

# The Balance between Liquidity and Profitability in Commercial Banks (Saudi Arabia)

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## Abstract

This study is aimed to measure and evaluate the profitability and liquidity of Saudi commercial banks. The subject of study is selected due to the increasing number of business transactions and development financing in the Saudi Arabian economy and the increasing variation and sophistication of bank services. The study is based on the secondary data which has been collected from balance sheet and income statements of banks, their websites, and related web pages of Saudi stock exchange (Tadawul) and Saudi Arabian Monetary Agency (SAMA) on the internet. Hypotheses testing finding exposed that there is no relationship between the total assets of bank and its profitability. Moreover, there is relationship between customer deposits and the amount of personal loan. Also, there is relationship between numbers of branches and banks liquidity (customer deposits). Based on the result above, researchers recommend Saudi banks to take the opportunity of enter the Islamic banking service. Bank who will take this opportunity will attract new customer which will generate attractive profit with reasonable level of risk. In addition, banks need to be more close to a customer by opening new branches in rural areas, small cities and populated areas. Furthermore, banks may simplify banking services for their customers.

**Keywords:** Liquidity, Profitability, Ratios, Tadawul, SAMA.

## 1. Introduction

Profitability and liquidity are effective indicators of the corporate health and performance of the commercial banks. These performance indicators are very important to the shareholders and depositors who are major publics of a bank. As the shareholders are interested in the profitability level, the depositors are concerned with liquidity position which determines a bank's ability to respond to the withdrawal needs which are normally on demand or on a short notice as the case may be. In the financial intermediation process, a bank collects money on deposit from one group (the surplus unit) and grants it out to another group (the deficit unit). These roles involve bringing together people who have money and those who need money. Liquidity management is an important aspect of monetary policy implementation, while the other integral component of monetary policy, economic management, involves promoting sustainable economic growth over the long term by keeping monetary and credit expansion in step with an economy's noninflationary output potential, liquidity or reserve management as a shorter time horizon (Rehman, Khan & Khokhar, 2015).

The main source of risk for Saudi banks remains credit risk and high concentration, and possible exposure of some banks to the private corporate sector. The local regulator, SAMA, has acted prudently and quickly to ensure adequate liquidity is available and guaranteed local depositors but the emphasis going forward is strengthened corporate governance and transparency at bank board level to avoid lax lending standards and "name lending" from rising up again (Ramady, Mohamed, 2010).

As part of the technical aspects of Saudi Arabia Monetary Agency responsibility, there are important critical factors that are required to facilitate liquidity management. These include a stable macroeconomic environment, a sound and competitive financial system, adequate regulatory and supervisory framework, and capacity build up ([www.SAMA.gov.sa](http://www.SAMA.gov.sa)).

This study will focus on the function of the banking sector which is creating profit by investing liquidity. Moreover, will determine the relationship between banks' liquidity creation and their profitability and study the role of Saudi Arabia Monetary Agency in affecting the liquidity level of these banks.

## Importance of the Study

Banks and other financial institutions are what make financial markets work. Without them, financial markets would not be able to move funds from people who save to people who have productive investment opportunities. They thus also have important effects on the performance of the economy as a whole.

This study is significant to all stakeholders such as managers of banks, depositors – investors. The significance of this study can be seen in the following ways:

- 1) Findings of this study are significant to managers of banks since the level of profitability of banks indicate the ability of banks to accommodate shock such as financial crisis. This profitability of banks can be compared to the overall banking situation because this serves as a good indicator to managers of banks to understand the strength of the banks against the overall banking industry. More so, banks that

are unable to meet its customers' demands leaves itself exposed to a systemic lack of confidence in the banking system.

- 2) It is also significant to depositors/investors since bank performance (profitability) serves as an indicator whether to invest or withdraw their funds from the bank. They need past performance in terms profitability of the banks to know if it will be beneficial to deposits or invests to earn more returns that will enable them maximize their wealth. This study provides depositors as well as investors more and reliable information that will enable them to analyze the profitability of banks in order to know the strength of the commercial banks in Saudi Arabia (Rehman, Khan, Khokhar 2015).

### Study problem

Commercial banks are financially working based on liquidity. The liquidity component requires monitoring to achieve protection for depositors and profitability to the bank therefore, we can say that profitability and liquidity two powers are walking in opposite directions. Too much attention on profitability may lead the firm into a pitfall by reducing the liquidity position of the organization. On the other hand, too much attention on liquidity would tend to affect the profitability if they are keeping much of cash reserves greater than that amount required by the conditions. Accordingly, bank will miss opportunities of lending and investment which is generating revenue (Hindi Ibrahim 2010).

The study problem is appearing in the complexity of the relationships between liquidity and profitability, as they in fact are incompatible goals and once a bank attempts to achieve one of them, he should not forget other one. Therefore, banks should always strike to maintain a balance between conflicting objectives of liquidity and profitability. The bank's liquidity should not be too high or too low.

### Objectives of the Study

The objective of this study is studying and analyzing the problem of commercial banks in Saudi Arabia are facing, which is employing money deposited into the bank in order to generate profitability. Generate profitability will conflict with the bank administration needs to provide liquidity and make it available to meet demands of depositors. However, the specific objectives of the study are:

1. Assessing the impact of banks liquidity on bank profitability.
2. Examining the influence of shareholders fund on banks profitability.
3. Assessing the impact of total assets on banks profitability.

### Hypotheses of the study

- $H_0$  There is no relationship between the total assets of bank and its profitability.
- $H_A$  There is relationship between the total assets of bank and its profitability.
- $H_0$  There is no relationship between customer deposits and the amount of personal loan.
- $H_A$  There is relationship between customer deposits and the amount of personal loan.
- $H_0$  There is no relationship between numbers of branches and banks liquidity (customer deposits).
- $H_A$  There is relationship between numbers of branches and banks liquidity (customer deposits).

### Literature review

There have not been many similar studies done on liquidity and profitability in Saudi banks. So this study may fill the gap in the literature. There are many studies/papers done on liquidity and profitability of banks irrespective of different countries.

Muhammad, and et al., (2011) This paper investigates the significance of Size of the firm, Networking Capital, Return on Equity, Capital Adequacy and Return on Assets (ROA), with liquidity Risk Management in conventional and Islamic banks of Pakistan. 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 Capital adequacy ratio in conventional banks and return on assets in Islamic banks is found to be positive and significant at 10% significance level. Said Nuri (2009) has stated that there are measurable linkages among bank's size, asset management, operational efficiency and financial performance of the bank.

Abuzar (2004) examines the relation between profitability and liquidity as measured by current ratio and cash gap in Saudi Arabia. The study found significant negative relation between the firms profitability and its liquidity level, as measured by current ratio. This relationship is more evident in firms with high current ratios and longer cash conversion cycles. At the industry level ,however, the study found that the cash conversion cycle r the cash gap is of more importance as a measure of liquidity than current ratio that affects profitability. The size variable is also found to have significant effect on profitability at the industry level.

Sujan, and et al., (2013) The study evaluates the profitability and liquidity of two types of banking system in Bangladesh for the period of 2008 to 2012. The study found that Islamic Banks are less preferable than Conventional banks in the year 2008 and 2009 in all the profitability indicators. In 2010, Conventional banks had

been more profitable than Islamic banks except ROE, PER. In 2011 and 2012, Islamic banks' profitability performance is better than that of conventional banks in the performance indicators except EPS, profit per branch and profit per employee. The study also found that Islamic banks are less profitable having less liquidity position during 2008-2012.

Haddad and Hakim (2012) analyzed the role of domestic and foreign banks in the economy of Saudi Arabia. The authors found that there is a doubt that partly owned foreign banks are more risk exposed than their purely domestic counterparts and do not found evidence that foreign shareholders of Saudi banks suffered losses and liquidity problems in their home countries and cut credit in Saudi Arabia nor acted in a manner inconsistent with their domestic counterparts. Their evidences was not supported the double standard in banking regulation.

Niresh J. Aloy (2012) the study is initiated to find out the cause and effect relationship between liquidity and profitability. The study covered 31 listed manufacturing firms in Sri Lanka over a period of past 5 years from 2007 to 2011. Correlation analysis and descriptive statistics were used in the analysis and findings suggest that there is no significant relationship between liquidity and profitability among the listed manufacturing firms in Sri Lanka.

Faisal, and et al., (2012) The purpose of this study is to check the financial performance of the commercial banks of Pakistan by covering the period of five years from 2007 to 2011. This study used another indicator for assessment of financial performance that is return on operating fixed assets (ROFA). return on fixed Assets indicates that how the banks are using their operating fixed assets and what is the contribution of the operating fixed assets in the performance of the banks. This study shows that banks having more total assets, total equity and total operating fixed assets have better financial performance or not. It's does not means that the banks having higher total assets, higher total operating fixed assets and higher equity have better performance.

Mabwe and Robert, (2010) This paper investigates the performance of South Africa's commercial banking sector for the period 2005- 2009. The study found that overall bank performance increased considerably in the first two years of the analysis. A significant change in trend is noticed at the onset of the global financial crisis in 2007, reaching its peak during 2008-2009. This resulted in falling profitability, low liquidity and deteriorating credit quality in the South African banking sector.

Omar and et al., (2009) This study aims to give the analysis of the determinants of banks' profitability in the Kingdom of Saudi Arabia (KSA) over the period 1999-2007. This paper investigates the co-integration and causal relationship between return of assets (ROA) and return of equity (ROE) of Saudi banks. The analysis employs Augmented Dickey Fuller (ADF) test, Johansen's cointegration test, Granger causality test. Analyzing the cointegration and other tests on Saudi Arabian banking sector over the study period, the relationships between the two variables are examined. The empirical results have found strong evidence that the variables are co-integrated.

Rehman, and et al., (2015) The current study makes an earnest endeavor to investigate the relationship between liquidity and profitability of companies listed in Saudi Stock Exchange (Tadawul). The study encompasses 99 listed companies in Tadawul. The liquidity of the companies is gauged by current ratio, quick ratio and the absolute liquid ratio. The overall results revealed that there is only one positive significant relationship between Return on Assets (ROA) and Current Ratio (CR) of the companies in Saudi Arabia. Further, it is revealed that there is negative but insignificant relationship between the Return on Assets (ROA) and Quick Ratio (QR) & Cash Ratio (CHR) of the companies in Saudi Arabia.

According to Rehman, et al., (2014) The research paper makes an endeavor to determine the profitability of listed Petrochemical companies in Saudi Arabia with five years accounting period from 2008 to 2012. The paper encompasses six variables, namely, creditors' velocity (CRSV), debtors' turnover ratio (DTR), inventory turnover ratio (ITR), long-term-debt to equity ratio (LTDER), total assets turnover ratio (TATR) and net profit margin (NPM). Profitability as a dependent variable is exhibited by net profit margin (NPM) while the selected other ratios are expressed as independent variables. Based on the findings of the study, it is cogently revealed that there is a significant relationship between the four selected ratios and net profit margin of Petrochemical companies in Saudi Arabia.

Alagathural (2013) examined the relation between liquidity and profitability in Sri Lanka trading companies, by using correlation and regression analysis the study found significant relationship between liquidity and profitability in Sri Lanka trading companies. Saleem and Rehman (2011) investigated the relationship between liquidity and profitability of oil companies of Pakistan, the study found that there is a significant influence of liquid ratio on ROA, and there is insignificant influence on ROE and ROI.

## **Methodology of the study**

### **1. Data Collection**

The study is based on the secondary data which has been collected from balance sheet and income statements of banks, their websites, and related web pages of Saudi stock exchange (Tadawul) and Saudi Arabian Monetary Agency (SAMA) on the internet.

## 2. Study population and Sample

The study population consist of all commercial banks (12 banks) that operating in Saudi Arabian for two years from 2012 to 2013, necessary data have been collected for calculating profitability and liquidity ratios.

(Table No.1)

Commercial banks in Saudi Arabia

Riyadh Bank	Saudi Hollandi	Arab National	Al Bilad
AlJazira Bank	Saudi Fransi	Saudi American	Alinma
Investment Bank	Saudi British	Al Rajhi	Alahli Bank

(www.SAMA.gov.sa)

## 3. Statistical Process

To compute the financial ratios, Microsoft Excel has been used in order to materialize the objectives of evaluating and comparing the profitability and liquidity of commercial banks in Saudi Arabia. In addition, table and graphs are constructed to present the data and interpret the findings of the study. Moreover, descriptive analysis is employed to explain the liquidity and profitability of commercial banks for the entire period as it is best suited in the comparative study.

### Finding and discussion

This section includes analysis for the result of profitability and liquidity ratios. Hypotheses were tested through the result of study's ratios. The study data were presented using tables and simple percentages.

#### 1- Liquidity Ratios

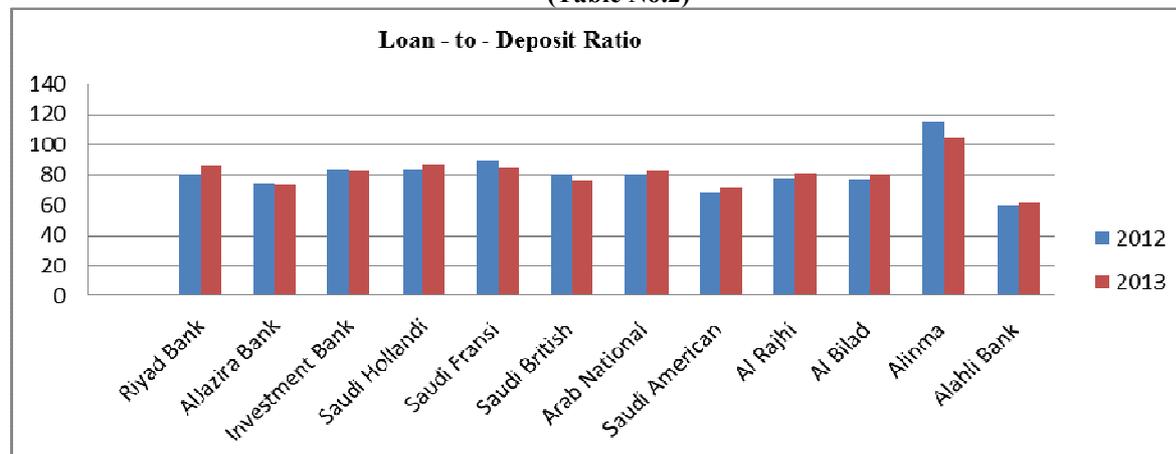
- **Loan-to-Deposit Ratio**

**Loan - to - Deposit Ratio = (Net loans/ Total deposits)\*100**

A high ratio indicates illiquidity, because in this case a bank is fully loaned-up relative to its stable funding. Implicitly, it is assumed that new loans must be financed with large purchased liabilities. A low ratio suggests that a bank has additional liquidity, since it can grant new loans financed with stable deposits.

Table No.2 shows the Loan-to-Deposit ratio reached 77% compared to 76% in 2012. Alinma, and Saudi Hollandi recorded Loan-to-Deposit ratio of 105%, 87% respectively. Alahli Bank Loan-to-Deposit ratio stood at a lower percentage of 62% in 2013

(Table No.2)



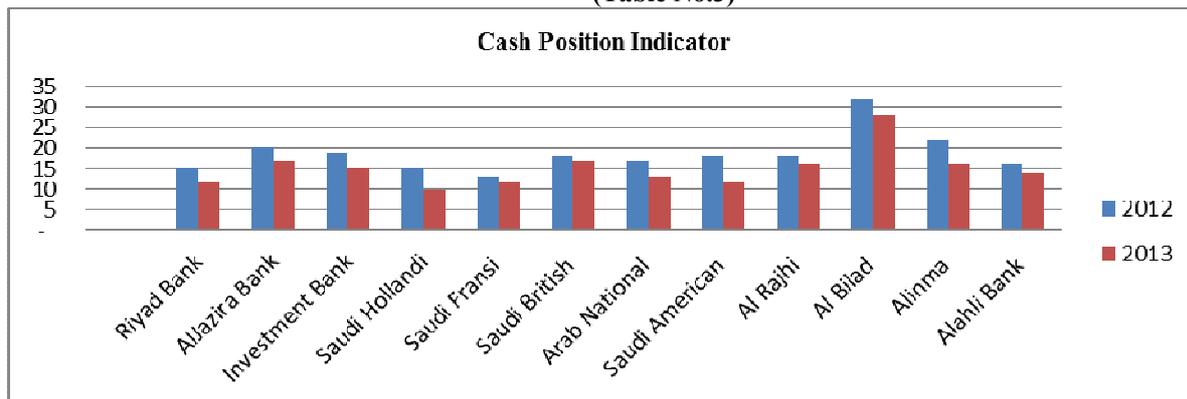
- **Cash Position Indicator**

**Cash Position Indicator = Cash and deposits due from banks/ Total assets**

Table No.3 shows cash in the hand and deposits due from banks to total assets in 2013 has been decrease to 14% compared to 17% in 2012 which indicated these banks are in bad position to meet cash needs. Saudi American and Alinma bank showed the highest decrease, reaching 6%. While Saudi Fransi and Saudi British bank were recorded the lost decrease, reaching 1%.

In the same time this ratio can tell us that, these banks are in good position due to that they are keeping only the required percentage to meet cash demand and investing the rest to gain profit.

(Table No.3)



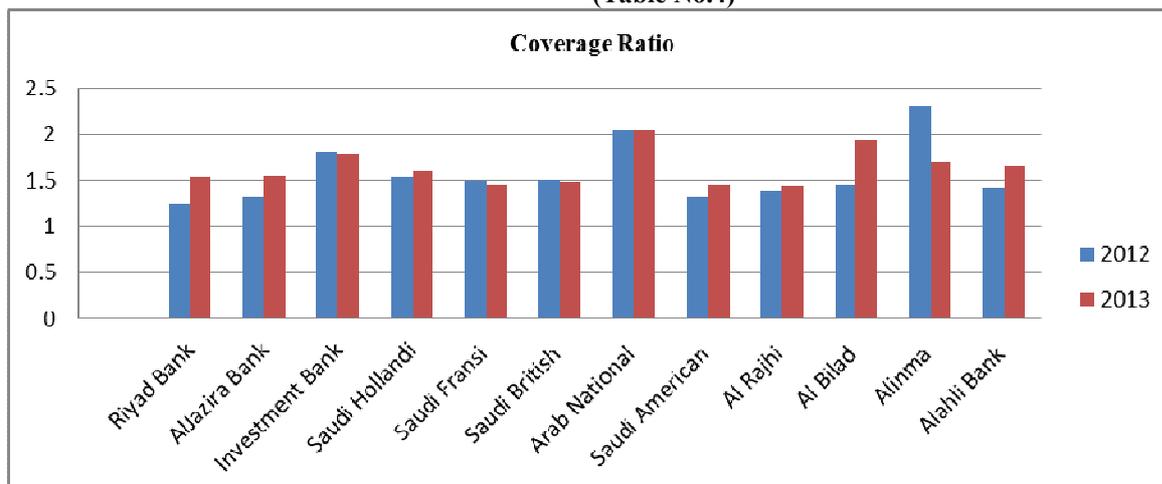
• **Coverage Ratio**

**Coverage Ratio = Provision for credit losses/Non-performing loans and advances**

Coverage Ratio, it is basically how much do the provisions for credit losses cover the non-performing loans and advances.

Banks mostly keep this ratio higher than 1. The higher the number, the less risk the banks are bearing against the implications of the default of its Non-performing loans. Table No.4 shows that, during 2013, the coverage ratio increased to 1.57 compared to 1.45 in 2012. Alinma bank, Arab National bank and Investment Bank had the highest coverage ratio in 2012 of 2.31, 2.05 and 1.81 respectively. Arab National bank, Al Bilad and Investment Bank had the highest coverage ratio in 2013 of 2.05, 1.94 and 1.78 respectively.

(Table No.4)



2- Profitability Ratios

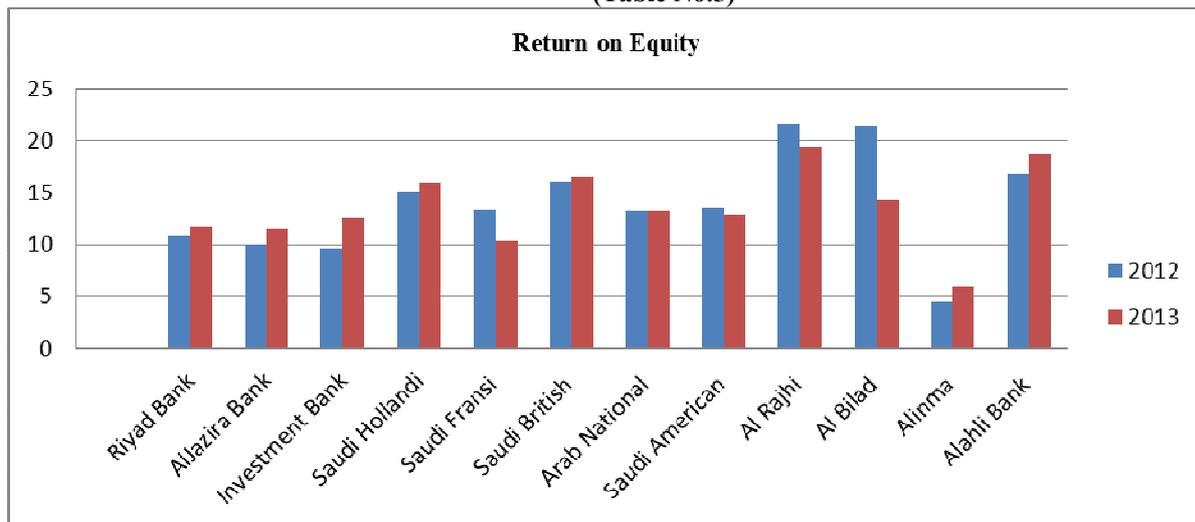
• **Return on Equity (ROE)**

**Return on Equity = [(Net Income for the Year) / (Owners' Equity)] \*100**

A percentage representing how efficient is the company in making profit out of its shareholders investment. The higher the ratio, the more efficient the company is, and vice versa.

Table No.5 shows the return on equity (ROE) was maintained at the 14.40% level in 2013. Saudi Investment Bank showed the highest increase in ROE, reaching 13% on the back of higher earnings, but Bank Al Bilad showed a significant drop in ROE from 21% in 2012 to 14% in 2013, due to lower earnings.

(Table No.5)

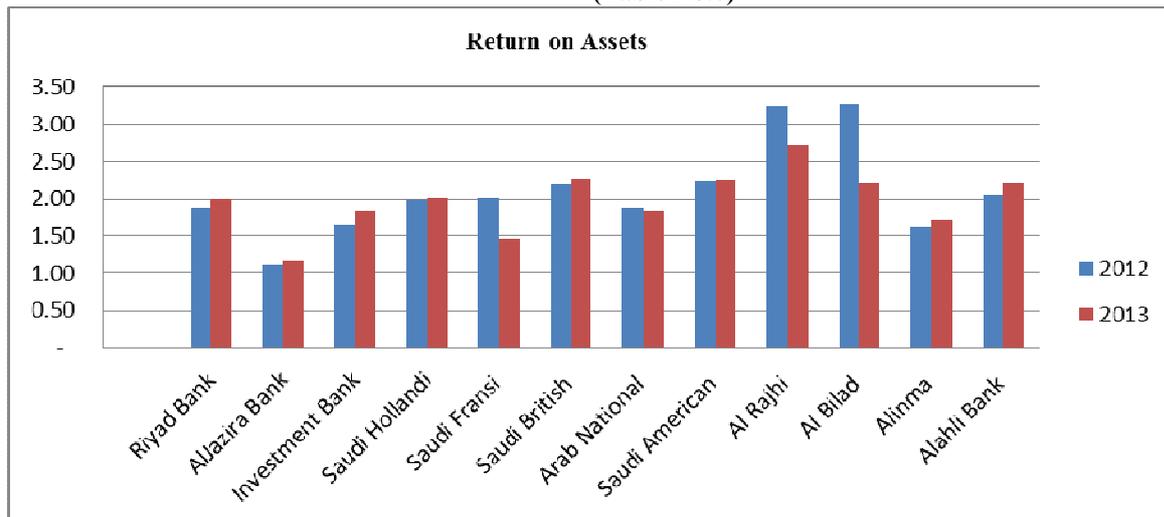


• **Return on Assets (ROA)**

$$\text{Return on Assets} = \frac{(\text{Net Income for the Year})}{(\text{Average Total Assets})} * 100$$

Table No.6 shows the sector's return on assets in 2013 dropped slightly to 2.11% compared to 2.19% in 2012. Investment Bank and Alahli Bank recorded the highest increase in ROA, reaching 1.84%, 2.21% respectively while Al Bilad Bank showed a significant drop in ROA from 3.28% in 2012 to 2.21% in 2013.

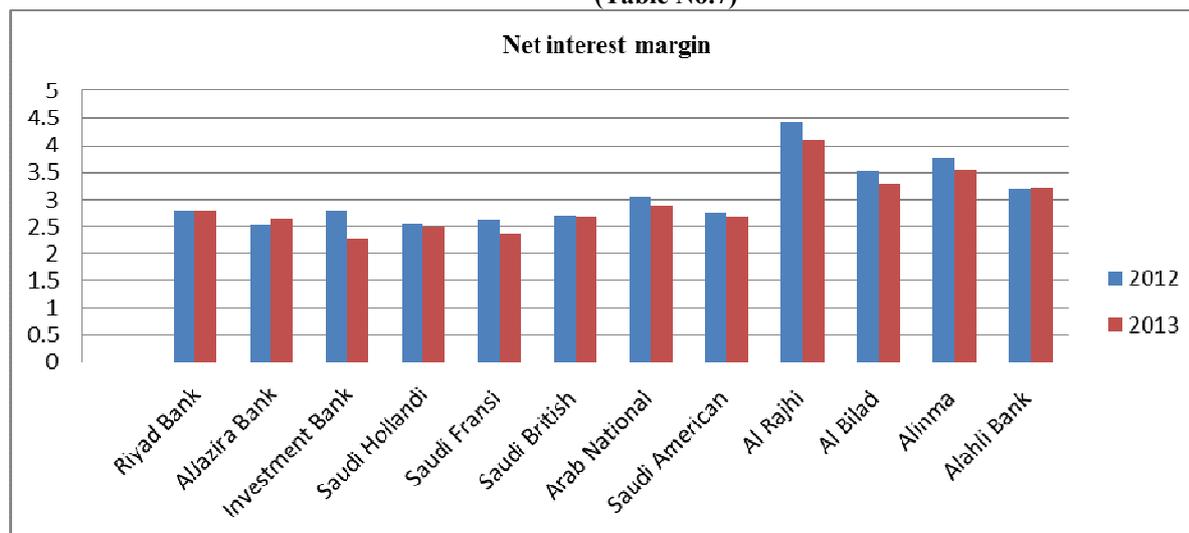
(Table No.6)



• **Net Interest Margin**

Table No.7 shows the net interest margin declined to 3.02 % from 3.14% in 2012. Investment Bank made the highest decline by 0.52%. While AlJazira Bank and Alahli Bank made a growth by 0.11% and 0.03% respectively.

(Table No.7)



### Data Analysis

- 1) Saudi banks have a significantly high proportion in total customer deposits. Customer deposits grown to SR 1,459,534,935.00 versus SR 1,324,399,358.00 in 2012, with an annual increase of 10%.
- 2) A reader will notice that during 2013, Investment bank achieved the highest increase in the amount of customer deposits of 41%. Directly, Investment bank used this abundant liquidity to record the highest increase in the loan balance with 40% growth rate. (Tadawul).
- 3) Al Rajhi has 16% share in total deposits and net loan 17% (2013). As a result, Al Rajhi has the highest net interest margins in the industry with 4.1%.
- 4) The Saudi banking sector's asset quality consistently improved as evidenced by the coverage ratio improving to 1.57% in 2013 from the high of 3.4% in 2009. Improvement in non-performing loans ratio is likely to have been driven by the banking sector's focus on cleaning bad loans and growth in the Kingdom's economy.
- 5) The drop in non-performing loans in 2013 will allow the banks to book low provisions to maintain coverage ratio. The consequent lower provisioning by banks will led to an overall increase in profitability.
- 6) A closer look at the scale of operations of the Saudi bank reveals that Al Rajhi, Alahli Bank, Riyad Bank and Arab National Bank are likely to be strong competitors given their well-established respective networks of branches, **Automated Teller Machines (ATMs)** and Point -of- Sale terminals. (Tadawul).
- 7) Al Rajhi Bank was the top performer in terms of both Return on Equity and Return on Assets (19.4% and 2.72%%, respectively) in 2013. This robust performance is ascribed to the bank's ability to continuously grow its low-cost customer deposits base. Al Rajhi has the largest number of branches and **Automated Teller Machines (ATMs)**, it enjoys the highest penetration in the market vis-à-vis other banks in Saudi Arabia.
- 8) Alinma's loan-to-deposits ratio was 115% in 2012 and 105% in 2013 which is the highest among its peer group and is above SAMA's upper limit of 85%. A stronger capital base provides room for financing opportunities. More than banks were exceeded 85% but Alinma bank was the highest percentage.

### Hypotheses Testing

Simple Linear Regression is used in order to test hypothesis by using excel program.

**Simple linear regression** is a statistical method that allows us to summarize and study relationships between two continuous (quantitative) variables.

**Regression Equation** is used in stats to find out what relationship, if any, exists between sets of data.

The following regression equations can help you figure out if your data can be fit to an equation:

$$Y = b_0 + b_1X$$

Y → Dependent Variable

$b_0$  → Population y intercept

$b_1$  → Population Slope Coefficient

X → Independent Variable

- $b_0$  is the estimated average value of Y when the value of X is zero.

- $b_1$  is the estimated change in the average value of Y as a result of a one-unit change in X.
- The coefficients  $b_0$  and  $b_1$  usually be found using computer software, such as Excel, SPSS or Minitab.

Other regression measures will also be computed as part of computer-based regression analysis.

**Regression analysis** is used to predict the value of a dependent variable (y) based on the value of at least one independent variable (x) and explain the impact of changes in an independent variable on the dependent variable. Dependent variable, the variable we wish to explain and Independent variable the variable used to explain the dependent variable.

There are two ways under **linear regression** to test hypothesis,

- *t*-test for testing  $H_0$
- ANOVA *F*-test for testing  $H_0$

In our study, ANOVA *F*-test is used to decide whether hypothesis is accepted or rejected.

The four steps involved in using the critical value (F) approach to conducting hypothesis test are:

1. Specify the null and alternative hypotheses.
2. Calculate the value of the test statistic by using Excel.
3. Determine the critical value by finding the value from the table F.
4. To find the critical value, you have to obtain D1 (degree of freedom number 1) and D2 (degree of freedom number 2) by using Excel.
5. Compare the test statistic to the critical value:

**If  $F_{\text{test statistic}} > F_{\text{critical}}$ ,  $H_0$  is rejected.**

**If  $F_{\text{test statistic}} < F_{\text{critical}}$ ,  $H_0$  cannot be rejected.**

The first hypothesis

$H_0$  There is no relationship between the total assets of bank and its profitability.

$H_A$  There is relationship between the total assets of bank and its profitability.

Independent (X): Total Assets

Dependent (Y): Net interest margin (profitability)

Before testing this hypothesis, we need to explain the relationship between X&Y through the following equation:

$$Y = b_0 + b_1X \rightarrow Y = 2.75091721 + 0.02918175X$$

$b_0$ , no bank getting profitability had 0 assets, so  $b_0 = 2.75091721$  just indicates that, for banks within the range of X(total assets) observed, **2.75091721** is the portion of the Y(profitability) not explained by X (total assets).

$b_1 = 0.02918175$  tells us that the average value of Y (profitability) increases by **0.02918175** (SR1000000) = SR29181.75, on average, for each additional X (assets).

Testing the hypothesis is next step after we found the relationship between X&Y. The critical F value for level of significance = 0.05 and D1 = 1 and D2 = 10, is 4.97. While F (test statistic) was 0.914 < 4.97 the F (critical), the Null hypothesis  $H_0$  is accepted and the alternative hypothesis  $H_a$  is rejected.

SUMMARY OUTPUT
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<i>Regression Statistics</i>	
Multiple R	0.289451773
R Square	0.083782329
Adjusted R Square	-0.007839438
Standard Error	0.567023854
Observations	12

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.294006155	0.294006155	0.914	0.361486011
Residual	10	3.215160512	0.321516051		
Total	11	3.509166667			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	2.75091721	0.300294188	9.16074076	3.52817E-06
Total Assets	0.02918175	0.030516483	0.95626196	0.361486011

The second hypothesis

$H_0$  There is no relationship between customer deposits and the amount of personal loan.

$H_A$  There is relationship between customer deposits and the amount of personal loan.

Independent (X): Customer deposits

Dependent (Y): Net Loans

Before testing this hypothesis, we need to explain the relationship between X&Y through the following equation:

$$Y = b_0 + b_1X \rightarrow Y = 13619157.55 + 0.649476487X$$

$b_0$ , no bank make loans had 0 Customer deposits, so  $b_0 = 13619157.55$  just indicates that, for banks within the range of X (Customer deposits) observed, 13619157.55 is the portion of the Y (Net Loans) not explained by X (Customer deposits).

$b_1 = 0.649476487$  tells us that the average value of Y (Net Loans) increases by 0.649476487 (SR1000000) = SR649476.49, on average, for each additional X (Customer deposits).

Testing the hypothesis is next step after we found the relationship between X&Y.

The critical F value from Appendix for level of significance = 0.05 and D1 = 1 and D2 = 10 is 4.97. While F (test statistic) was 189.724 > 4.97 the F (critical), the Null hypothesis  $H_0$  is rejected and the alternative hypothesis  $H_a$  is accepted.

SUMMARY OUTPUT
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<i>Regression Statistics</i>	
Multiple R	0.974643926
R Square	0.949930783
Adjusted R Square	0.944923861
Standard Error	12613838.33
Observations	12

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3.01867E+16	3.01867E+16	189.724	7.91076E-08
Residual	10	1.59109E+15	1.59109E+14		
Total	11	3.17778E+16			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	13619157.55	6570762.146	2.072690694	0.064989866
Customer Deposits	0.649476487	0.047152297	13.77401592	7.91076E-08

The third hypothesis

$H_0$  There is no relationship between numbers of branches and banks liquidity (customer deposits).

$H_A$  There is relationship between numbers of branches and banks liquidity (customer deposits).

Independent (X): Number of branches

Dependent (Y): Customer Deposits

Before testing this hypothesis, we need to explain the relationship between X&Y through the following equation:

$$Y = b_0 + b_1X \rightarrow Y = 47572879.93 + 477518.23X$$

$b_0$ , no bank has customer deposits had 0 branches, so  $b_0 = 47572879.93$  just indicates that, for banks within the range of X (number of branches) observed, 47572879.93 is the portion of the Y (customer deposits) not explained by X (number of branches).

$b_1 = 477518.23$  tells us that the average value of Y (customer deposits) increases by SR477518.23, on average, for each additional X (number of branches). Testing the hypothesis is next step after we found the relationship between X&Y.

The critical F value from Appendix for level of significance = 0.05 and D1 = 1 and D2 = 10 is 4.97. While F (test statistic) was 16.938 > 4.97 the F (critical), the Null hypothesis  $H_0$  is rejected and the alternative hypothesis  $H_a$  is accepted.

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.79295877
R Square	0.628783612
Adjusted R Square	0.591661973
Standard Error	51541609.72
Observations	12

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	4.49977E+16	4.49977E+16	16.938	0.002091622
Residual	10	2.65654E+16	2.65654E+15		
Total	11	7.1563E+16			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	47572879.93	22311079.66	2.1322536	0.058797605
Number of branches	477518.2247	116025.3574	4.115636748	0.002091622

### Conclusion

In the light of the statistical analysis and hypotheses test, the current study showed the following results:

1. The result of testing the first hypothesis is rejected and the following finding is approved the result. The net interest margins of Saudi banks declined 1.71% from 3.14% in 2012 to 3.02% in 2013. The return on loans declined driven by increasing industry competition and ample liquidity in the banks. Moreover, excel outputs showed that correlation coefficient  $r$  is 0.289452 (closer to 0) means the relationship between X and Y is weak.
2. The result of testing the second hypothesis is accepted and the following finding is approved the result. The top five banks in terms of total customer deposits acquires on 68% of the market in 2013. Alahli Bank topped the list with a 21% share, followed by Al Rajhi (16%), Saudi American (11%), Riyadh (10%), and Saudi British Bank (10%). As result, these top five banks acquires on over all loan book commanded 65% of the market in 2013. Al Rajhi Bank and Alahli Bank lead the pack with a market share of 17%, followed by Riyadh Bank (12%), Saudi American (10%), and Saudi British Bank (9%). Moreover, excel outputs showed that correlation coefficient  $r$  is 0.974644 (closer to 1) means the relationship between X and Y is strong.
3. The result of testing the third hypothesis is accepted and the following finding is supported the result. Saudi banks sustained the growth momentum in 2013, as reflected in the increase in assets and deposits. Total bank assets grew with an annual increase of 9%, reached SR 1,872,993,047.00 in 2013 compared to SR 1,713,106,693.00 in 2012 due to increased expenditure by both public and private entities. Rising consumer disposable income and growth in the number of bank branches and Automated Teller Machines (ATMs) bolstered customer deposits to SR1, 459,534.94 in 2013 versus SR 1,324,399.36 in 2012, with an annual increase of 10%. Moreover, excel outputs showed that correlation coefficient  $r$  is 0.792959 (closer to 1) means the relationship between X and Y is strong.
4. Liquidity management and profitability in commercial banks are two sensitive issues in the operations of commercial banks.
5. Banks are interesting in profit more than interesting in liquidity because these banks are commercial establishments whose main objective is making a profit.
6. Banks used the surplus of liquidity either for providing loans or investing to increase the profitability of the bank.
7. High exposure to loan helps to increase net interest margins. While the high share of demand deposits keeps cost of funds low. As a result, a bank has the highest net interest margins in the industry.
8. A loans-to-deposit ratio is increased due to bank demand deposits expanded driven by strong liquidity which is translated to personal loan.
9. If non-performing loans (NPLs) increased due to the rising number of credit defaults, the consequent

- higher provisioning by banks will led to an overall decline in profitability.
10. Deposits establish greater portion of the Bank's liquidity" the deposits represent most of the bank's liquidity, as they are representing of external sources of funding which is reflecting positively on bank profits.
  11. The banks rely on the financial ratios to disclose the overall liquidity and profitability to know their cash and financial positions in order to avoid risks.
  12. Banks are relying on cash flow statement to measure their performance and know their cash position.
  13. SAMA are monitoring and controlling liquidity into these banks..

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