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THE EFFECT OF CAPITAL ADEQUACY ON PROFITABILITY: A COMPARATIVE STUDY BETWEEN SAMBA AND SAAB BANKS OF SAUDI ARABIA

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Abstract

This study is aimed at finding out the effect of capital Adequacy on profitability between two banks SAMBA and SABB. The necessary data used for analysis were collected from secondary sources. A descriptive analysis was used in testing the hypotheses. Results indicated that, Model 1 SABB bank shows a low positive correlation relationship between the ROA and ROE and a high positive relationship between ROA and CCA, ECA, TCA, CIR, DE. A low negative relationship between ROA and TRC, BS, AG, AL. The ROE has a positive relationship with CCA, ECA, TCA, TRC, BS. A negative relationship between ROE and CIR, AG, AL, DA. Furthermore, Model 2 SAMBA bank shows a high positive correlation relationship between ROA and ROE and a positive relationship between ROA and DE. A negative relationship between ROA and CCA, ECA, TCA, CIR, TRC, BS, AG, AL. A positive relationship between ROE and CIR, DE, and a negative relationship with CCA, ECA, TCA, TRC, BS, AG, AL. The authors suggest that more empirical studies should be carried out by other researchers in the same area which would be a source of help to many entities and it will help management to improve the financial performance of the banks.

Keywords: Return on assets, Return on equity, Core capital, equity capital, Risk weighted capital

INTRODUCTION

The Bank's capital plays an important role in maintaining the safety and durability of the banks and the integrity of banking systems in general, capital represents the wall or barrier that prevents any unexpected loss can be exposed to the bank that affect depositors' money, as well known, the banks generally operate in an environment with high degree of uncertainty which result in exposure to many risks. Banks are exposed to two main types of losses risks; expected losses which occur frequently to any bank and the size of these losses are usually small. Unexpected losses that occur rarely, but the impact on the bank is usually great.

The term capital adequacy expresses the capacity and efficiency of banks that measures, direct and control the risks it faces, in order to be scaled, control and making decisions consistent with the strategy and policy and to strengthen its competitiveness attitude. The capital adequacy is beneficial in pricing banking services and maximizing returns from banks operations, in addition to policy development and procedures necessary for the prevention of different types of risks, which arise as a result of technological and electronic evolution and increasing complexities in banking and competition between banks. Thus, commercial banks are obliged to provide sufficient capital to cover for any possible dangers that may occur, and develop the right strategy to ensure the survival of the bank with a higher percentage than the specified percentage and in order to avoid the intervention of monetary authorities to prevent its decline, which is known Corrective actions.

Capital adequacy ratio for banks is one of the most important indicators of the financial solvency of the financial sector and it is considered as a safety valve to protect the depositors to promote stability and efficiency in the banking system and financial institutions.

The legislation in the central banks of all countries in the world are monitoring this index of banks operating in their economies in order to maintain the financial institution's ability to continue to operate and maintain the presence of a strong and solid money to meet any emergency obligations when there is pressure confronting the financial institutions or large withdrawals of deposits shortly. In addition, it is an indicator which leads us to know the degree of skill banking management in employing financial assets to maximize future shareholder profits, there is an inverse relationship between high capital adequacy and level of profits when this rate is high the rate of profit fell, and vice versa.

This rate can be measured by two tiers (tier1) a core capital (equity), which can be the financial institution of the continuity of its business without interruption. The second tier is extended, which includes core capital slide (property rights) as well as any technical reserves or allowances loaded on income and is considered as a non-outflow supports core capital This rate can be measured by the following equation: capital adequacy ratio = property rights ÷ risk

weighted assets. Banks may not be able to continue its various activities without the necessary funds required to finance it is assets because the banks business is different from industrial, service and commercial companies in the degree of dependence on external sources of funds, and the use of different sources of funds.

The finance decision in public companies, and banks in particular is very important decision that affect the future cash flows of the company, profitability, and liquidity, and this decision determining the percentage of financing requirements from short-term sources, and long-term, as well as the mix capital of debts and equity.

Saudi commercial banks occupy very important position in the country economy, and it plays an essential role in financing production, trade and investment, these banks became an essential part in activating the economic and social development. These banks managed the development of the banking sector through the development of financial, human resources potentials and technological process, which led to the creation of an atmosphere of competition in the market between the Saudi private banks and foreign banks.

Capital in private banks plays a vital and important role in the protection of depositors 'money and represents the hippocampus shield, which protects it from unexpected losses. Making profits by banks can achieve the fundamental objectives sought by banks, such as maintaining it is survival and strengthen its financial position and increase its ownership equity, protect its solvency and liquidity, thus increasing their ability to cope with risk, debts and crises.

In 1999 a number of amendments to the Basel I developed new methods for measuring the credit risk of a simple method (Simple Approach) to the standard method (Standardized Approach) based on the external evaluation of credit and near Basel I, and then moved on to the method of internal rating (Internal Rating Based approach IRBA) through basic method (Foundation approach) and advanced method (Advanced approach) and the introduction of what is known as operational risks in the shrine of the capital adequacy ratio, and all this in the context of the first pillar (Pillar1) of the Basel II which is the minimum capital requirements (minimum capital Requirement) second pillar (Pillar2) supervisory review (supervisory review) The third pillar (Pillar3) market discipline (market discipline) In both criteria (Basel I and Basel II) must not be less than the capital adequacy ratio of 8%

After the occurrence of the global financial crisis in 2008 many banks found that they did not have sufficient capital to support the status of the risks taken, as well as the construction of excessive indebtedness within the budget and outside accompanied by the gradual erosion of the level and quality of capital, that is a part from insufficient liquidity stocks.

This forced the Basel Committee on Banking Supervision to make substantial modifications to the pillars of Basel II by issuing new rules and standards accounted for Basel III

at the end of 2010, and has these key measures to strengthen the banking sector, the structure of the rules of capital and reserves, liquidity tests compactor (Stress Testing), governance and practice of compensation banks.

Banks must maintain proper liquidity in order to be able to pay it is obligations in the short run and maintain adequate profitability to enhance solvency and to gain trust by customers and shareholders. Banks should maintain it is earning assets, such as loans and advances, bonds, government securities, stocks. As well as, banks are required to generate revenues to meet operating costs, maximizing shareholders' wealth, and show management efficiency. The management efficiency is measured by how much theygain profits. The bank may expose into insolvency if it fails to generate profits.

Profitability is a key target for all financial institutions as banks must keep adequate liquidity amounts so as to maintain the continuity. They are one of the most important sources Key to generate capital. Without profits banks will not be able to attract external capital to strengthen its investments and co-existence with the competition. The profitability help to increase bank deposit holders and potential investors as well as confidence and encourage the shareholders of capital to underwrite in the bank, plus they are used as a measure of performance of the bank's management, where Give strong indications of the regulators that the bank is moving in the right direction, plus it gives an idea about the adequacy of bank management in directing projects, as well as it is a measure of the effectiveness of investment, operational and financing policies followed by the management of the bank. However, most of these banks are having trouble balancing between liquidity and efficiency factors. Administrative and financial solvency that are more factors affecting the profitability of the bank, and the study problem can be summed up by the following questions:

- What is the effect of capital adequacy in the profitability of the two huge banks operating in Saudi market?
- What is the most powerful factors of the capital adequacy that change the profitability of banks?

The importance of this study stems from being one of the limited studies describing the capital adequacy of the two Saudi banks which are holding large capital. This study will be a source of help for a number of entities, individuals, researchers and institutions, in order to maintain their investments and achieve the greatest possible return in exchange for carrying less loss, as well as it is also important for the depositors to check and reassure on the recovery of their deposits on the one hand and interest imposed on it on the other hand. It is also important for the owners in order to maximize their shareholders' wealth and to maximize the profits of their investment, in addition to the need for banking institutions to manage success

and failure to enable them to take action and precautionary measures to protect them from financial leverage and operating leverage risk, also officials of institutions benefit from this study by taking preventive measures to avoid the financial crises affecting the national economy.

The main objective of this study is to determine the factors that affecting the capital adequacy of the SAMBA and SABB commercial banks, so as to highlight the role played by these banks to strengthen the credibility of the Saudi financial banking system.

LITERATURE REVIEW

Capital adequacy is closely linked to the economic growth of a country. The issue of capital adequacy in banks has gained significant importance under global regulatory changes especially in recent years as a result of the increased risks and financial crises they face. The interest of the industrialized countries in the subject of capital adequacy and the need to unify their control systems (Basel III), led them to make attempts to strengthen the capacity of global capital and rules. In order to avoid risks and transition of liquidity more rules and regulations were set up to reach to a more flexible banking sector and resolve problems. This has created safety margins, leverage rates and introduced liquidity risk management indicators to have high quality capital during periods of stress and crisis.

Valentina, F. Calvin M and Liliana S.(2009) found that sub-Saharan Africa's bank has a high earnings compared with other regions. This study consisted of 389 banks in 41 countries of sub-Saharan Africa aimed to investigate the determinants of bank profitability. The study found that regardless of the credit risk, but the return on assets was high with large banks that have diversification of activity and private property. In addition, this study indicated that macroeconomic variables have influenced Bank earnings, since macroeconomic variables that promote stable growth of output and low inflation affected and promoted credit expansion. The results also indicated that continued moderation in profitability. Thus, this study supports the imposition that states "the higher capital requirements in the region can promote financial stability".

In their study, Joseph, K. S. and Tabitha N. (2016) try to investigate the impact of capital on the financial performance in the context of commercial banks in Kenya. They found that the core capital to total risk weighted assets ratio and the total capital to total risk weighted assets ratio decreased for both the Tier I and Tier II banks during the years 2010 and 2014.. Accordingly, both Tier I and Tier II banks upgraded these two ratios at a significantly higher level than the set minimum requirement of 8% and 12%, respectively.

Alalaya, M. and Al Khattab, S.A. (2015) concluded that Assets logarithm of banks had a significant negative relationship with ROA, whereas ROE had a positive and significant

relationship, TD/TA had a positive effect, GDP had a negative impact, GDP and per capita inflation rate were found to be negatively signed.

Ali, S.A. (2016) investigated the crucial determinants of profitability in the case of Jordanian commercial banks. A balanced panel data for these banks (2005-2014) was used to achieve this purpose, and ROA and ROE were use as banks' profitability measurement. Findings indicated that there is a positive association between capital adequacy, capital and leverage and banks' profitability, and negative association between assets quality and banks' profitability. In addition, this study found that improving Jordanian bank's profitability needs well-capitalized banks accompanied with high capital adequacy.

Torbira, L. Land Zaagha, A. S. (2016) investigated in their empirical study the impact of capital adequacy indicators on bank financial performance measures in Nigeria. The analysis revealed the existence of significant long run relationship between bank financial performance variables and capital adequacy indicators in the Nigerian banking industry.

Rufo's, M. and John P. R. (2017) study aimed to investigate the impact of credit risk on capital adequacy. The sample of this study consisted of 567 banks in Philippines. Findings related to this current study indicated that capital adequacy has no significant impact on the banks' profitability in Philippines.

David, U. and Osemwegie, M.(2016)looked at the importance of capital adequacy and its impact on the financial business in the Nigerian banks through GLS estimator technique Statements for the period from 2007 to 2015. The application and study proved through empirical evidence the impact of capital adequacy in promoting financial business to the banks of Nigeria supporting the overriding impact of capital adequacy in improving the financial deeds of banks.

Siti, N. Y.1, Nusaibah, M and Kazuhiro, O.(2016) aimed to study the impact of capital adequacy ratio on financial performance and economic resultsin64 Japanese banks during the years from 2005 to 2014. The results indicated that there are various signs of relationships between study's variables with a slight variation from the previous empirical work.

In his study, Ben Moussa, M. A.(2013) tried to investigate the relationship between capital and financial performance in 19 banks located in Tunisia during the period of (2000-2009). Three measures were used in this study: return on assets (ROA), return on equity (ROE), and the net interest margin (NIM) to approximate the capital ratio and its financial performance. The results indicated that a positive relationship was existed between capital and financial performance.

Căpraru, B. and Ihnatov, I. (2015) found that banks' profitability is negatively influenced by the cost to income ratio, banks' size, and credit risk and market concentration.

Ikpefan, O. (2013) examined the extent of the impact of capital adequacy, management and performance of the commercial banks in Nigeria (1986-2006). Capital adequacy ratios is found to have a negative impact on earnings. The researcher measured the efficiency of the management and operational expenses and found that there is a negative correlation to the return on capital. The implications of this study, among other things, pointed out that sufficient shareholders' funds can contribute to the promotion of Nigerian commercial banks,' increase performance and also increase customer confidence, especially after the global financial crisis, which has led to huge losses in the Nigerian financial system.

METHODOLOGY

This study is based on descriptive and analytical approach by selecting a time series data from 2010-2015 for both banks, following two methods: The first method is based directly or indirectly on secondary data which also includes previous studies on the subject of the study to cover the theoretical side, in addition to relying on the annual reports issued by the banks under study which cover the practical side of the study. The second method is the statistical analysis where data was collected as a sample of study for 6 years' period from 2010 to 2015 for The Saudi American Bank **(SAMBA)** and The Saudi British Bank **(SABB)**. For the purpose of statistical analysis, the following tools were focused on:

1. Pearson correlation coefficient (Pearson Correlation) to identify the expected relationship between the independent variables (capital adequacy), and the dependent variable directions (profitability).

2- This study measures the relationship of return on assets (**ROA)** and return on equity(**ROE)** as dependent variable on the independent variables represented by core capital (**CCA)**, equity capital (**ECA)**, Risk weighted capital (**TRC)**, Total capital **(TCA)**, Cost income ratio (**CIR),** Bank size **(BS),** Asset growth **(AG),** Assets to liabilities **AL,** Debit to equity **DE** as independent variable.

The Equation Used:

ROA = CCA + ECA + TRC + TCA + CIR + BS + AG + AL + DE

ROE = CCA+ ECA + TRC + TCA + CIR+ BS + AG + AL + DE

Hypothesis

H1: Capital adequacy has a positive relationship with bank profitability.

The main hypothesis is divided into sub-hypothesis:

H 1.1: There is a positive relationship between core capital (leverage) ratio and bank profitability.

H 1.2: There is a positive relationship between equity capital to assets ratio and bank profitability.

H 1.3: There is a positive relationship between Tier 1 risk weighted capital ratio and bank profitability.

H 1.4: There is a positive relationship between total capital to assets ratio and bank profitability.

H 1.5: There is a positive relationship between cost-income ratio and bank profitability.

H 1.6: There is a positive relationship between bank size and bank profitability.

H 1.7: There is a positive relationship between asset growth and bank profitability.

H 1.8: There is a positive relationship between assets to liabilities and bank profitability.

H 1.9: There is a positive relationship between Debit to equity and bank profitability.

Theoretical and Procedural Definitions

Return on Assets (ROA): This rate measures the overall effectiveness of the company to make a profit through investments and assets at its disposal. The higher the rate, the greater profitability. This rate index on the overall profitability of the company with capital provided by equity and debt capital. Investors are keen to look at this rate because it gives a clear picture of the profitability of the company. The following equation calculating the return on investment:

Return On Assets (ROA) = Net Income/Total Assets

Return on Equity (ROE): It measures the return achieved by the company's shareholders. Where this rateplays a big role in investment decisions for the owners of shares or rights. Owners look forward to increasing this rate. Return on shareholders' equity is calculated by the following equation:

Return on Equity (ROE) = Net Income/Total Shareholders' Equity

Equity Ratio: The equity ratio is considered as a leverage or solvency ratio for investors which measure the total company assets that are financed by investors. Equity ratio is calculated by comparing the total equity in the firm to the total assets.

Equity Ratio = Total Equity/Total Assets

Capital-to-Asset Ratio: This ratio helps to determine whether a company has enough capital. A financial can use the capital-to-asset ratio to determine a minimum level of capital that banks must maintain. Business and financial managers can use the capital-to-asset ratio to make the company's capital and asset levels to reach sound levels. Investors may use it to decide whether to pump money in the firm. Capital-to-asset ratio is calculated by the following equation:

Capital-to-Asset Ratio = Total Capital/Assets

The Cost-to-Income Ratio: It is a key financial measure for determining the profitability of a bank. This ratio shows how a bank can efficiently perform it is operations. The ratio is calculated

by dividing the operating expenses on operating income. The lower the ratio the more profitable the bank will be. Also this ratio helps investors to have clear insight on how efficiently the company can perform. Changes in the ratio can also cause some potential problems: if this ratio increases from one period to the next, it means that expenses are increases at a rate higher than income, which could affect the company business adversely. Equity ratio is calculated by:

The Cost-to-Income Ratio = Operating Expenses / Operating Income

The Debt to Assets Ratio: This ratio indicates that how much a company's assets are financed with debt, rather than equity. The debt to asset ratio is a leverage ratio which measures financial risk of a business as well as it measures the amount of total assets which is funded by creditors instead of investors. If the ratio is greater than 1 it means that a large proportion of assets are being funded with debt, but if the ratio is lower than 1 this indicates that considerable amount of assets funding is coming from equity. The debt to asset ratio is calculated by:

The Debt to Asset Ratio = Liabilities/ Total Assets.

Debt to Equity Ratios: It measures the extent to which the company's reliance on (debt) to fund its assets, in other words, it is which measures a company's financial leverage and in practice there are two ways to measure debt ratios, the first depends on the statement of financial position which measure the extent of reliance on debt in the company's financing, while the second depends on the income statement, which measures the degree of risk of debt through the acquisition of interest rate and coverage of fixed rate burden. The formula for calculating D/E ratios can be represented in the following way:

Debt to Equity Ratio = Total Liabilities / Shareholders' Equity

Capital Adequacy: The capital adequacy ratio is a tool to measure the solvency of the bank and it is ability to repay its obligations and meet any losses that may occur in the future. In other words, the increase in the capital adequacy of banks is an indicator to protect depositors' money, so that it helps in reducing the risk of crises which could expose the bank and a private bankruptcy costs. Capital Adequacy is defined as avoiding and hedging against the risks of various kinds, which may be exposed by commercial banks from its operations, and this variable is the independent variable, which can be expressed by the following equation:

Core Capital/Risk Weighted Assets: Includes all risky assets, with the exception of liquid assets (cash balances in the Central Bank and financial institutions), the examples of risky assets are loans to guarantee or without guarantee and other securities (long-term investments). This ratio shows the relationship between the bank's capital sources and the risk weighted assets of the bank and any other operations.

Assets/Liabilities: The Asset/Liability Ratio can be a useful quick tool in evaluating credit.

ANALYSIS AND FINDINGS

Descriptive Statistics

The arithmetical average of the study variables is presented in table 1 and 2. The maximum and minimum values indicate high or low value variable. The median shows the numerical value separating the higher half of a data sample. The standard deviation shows how much variation or dispersion exists from the mean. The low standard deviation indicates that the data are very close to the mean; high values of standard deviation indicate that the data set expands values. The difference is how the random variable is distributed near the mean value.

Table 1and 2 provides summary descriptive statistics analysis for all the variables that are used in the study. The ROA as profitability indicator has a mean of 3.40% of total assets and a standard deviation of 0.37 for SABB bank (Model 1), which is higher than the mean of SAMBA bank 2.26% and the standard deviation is 0.07% (Model 2). Furthermore, the ROE as profitability indicator has a mean of 26.68% of total assets and a standard deviation of 3.03 for SABB bank (Model 1), which is higher than the mean of SAMBA bank ROA 14.26% and the standard deviation is 1.91% (Model 2). The mean value of core capital is 12.34% with a standard deviation reaching to 1.54 for model 1, meanwhile, the mean value for the same ratio in (Model 2) of SAMBA bank reached to 15.61% with a standard deviation of 1.57. The mean of equity capital ratio is 12.83% with a standard deviation of 1.49 for model 1, and the mean for model 2 for the same value 16.06 with a standard deviation 1.67. Furthermore, the mean of risk weighted capital is 15.05% with a standard deviation of 0.85 for model 1, and the mean value for the same ratio in (Model2) is 18.33% with a standard deviation approaching 1.16. The total capital mean ratio is 88.09 with a standard deviation 6.83% in model 1, as compared to the mean of 89.97% and a standard deviation of 3.86% in model 2. The cost income mean ratio is 42.27 with a standard deviation 9.91% in model 1, as compared to the mean of 52.07% and a standard deviation of 3.56% in model 2. The bank size mean value was higher in SAMBA bank as compared to bank SABB meanwhile; the standard deviation was higher in bank model 1.The mean of asset growth ratio is 7.52 with a standard deviation 14.72% in model 1, as compared to the mean of 4.07% and a standard deviation of 2.65% in model 2. The mean of assets to liabilities ratio is 118.97% with a standard deviation 9.1% in model 1, as compared to the mean of 119.21% and a standard deviation of 2.29% in model 2. The mean of debt to equity ratio is 6.63% with a standard deviation 0.59% in model 1, as compared to the mean of 5.29% and a standard deviation of 0.68% in model 2.

Table1. Descriptive Analysis of the Dependent and Independent Variables for SABB Bank

Variable (SABB)	Mean	25(%)	Median	75(%)	SD
Return on assets (ROA)	3.40	3.3275	3.5	3.53	0.37
Return on equity (ROE)	26.68	25.07	25.605	27.8425	3.03
Core capital (CCA)	12.34	11.73	12.115	13.025	1.54
Equity capital (ECA)	12.83	12.17	12.63	13.645	1.49
Risk weighted capital (TRC)	15.05	14.7325	14.855	14.9925	0.85
Total capital (TCA)	88.09	87.9825	89.985	91.5975	6.83
Cost income ratio (CIR)	42.27	36.79	38.32	41.62	9.91
Bank size (BS)= Assets	167383588	148318678	182455734	187609268	28005113
Asset growth (AG)	7.52	-0.85	2.945	9.395	14.72
Assets/Liabilities (AL)	118.97	114.29	115.46	117.28	9.1
Debt to equity (DE)	6.63	6.34	6.79	7.01	0.59

Table 2. Descriptive Analysis of the Dependent and Independent Variables for SAMBA Bank

Variable (SAMBA)	Mean	25(%)	Median	75(%)	SD
Return on assets (ROA)	2.26	2.21	2.26	2.3	0.07
Return on equity (ROE)	14.26	12.91	13.29	15.23	1.91
Core capital (CCA)	15.61	14.58	16.09	16.61	1.57
Equity capital (ECA)	16.06	14.97	16.575	17.13	1.67
Risk weighted capital (TRC)	18.33	17.85	18.905	19.01	1.16
Total capital (TCA)	89.97	86.9	90.8	92.825	3.86
Cost income ratio (CIR)	52.07	49.27	52.72	55.04	3.56
Bank size (BS)= Assets	205822837	193847707	201052893	214308278	17809370
Asset growth (AG)	4.07	2.39	3.45	5.53	2.65
Assets/Liabilities (AL)	119.21	117.69	119.87	120.67	2.29
Debt to equity (DE)	5.29	4.84	5.04	5.69	0.68

Pearson's Correlation Analysis

Table 3 presents the Pearson correlation matrix for Model 1. The table shows that there isa low positive correlation relationship between the ROA and ROE as dependent variables and a high positive correlation relationship between ROA and CCA, ECA, TCA, CIR, DE, as well as there is a low negative correlation relationship between ROA and TRC, BS, AG, AL. In addition to that, ROE as a dependent variable has a positive correlation relationship with CCA, ECA, TCA, TRC, BS. In the meanwhile, CIR, AG, AL, DA has a negative relationship with ROE.

Table 3. Pearson's Correlation Matrix of SABB Bank

	ROA	ROE	CCA	ECA	TRC	TCA	CIR	BS	AG	AL
ROE	.007									
	.990									
CCA	.503	.841*								
	.309	.036								
ECA	.485	.838*	.997**							
	.329	.037	.000							
TRC	-.046	,941**	.750	.723						
	.931	.005	.086	.104						
TCA	.719	.498	.879*	.887*	.383					
	.107	.314	.021	.018	.454					
CIR	.564	-.631	-.343	-.371	-.573	-.125				
	.244	.179	.506	.469	.234	.814				
BS	-.642	.688	.287	.320	.581	-.040	-.848*			
	.169	.131	.581	.536	.227	.940	.033			
AG	-.776	-.187	-.652	-.663	-.084	-.902*	-.180	.254		
	.070	.722	.160	.151	.875	.014	.733	.628		
AL	-.878*	-.042	-.572	-.577	.050	-.880*	-.241	.473	.909*	
	.021	.937	.235	.230	.926	.021	.646	.344	.012	
DE	.053	-.993**	-.807	-.810	-.908*	-.459	.654	-.752	.160	-.009
	.921	.000	.052	.051	.012	.360	.158	.084	.761	.987

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

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

It was also found from the correlation analysis in table 4 Model 2 that, there is a high positive correlation relationship between ROA and ROE, as well as a positive relationship between ROA and DE. Also, there was a negative relationship between ROA and CCA, ECA, TCA, CIR, TRC, BS, AG, AL. Furthermore, ROE as a profitable measure has a positive correlation relationship with CIR, DE, as well as it has a negative correlation relationship with CCA, ECA, TCA, TRC, BS, AG, AL.

Table 4. Pearson's Correlation Matrix of SAMBA Bank

	ROA1	ROE1	CCA1	ECA1	TRC1	TCA1	CIR1	BS1	AG1	AL1
ROE1	.781									
	.067									
CCA1	-.611	-.970**								
	.198	.001								
ECA1	-.615	-.972**	1.000**							
	.193	.001	.000							
TRC1	-.753	-.986**	.955**	.957**						
	.084	.000	.003	.003						
TCA1	-.703	-.914*	.903*	.903*	.892*					
	.119	.011	.014	.014	.017					
CIR1	-.065	.438	-.551	-.550	-.482	-.168				
	.903	.385	.257	.258	.333	.750				
BS1	-.425	-.747	.789	.791	.709	.492	-.718			
	.401	.088	.062	.061	.115	.321	.108			
AG1	-.374	-.735	.787	.787	.696	.470	-.789	.985**		
	.465	.096	.063	.063	.124	.347	.062	.000		
AL1	-.599	-.967**	1.000**	1.000**	.952**	.899*	-.559	.793	.791	
	.209	.002	.000	.000	.003	.015	.248	.060	.061	
DE1	.661	.985**	-.997**	-.998**	-.973**	-.908*	.533	-.781	-.778	-.996**
	.153	.000	.000	.000	.001	.012	.276	.067	.068	.000

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

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

Trend Analysis

In order to achieve the basic objective of this study, financial ratios for both banks were calculated as shown in the following tables. Model 1 shows that ROA average ratio which is 3.40% was mostly constant through the years of study period. The ROE average ratio which stood at 26.69 fluctuated over the years it increased from 23.53 in 2010 to 31.90 in 2015. The CCA increased over the years registering average ratio of 26.69. The ECA also increased over the years and it is average reached to 12.83. The TRC increased over the years of study and it is average ratio stood at 15.05. The TCA was unsteady over the years of study with average ratio of 88.10. The CIR was very high in year 2010 and then declined to almost half in 2015 with average ratio 42.28. The BS increased through the years of study reaching to 16.7 billion riyals, while AG was unstable over the years however it is average ratio stood at 7.52. The AL was

volatile over the years with average 118.97. The DE was inconsistent over the years registering an average ratio of 6.63.

Table 5.SABB Financial Statements Ratio (2010-2015)

Variable (SAAB)	2010	2011	2012	2013	2014	2015	Average
Return on assets (ROA)	3.86	3.53	2.75	3.28	3.47	3.53	3.40
Return on equity (ROE)	23.53	24.94	25.46	25.75	28.54	31.90	26.69
Core capital (CCA)	11.65	11.97	10.16	12.26	13.28	14.70	12.34
Equity capital (ECA)	12.10	12.38	10.70	12.88	13.90	15.00	12.83
Risk weighted capital (TRC)	14.16	14.83	14.88	14.70	15.03	16.69	15.05
Total capital (TCA)	87.76	88.65	74.96	91.32	91.69	94.20	88.10
Cost income ratio (CIR	61.94	42.35	39.43	37.21	36.07	36.65	42.28
Bank size (BS)= Assets	125372866	138657505	187609268	177302200	187609268	187750423	167383588
Asset growth (AG	-1.16	10.59	35.30	-5.49	5.81	0.08	7.52
Assets/Liabilities (AL)	113.77	114.13	137.36	114.78	116.14	117.66	118.97
Debt to equity (DE)	7.26	7.08	6.81	6.77	6.20	5.66	6.63

Source: Calculated from the SABB bank financial statements (2010-2015)

Model 2 shows that ROA average ratio which is 2.26% was mostly constant through the years of study period. The ROE average ratio which stood at 14.26 was inconsistent over the years it decreased from 17.44 in 2010 to 12.92 in 2015. The CCA increased over the years registering average ratio of 26.69. The ECA also increased over the years and it is average reached to 16.06. The TRC increased over the years of study and it is average ratio stood at 18.33. The TCA was almost steady over the years of study with average ratio of 89.97. The CIR declined during the period of study with average ratio 52.07. The BS increased through the years of study reaching to 20.6 billion riyals, while AG was changeable over the years however it is average ratio stood at 4.07. The AL was capricious over the years with average 119.21. The DE was unsteady over the years registering an average ratio of 5.29.

Table 6. SAMBA Financial Statements Ratio (2010-2015)

Variable (SAMBA)	2010	2011	2012	2013	2014	2015	Average
Return on assets (ROA)	2.36	2.30	2.20	2.20	2.30	2.22	2.26
Return on equity (ROE)	17.44	15.76	13.65	12.91	12.88	12.92	14.26
Core capital (CCA)	13.27	14.23	15.63	16.54	17.35	16.63	15.60
Equity capital (ECA)	13.57	14.59	16.11	17.04	17.90	17.16	16.06
Risk weighted capital (TRC)	16.33	17.52	18.95	18.86	19.31	19.03	18.33
Total capital (TCA)	84.87	85.86	91.58	94.26	93.24	90.02	89.97
Cost income ratio (CIR)	55.66	50.91	54.52	55.22	47.39	48.72	52.07
Bank size (BS)= Assets	187415840	192773890	197069156	205036629	217398827	235242679	205822837
Asset growth (AG	1.02	2.86	2.23	4.04	6.03	8.21	4.07
Assets/Liabilities (AL)	115.82	117.18	119.20	120.53	121.80	120.71	119.21
Debt to equity (DE)	6.36	5.85	5.21	4.87	4.59	4.83	5.29

Source: Calculated from the SAMBA bank financial statements (2010-2015)

CONCLUSION

However, it was found from the descriptive statistics analysis for the dependent variables that the ROA as profitability indicator has a mean of total assets and a standard deviation for SABB bank (Model 1), higher than the mean and standard deviation of SAMBA bank (Model 2). Furthermore, the ROE as profitability indicator has a mean of total assets and a standard deviation for SABB bank (Model 1), higher than the mean and standard deviation of SAMBA bank (Model 2).

A descriptive analysis was used in testing the hypotheses and Pearson correlation analysis of Model.1 shows that there is a low positive correlation relationship between the ROA and ROE as dependent variables and a high positive correlation relationship between ROA and

CCA, ECA, TCA, CIR, DE, as well as there is a low negative correlation relationship between ROA and TRC, BS, AG, AL. In addition to that, ROE as a dependent variable has a positive correlation relationship with CCA, ECA, TCA, TRC, BS. In the meanwhile, CIR, AG, AL, DA has a negative relationship with ROE.

It was also proved in the correlation analysis of Model 2 that, there is a high positive correlation relationship between ROA and ROE, as well as a positive relationship between ROA and DE. Also, there was a negative relationship between ROA and CCA, ECA, TCA, CIR, TRC, BS, AG, AL. Furthermore, ROE as a profitable measure has a positive correlation relationship with CIR, DE, as well as it has a negative correlation relationship with CCA, ECA, TCA, TRC, BS, AG, AL. Financial ratios were calculated and shows that ROA and ROE average ratios in Model1. are greater than the average ratio in Model 2.

There are many empirical studies conducted in the same field, but specific studies on Saudi Banks were rare. Therefore, the authors suggest that *more empirical studies should be carried out by other researchers* in the same area which would be a source of help to researchers, academicians, bankers. Also this study may add new value to the literature.

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