**The Effect of the Rate of Bank Deposits on the Profitability of Commercial Banks: An Empirical Analysis**

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**ABSTRACT**

The aim of this study is to measure the relation between bank deposit and profitability generated in all kind of commercial banks and to determine the types of deposits that have greater effect on the bank profitability. The Commercial Bank of Jordan was selected as the study sample for a period of five years between 2012 and 2016. The study revealed that there is a significant relation between deposits and the indicators of profitability. The saving deposit is the biggest contribution to profitability; followed by time deposits, and finally the current deposits which have the lowest contribution. Therefore, the same approach of the Jordanian commercial bank is to draw special strategic action and diversify the credit and attract investment deposits.

**Key words**: Current deposits, savings deposits, time deposits, profitability.

**1. INTRODUCTION**

Trading in money determines the nature of the activity of any commercial banks; while the main objective of this trading is to achieve the maximum possible profits by investing its resources in special areas. These areas are meant to achieve appropriate returns such as loans, services and banking facilities. In any business, not just banking and profit, profitability is the primary and basic objective. Profitability is a simple symbol for the difference between the generation of profit and cost expenditure; therefore, the higher the profit, the higher the returns, and the lower the costs. In the banking market, the profitability is the indicator of the bank's competitive position with the management quality.

The commercial banks generate most of these activities but they are mostly due to banking operations which is the granting of credit – the main activity of the banks. Thus, the activity requires the availability of funds that are related to the ability of banks in order to provide high guarantees to depositors who are in position to deposit their savings in the form of deposits. The chances of a higher practice of credit activity are then increased as they are financial institutions that borrow and lend money; the difference between the interest and the debtor is their profitability. Therefore, one of the most important factors that can increase or limit the profitability of any bank is the volume and continuity of deposits as the profitability of the banks is also the cornerstone of their work. In order to generate the maximum return possible and to provide an appropriate ratio of liquidity to cash withdrawals, the departments of these banks are required to their liquidity from the deposits in an ideal manner. The problem statement of this study is generated from the contribution of deposits of different types and sizes in the profitability of the selected banks.

**2. LITERATURE REVIEW**

**2.1 Bank Deposits**

Choudhry (2011) stated that, due to individuals or institutions, deposits are restricted to cash deposited in the banks' commercial books. As the value of the deposit may indicate the depositor's financial status, which is a secret that cannot be disclosed, the bank deposits are subjected to strict confidentiality (Akhtar, Akhter & Shahbaz , 2017). The deposits are important as they are the lifeblood of banks and the main source of money. They may account for more than 90% of the total opponents which are the lowest cost and are among the most fertile sources of money (Casu&Molyneux, 2006).

**2.2 Categorization of Bank Deposit**

Bank deposits can take three main forms: savings deposits, term deposits, and current deposit.

***Current Deposit:*** A certain party with the Bank deposits this kind of money and it can be withdrawn by the depositary at any time he wishes to withdraw (Schönhärl, 2017). Demand deposits are also another name for Current deposits which the banks are under mandate to pay. Current deposits are known for continuous movement. Zopounidis (2002) added that, the bank usually requires a minimum deposit value to be opened by the customer to open an account.

***Savings Deposit:*** Saving deposits are agreements between the customer and the bank where the customer deposits a sum of money in return for interest in as much as the customer has the right to withdraw without prior notice from the deposit at any time (Bikker&Gerritsen, 2018). Deposits through savings are mainly professionals and middle-income customers for the customers to deposit their small savings. The advantage is that, the account can be easily opened and there is possibility of depositing funds at any time (Somashekar, 2009).

Time ***Deposits:*** In this type of deposit, the bank is given flexibility to invest its funds with the intention that this deposit cannot be withdrawn by checks (Hempel & Simonsom, 1999; Mishkin, 2007).

**2.3 The Importance of Deposits**

All types of the main and largest source of financing for the bank are represented by the deposits as they allow banks to create credit in a unique manner and due to the ability of the bank to provide credit facilities. This does not stop at the amount deposited at it after the legal reserve is raised but in the same proportion of each deposit amount. In addition, this is the most important forms of savings that contribute significantly to support investment in countries and to support the movement of investment and project financing by contributing to the formation of fixed capital with banks while encouraging and supporting customers to increase savings across benefits (Bouheni, Ammi & Levy, 2016).

**2.4 Factors affecting the Profitability of Banks**

Profitability is regarded as the connection between the profits achieved by the bank and the investments that led to these profits. Profitability is a measure to determine the efficiency of a bank and its fund management. These are the measures that are affected by the corporate governance and the rate of both external and internal mechanisms and the level of accounting and external audit quality (Thijeel, Flayyih & Raghib, 2018; Al-taie, Flayyih & Talab, 2017; Flayyih, Ali, & Mohammed, 2018; Rose, 2002). The profitability of banks is affected by many factors such as:

***External Factors:*** the economic and political conditions are the external factors affecting the profitability of banks which affect most of the countries of the world. These two situations occurred in the financial crises as experienced by the world; subsequently reflects the financial policy of those countries. The stability of economic and political conditions affects the profitability of banks. Therefore, there will be a higher demand for credit in times of economic boom than in time of recession (Ayele, 2012). Furthermore, legal and banking regulations in general have a significant impact on the performance of commercial banks which is an additional obligation to banks. Examples are: limitations on the amount of movement and nature of facilities and the amount of liquidity to be retained are other effects (Koch & Macdonald, 2014). As the limited resources available to banks make them have to pay high interest rates to obtain these resources, the profitability of commercial banks is also affected by the competition. According to Rose (2002), this will lead to a low margin of return and therefore affect the rate of net profits and profitability.

***Internal Factors:*** The liquidity of the bank and the structure of the deposits are considered the internal factors or determinants of the profitability of the bank. The budgets are prepared on the basis of maintaining certain percentages of liquidity by the bank and one of the most important determinants of profitability of banks is the careful investment of funds. Repayment cases are for the depositors (Saunders, 2014).

**3. RESEARCH METHODOLOGY**

The aim of this study is to evaluate and measure the connection between deposits and profitability generated in commercial banks of all kinds and to determine the types of deposits that have greater impact on the bank profitability. The importance of the subject of bank deposits and profitability of banks are the contributions of this study. The study concentrates on finding the appropriate strategies to attract deposits as they are the fundamentals of commercial banks and to find the strategies that can maximize their profitability. The sampled population for this study is the Commercial Bank of Jordan as the bank is considered as one of the most important commercial banks in Jordan with varieties of activities. The annual reports and the financial statements of the bank have been studied for the period 2012 to 2016.

This study proposes that: there is a statistically significant relationship between bank deposits and profitability indicators.

Therefore, the bank deposits are of three types: current deposits, savings deposits and term deposits. Using the following equation, ROA can be used to measure profitability indicators:

ROA = (Net Annual Profits / Total Assets) × 100

While the ROE can be measured using the following equation:

ROE = (net profit after tax / property right) × 100

This study employed the descriptive approach of reality study and phenomenon as it exists in reality. This is determined as a precise description and it is expressed or quantified in a descriptive manner. Quantitative analysis expresses digitally, the phenomenon in a way that shows how much the phenomenon affects the size and the extent of its relationship with another phenomenon.

**4. RESULTS**

This study used quantitative analysis of current deposits, savings and term deposits in the Commercial Bank of Jordan as the selected population and the effect of each of this deposit on the profitability of the bank was examined using simple linear regression equation. The Table 1 presents the size of the three types of deposits and their profitability indicators during the Jordan Trade period of 2012-2016.

Table 1: Volume of deposits (million dinars) and profitability indicators

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Current deposit | Saving deposit | Time deposit | ROE | ROA |
| 2012 | 378.6\* | 531.3 | 534.5 | 13.55% | 1.78% |
| 2013 | 429.8 | 564.9 | 444 | 13.73% | 1.99% |
| 2014 | 461.1 | 620 | 479.5 | 14.44% | 2.21% |
| 2015 | 488.9 | 667.6 | 356.5 | 11.7% | 1.86% |
| 2016 | 535.2 | 675.8 | 323.8 | 10.78% | 1.82% |

**4.1 Measuring the Relationship between Current Deposits and Profitability Indicators**

Table 2: The relationship between current deposits and profitability indicators

|  |  |
| --- | --- |
| Variables  | Explanatory variable |
| Response variables | β | R2 | F | R | T-test | Level of significance |
| ROE | 0.21 | 0.55 | 6.56 | 0.28 | 4.79 | With statistical significance |
| ROA | 0.18 | 0.58 | 7.34 | 0.23 | 5.12 | With statistical significance |

The coefficient of correlation between the ROE and current deposit is 0.28. This value is statistically significant at the level of 0.05 and the calculated T-value is 4.79, which is greater than the tabulated value of 4.03 at the level of 0.05. The coefficient of correlation between the current deposits and the ROA is 0.23 which is significant statistically at 0.05 as the calculated value of T, 5.12 is greater than the tabulated value of 4.03 at the moral level 0.05. Thus, there is positive correlation between current deposits and profitability indicators at Jordan Commercial Bank.

The findings revealed that ROE deposits are affected by the calculated value of 6.56 which is greater than the scale value of 4.19. The coefficient of R-squared for the relationship between current deposits and ROE is 0.50; this implies that there is 55% of the change in ROE. The current value of F calculated as 7.34 is higher than the total value of ROA which is 4.19 while the R squared value is 0.80. This means that the change in ROA returns 58% to current deposits. With 180 as the value of the coefficient of β, it means that any change in one unit in current deposits means a change in ROA by 18%.

**4.2 Measuring the Relationship between Savings Deposits and Profitability Indicators**

Table 3: The relationship between savings deposits and profitability indicators

|  |  |
| --- | --- |
| Variables  | Explanatory variable |
| Response variables | β | R2 | F | R | T-test | Level of significance |
| ROE | 0.41 | 0.32 | 8.34 | 0.42 | 4.79 | With statistical significance |
| ROA | 0.35 | 0.24 | 7.56 | 0.39 | 5.12 | With statistical significance |

Table 3 presents the correlation coefficient between the savings deposits and the ROE. The positive value of ROE (0.42) shows that there is significant correlation in the relationship. This is a statistical function at the 0.05 level of significance as the calculated T value (4.79) is greater than the scale value of (4.03). A significant level (0.05) confirms the correlation between savings deposits and ROE. As the value of T (5.12) was greater than the scale value of (4.03) at the level of significance (0.05), the correlation coefficient (0.39) was statistically significant at the level (0.05). The relationship is confirmed with this result.

Also, there is a significant effect of savings deposits in ROE with the calculated value of F (8.34) to be greater than the nominal value of (4.19) while the value of the β coefficient is 0.1010) which means that any change in one unit (one million) will lead to 41% change in the ROE. This is also applicable to the significant effect of savings deposits in ROA where the value of calculated F (7.56) is greater than the value of the table at a significant level of 0.05. However, in the value of beta β (.350), it means that any change in one unit in the savings deposit account will change the proportion of 35% in ROA. The R-Squared has a coefficient of 0.240 which indicates that savings deposits account for 24% of the variance in ROA.

**4.3 Measuring the Relationship between the Term Deposits and Profitability Indicators**

Table 4: The relationship between current deposits and profitability indicators

|  |  |
| --- | --- |
| Variables  | Explanatory variable |
| Response variables | β | R2 | F | R | T-test | Level of significance |
| ROE | 0.23 | 0.46 | 7.65 | 0.62 | 5.69 | With statistical significance |
| ROA | 0.18 | 0.37 | 7.35 | 0.59 | 6.72 | With statistical significance |

The coefficient of correlation of the relationship between the term deposit and ROE is presented in Table 4 as 0.62. This shows that the significance of the correlation relationship to be statistically significant at the level of 0.05 with the calculated T value to be 5.69. The correlation coefficient between the term deposit and ROA is 0.59 which is statistically significant at 0.05 because the calculated T value of 6.72 is greater than the calculated value of 4.03 at a significant level of 0.05. Therefore, this affirms the significance of the correlation relationship.

On the calculation of term deposits in ROE, the results showed a significant effect with a calculated value of 7.65 which is greater than the standard value and a coefficient of β (230). This implies a change in one unit (one million) of ROE with coefficient of R-squared valued 460. It shows that 46% of the variance in ROE is accounted for by time deposits account. With a calculated value of 7.35, there was a significant effect on the calculation of time deposits in ROA which is higher than its tabulated value while the value of β is 180. Thus, there is change in one unit (1 million) of ROA by 18% with R-squared determination factor of 370. This shows that Time Deposit accounts for 37% of the variation in ROA.

**5. Conclusion**

This study revealed that the basis for the bank's work is constituted by the deposits. The largest percentage of the inputs is represented by the deposits and is used mainly in the main credit operations. The banks also managed maximize its contribution to the profitability of the bank by using the Time Deposits for deposits and Saving Deposits. In this study, the profitability indicators adopted are effective. It shows that the management of the bank is moving at a correct pace by maximizing the profitability of the bank and increasing reliance on savings deposits and term deposits. The results showed a positive correlation between these different types of deposits and profitability indicators and showed a significant effect of deposits in profitability, thereby achieving all the proposed hypotheses. The Savings Deposits is the most significant contribution to profitability. Lastly, the lowest contribution is from the current deposits. The extent of the administration's contribution to activating its instruments in activating time deposits should be critically observed by providing guarantees to customers at competitive interest rates through either Savings Deposits or Time Deposits.

To draw up a special work strategy aimed at diversifying the credit provided by the bank, this study recommends that the Iraqi banks should adopt the same approach as the Jordanian Commercial Bank. The bank directs the available cash to the various deposits and various sources of credit and investment in order to diversify the sources of profitability and to increase taking into account the degree of risk investments.

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