the bank (SZE).

Results indicated that the profitability (represented by return on assets (ROA)) of Saudi banks is surpassed the profitability of the Jordanian banks. This implies that Saudi banks are more profitable than the Jordanian ones as well as it is utilizing resources in more efficient way. The profitability of Saudi banks has a positive and significant correlation with total investment to total assets ratio, total equity to assets ratio and liquidity risk, in addition, there has been a negative and significant correlation with net credit facilities to total assets ratio, net credit facilities to total deposits ratio, cost-to-income ratio and size variables. Whereas, the profitability of the Jordanian banks has a significant positive correlation with liquidity risk, net credit facilities to total assets ratio, total equity to assets ratio and net credit facilities to total deposits ratio variables. Furthermore, there has been a negative and significant correlation with cost income ratio, total investment to total assets ratio and bank size on profitability. It is worth mentioning that, the relationship between profitability and bank size is negative in both models. This result gives support to the recent papers that mention the diseconomies of scale that exist from a level of size upwards. Growing banks may face diminishing marginal returns so average profits would decline with size. Information advantage and the enforcement power gain from size are insignificant for large banks.

The findings of this study reflect the actual status of the sample banks. Since very little empirical studies has been undertaken investigating the characteristics of internal factors affecting profitability of banks in Saudi Arabia and Jordan, an empirical investigation in this field is required which could be of interest to academics, bankers, and policy makers.

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