The impact of asset management on achieving bank profitability  
(Applied study within Al-Khaleej commercial bank)

Ali Sadi Mohammed Salih Al-Sadi, Ali Mohammed Thijeel Al- Mamouri  
Post–Graduate Institute for Accounting and Financial Studies, University of Baghdad, Iraq

ABSTRACT
Banking activity is essential in countries' economies, as banks are considered intermediate financial institutions between surplus and deficit. Bank managers work on achieving the main objectives of any bank, which are: (profitability, liquidity, and security) by balancing the management of assets and liabilities and avoiding risks that face their work, such as liquidity risks and credit risks, as asset management is concerned with choosing the optimal investment combination for available sources of funds, as the funds are utilized in a variety of ways to reduce risks and obtain profit. Maximizing the bank's profitability is the responsibility of the management, as maximizing profitability is a strategic goal for the bank, and it will contribute to expanding the bank's work and obtaining a larger market share. The research was based on the analysis of banking profitability indicators (income of assets, income of investment) and their impact on profitability. As asset management is the one factor that affects the returns of assets and acquisitions, and, in turn, bank profitability is concerned. Thus, asset management must invest money elaborately and keep risks at bay.

Keywords: Asset Management, Bank Profitability

Corresponding Author: 
Ali Sadi Mohammed Salih Al-Sadi  
Post–Graduate Institute for Accounting and Financial Studies  
University of Baghdad, Iraq  
E-mail: Alialsadi88@yahoo.com

1. Introduction
The importance of commercial banks stems from their significant role in economic development due to the specificity of these institutions. The mechanism of work in banks lies in collecting cash surpluses from individuals and institutions to employ them in various investment fields, and granting loans is a prerequisite for the continuation and growth of countries, as the main objective of the bank's work is achieving profit by balancing the liabilities and assets of the bank. This requires efficiency in the bank's management performance in exploiting financial resources and achieving the best consequences. The importance of asset management in the bank lies in using its sources of funds with the best investments to achieve the best return, as asset management is concerned with choosing the optimal investment combination for the bank, reducing risks, and maintaining its performance by continuous profitability. The working policy of the bank we are studying, which is the sample of the current research, is conservative, so the bank tried to invest and conventionally diversify assets and preserve the total finances in exchange for deposits to be safe and away from liquidity risks in the bank [1-4].

2. Methodology
The research problem is the size of the impact of asset management in Iraqi commercial banks and the lack of knowledge of the extent of its effect on the bank's profitability. Because management of banking assets is the
process of distributing available funds to the various application elements to achieve a balance between profitability, liquidity, and security of the bank. For the bank to maintain a distinct degree of profitability, it is necessary to know and determine the balance between monetary assets and the volume of deposits to maximize profits. From this vantage point, the research problem is to find out if asset management has any bearing on a bank's capacity to turn a profit.

Research importance stems from the following:
1. Highlighting the impact of asset management on a bank's management performance.
2. Importance of asset management in achieving bank profitability.
3. Analyzing the influence between asset administration and a bank's profitability.
4. Analyzing the influence of asset management on a return rate of assets.
5. Analyzing the influence of asset management on a return-rate of investment.

The central hypothesis is: (There is no statistically significant impact for asset management in achieving a bank's profitability).

The researcher relied upon the descriptive-analytical approach, as it contributes to a comprehensive analysis of the problem under study, which is characterized by a detailed description of the relevant information, and analyzing them using a set of financial and statistical methods.

The research limits are as follows:
A. Spatial Limits: Al-Khaleej Commercial Bank is listed in the Iraqi Stock Exchange Market, Iraq - Baghdad.
B. Time Limits: Between 2011 and 2020.
C. Scientific Limits: Asset Management, Profitability.

The researcher tried to collect data he deemed necessary to give a comprehensive picture of the research through; Arab and foreign books related to the subject, university theses, periodicals, and scientific journals, in addition to studies, research, and articles published on the Internet.

3. Theoretical aspect of asset and liability management and profitability in the bank

3.1. Commercial bank definition

It is defined as those banks that have been authorized to engage in the banking business, which includes providing banking services, especially accepting deposits of various kinds, such as: (demand deposits, saving deposits, term deposits, and deposits subject to notice) and using them with other bank resources to invest in whole or in part or in any other way permitted by law [5].

As for the Iraqi Banking Regulation No. (94) for the year 2004, a bank is defined as a person holding a license or permit under this law to conduct banking business, including a government company established under the amended Governmental Companies Law No. 22 of 1977 [6]. According to those mentioned above, the commercial bank could be defined procedurally as a financial institution that plays the role of mediation between depositors and borrowers, and an essential thing that distinguishes it is accepting deposits from the public and providing them in the form of loans granted to customers or invested in other financial operations.

3.2. Bank assets

Assets are the various investment areas on the right side of the budget. The bank's financial resources are distributed and differ significantly in terms of liquidity, profitability, and security. It includes two items [7].

Ready Cash Balances are the most liquid items of the budget and consist of two main parts:
The first part is the ready amount of money that the bank must keep in the fund to meet the requests for depositors to withdraw the balances of their current accounts or other accounts that are due for payment. The second part concerns cash balances that the commercial bank must maintain with the Central Bank and are
considered a specified percentage of the deposits. There are also ready cash balances, whether in local or hard currencies, which the commercial bank maintains with other banks as balances or deposits. Discounted transfers portfolio consists of commercial papers and treasury bills that are deductible, and these papers become liquid according to the length of their term with their fixed debt [8].

Negotiable Instruments are commercial papers issued by large and well-known companies, which include an obligation to pay a sum of money worth fulfilling in a short time in exchange for deals carried out by people in business, and the holder can wait until the date of its payment, or he can convert it into cash by discounting it, i.e., (Selling them), within the commercial bank he deals with. This means that the commercial bank pays the magnitude of these negotiable instruments after deducting a certain percentage of the amount. The bank keeps these papers until their due date when the company that issued them pays their magnitude to the new owner, the commercial bank.

Treasury bills are short-term loan instruments issued by governments and under which they pledge to pay an amount of money later (ranging from 3 to 9 months) to those who buy them, and they are often sold at a discount. However, on their due date, their fixed nominal magnitudes paid according to this government bond, and the government temporarily issues these bonds to fill the state's budget deficit. Because of its high liquidity and low level of risk, it is considered one of the main components of the commercial bank's discounted transfer portfolio.

1. **Fixed Assets**: These are the bank's properties, such as buildings, lands belonging to the center, branches, and other properties that have been transferred to it through the banking activity. This item also includes the bank ownership of furniture, machinery, equipment, and tools it uses in its work [5].

2. **Other Assets**: This item contains the advanced payments, in addition to other miscellaneous debit items, such as (Instruments under collection, paid debit receivables, cash insurances against derivatives, prepaid expenses, and receivable revenues) [5].

### 3.3. The concept of asset management

Asset management is buying and lending money to achieve a profit margin. In banking terminology, it is called "margin management". It is also called allocation, the process by which the funds available to the bank are distributed to the elements of use and investment to harmonize liquidity and profitability. Resources are allocated to the following elements: (cash elements - investment in securities - loans - other assets) [9]. Asset management is the second function of financial management. At the time the necessary financial resources are managed, they are employed in light of their investment in the various assets and their economic redistribution, as the financial department undertakes this because it is the only responsible for managing the assets to achieve the most significant possible return for the bank [10]. Investment in assets gave rise to the concept of "asset management," which was defined as "the systematic process of running, maintaining, upgrading, and effectively managing assets" [10]. The researcher believes that the concept of banking asset management is: the management that determines the composition of the bank's asset portfolio, through which the investment opportunities of the bank are explored and evaluated in a way that enhances opportunities for profitability and diversification in assets, and this diversification in the portfolio leads to reducing the risk ratios to which the bank is exposed. The importance of asset management in the bank lies in maintaining liquidity and profitability and finding a balance between them, which is achieved by linking two main things [11].

Each item is given sufficient investment without negligence because exaggeration in investments leads to disruption of funds and reduced profitability, and modesty in investment leads to the loss of investment opportunities available to the bank.

The sources of funding are specified if they are full or borrowed, the ratio of the optimal mix of these sources, and the duration of payment of long-term liabilities, because their management leads to success or failure, which requires adequate care, and ensuring the maximum balance between internal and external cash flows.
3.5. The concept of banking profitability

Financial institutions, like any other business, rely heavily on a steady stream of profits to stay open and continue providing their services to the community. It's something to strive for if you're an investor and an indicator of how serious the bank is to its debtors. Banking financial management puts forth considerable effort to make the most of its available resources (sources), with the end goal of maximizing profits for shareholders relative to the returns that can be made on alternative investments subject to the same level of risk [12]. Financial institutions prioritize profit maximization in making both investment and financing choices [13].

Investment Decision is a set of decisions related to how to use the materials available by banks to finance various types of their assets, as the investment decision affects the profitability of the bank through the optimal distribution of public resources on numerous types of assets, to achieve an appropriate balance for investment. In every item of assets without an intensification that leads to a lack of opportunities or exploitation of resources, leading to achieving the finest return without sacrificing liquidity [14].

The financing decision is choosing the sources of financing from which the necessary funds will be collected to finance the bank's investments in assets (uses), and the impact of this decision is reflected in the bank's profitability by arranging the sources of funds from: (deposits, debts, shareholders' equity). This is conducted to enable the management to obtain the greatest return from its acquisition.

The researcher believes that profitability is a strategic goal that enables banks to grow and continuity. It is a financial indicator that shows the relationship between profits and investments that helped the bank to achieve these profits. It consists of a percentage expressing the extent to which the bank earns profitability and is concerned with the shareholders, depositors, investors, employees, and anyone who wants to invest in the bank.

3.6. Importance of profitability for the bank

Profits are essential to increase capital to carry out expansions in the bank's work through its lending and investment operations by reusing profits to achieve this. From the microeconomic point of view, profit is the project's goal, as the rational producer always seeks to maximize the profit function or minimize the loss. Still, from the macroeconomic point of view, it indicates the distribution of national income to the various production elements and its fairness on the one hand and the level of per-capita income on the other [13]. The administration is interested in identifying the profitability of the various fields of investing funds to direct funds to the most profitable areas and knowing the costs of performing banking services [14].

3.7. Profitability ratios

Profitability is usually measured by a set of ratios called profitability ratios. Through the two indicators below, we can show the bank's ability to manage its assets and whether it will contribute to maximizing profitability, which is one of the bank's main objectives.

3.7.1. Return on Assets (ROA)

You can think of it as a ratio because it compares the after-tax profit to the total assets. Most studies have relied on this ratio to evaluate the financial health of banks. Therefore, the rate of return on assets is of considerable significance in measuring the use of funds independent of its sources, as it evaluates the profitability of all financial resources invested in the bank [15]. This is calculated using the following equation:

\[
\text{Return on Assets (ROA)} = \frac{\text{Net-profit after Taxes}}{\text{Total of Assets}} \times 100
\]
3.7.2. **Return on Investment (ROI)**

Return on investment measures the amount or percentage of profits realized from the investment, equivalent to each investment made by the investor. The company has the profit or loss resulting from the investment during a specific period [16]. This ratio is calculated using the following equation:

\[
\text{Return on Investment (ROI)} = \frac{\text{Net-profit after Taxes}}{\text{Total of Investments}} \times 100
\]

4. **The practical aspect**

Profit available for distribution is the net profit after taxes. The bank's total assets equal the sum of its current and fixed assets. The profitability of a bank can be gauged by looking at its rate of return on assets. The results of the study into the Al-Khaleej Bank's rate of return on assets across the study's time period are displayed in Table 1.

| Table 1. Return on Assets |
|---------------------------|
| **Bank Name** | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Al-Khaleej Commercial Bank | 3.286 | 7.264 | 6.072 | 4.427 | 1.216 | 0.731 | 0.701 | 0.102 | -0.715 | -2.891 |

The analysis depicted that the rate of return on assets varies yearly, reaching the highest ratio in 2012. As for the lowest rate, it was in 2020. This discrepancy in rates indicates the intense competition between banks. The distributable net profit represents the net profit after tax. It means the total financial investments, such as investments in subsidiaries or affiliated companies. The rate of return on investments expresses the efficiency of the investment and is an indicator for measuring the profitability of investments in the bank. The results of the ROI analysis for the research sample of commercial banks over the allotted time frame are displayed in Table 2.

| Table 2. Return on Investment |
|-----------------------------|
| **Bank Name** | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Al-Khaleej Commercial Bank | 8.975 | 171.955 | 73.247 | 46.386 | 5.900 | 7.077 | 8.427 | 1.179 | -8.698 | -0.003 |

The analysis depicted that return on investment varies yearly, with the highest rate being in 2012 and the lowest in 2019. Testing the main impact hypotheses of Al-Khaleej Bank, which states, we found there is no statistically significant effect of asset management in achieving the bank's profitability.

Table 3 depicts a correlation matrix between the dependent variable (the bank's profitability) and the independent variable (the return on assets). The consequences indicate that the degree of correlation reached (0.916) at the level of significance (0.000), which is less than the significance level (0.01). That is, there is a significant positive direct relationship and a high correlation among the independent and dependent variables.

| Table 3. The magnitude of the Pearson correlation coefficient between return on an asset and profitability of the bank |
|---------------------------------------------------------------|
| **Independent Variable X2** | **Dependent Variable Y** | **Correlation Coefficient** | **Sig.** | **Statistical Sig.** |
| Return on Investment | Bank’s Profitability | 0.916 | 0.000 | Significant |

Table 4 depicts the calculated (F) magnitude of (41.953) at a level of significance of (0.000), which is greater than its tabular value, which is equivalent to (11.259). Asset management has a significant essential impact on
the profitability of the bank. It became clear that the equation has explanatory potential in terms of the coefficient of determination ($R^2$) of $(0.840)$, while the corrected coefficient of determination ($R^2$) is $(0.820)$, which means that the independent variable (return on assets) explains $(84\%)$ of the total charges in the dependent variable values (the bank's profitability). Other variables that were left out of the model account for the remaining $(16\%)$.

Table 4. The determination coefficient and a square of the determination coefficient to test the hypothesis, tabular ($F$) magnitude at a significance level of $(0.01) = 11.259$.

| Model | R   | $R^2$ | Adjusted $R^2$ | Std. error of the Estimate | Change Statistics |
|-------|-----|-------|---------------|---------------------------|------------------|
|       |     |       |               |                           | $R^2$ Change     |
|       |     |       |               |                           | $F$ Change       |
|       |     |       |               |                           | Sig. $F$ Change  |
| 1     | .916a | .840 | .820 | 1.19601 | .840 | 41.953 | .000 |

Table 5. The consequences of the constant values and regression coefficients in measuring the impact of asset management on the profitability of the bank, tabular ($T$) magnitude at a level of significance of $(0.01) = 2.896$

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|----------------------------|---------------------------|---|------|
|       | B                           | Std. Error                | Beta |     |
| 1 Fixed Return on Assets | .149 | .502 | .297 | .774 |
|       | .927 | .143 | .916 | 6.477 | .000 |

By rejecting the null hypothesis ($B_0=0$) and accepting the alternative hypothesis ($B_10$), Table 5’s statistical results demonstrated a significant effect at the $(0.01)$ level of significance, with the calculated ($T$) magnitude reaching $(6.477)$ at the $(0.000)$ level of significance, which is greater than its tabular value, which is equivalent to $(2.896)$. It is possible to formulate the following regression equation to quantify the effect of asset management on the bank's profitability: Bank profitability = $0.149 + (0.927 \times \text{return on assets})$.

The magnitude of the effect of the regression coefficient in the above equation $(0.927)$ indicates that an increase of one unit in the independent variable (return on assets) will also lead to an increase in the dependent variable (bank profitability) by $(93\%)$, meaning that the relationship is direct between independent and dependent variable. Based on that, and depending on the statistical consequences, and after verifying the set of considerations that explain the significance of the regression equation, we infer a rejection of a null hypothesis, and an acceptance of an alternative hypothesis, providing an answer that says: "There is a statistically significant effect of asset management in achieving bank's profitability".

Table 6. The magnitude of the Pearson Correlation Coefficient between return on investment and profitability of the bank

| Independent Variable X2 | Dependent Variable Y | Correlation Coefficient | Sig. | Statistical Sig. |
|-------------------------|----------------------|-------------------------|------|-----------------|
| Return on Investment    | Bank’s Profitability | 0.715                   | 0.010 | Significant     |
Table 6 shows the correlation matrix between a dependent variable (bank's profitability) and an independent variable (return on investment). The consequences indicate that the degree of correlation was (0.715) at a significant level of (0.01), meaning a meaningful positive direct relationship and a high correlation between an independent and dependent variable.

Table 7. The determination coefficient and the square of the determination coefficient to test the hypothesis, tabular (F) magnitude at a level of significance of (0.05) = 5.318

| Model | R  | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | \( R^2 \) Change | F Change | Sig. F Change |
|-------|----|----------|--------------------|---------------------------|-------------------|------------------|----------|---------------|
| 1     | .715\(^a\) | .511 | .450 | 2.08979 | .511 | 8.361 | .020 |

Table 7 shows the calculated (F) magnitude of (8,361) at a level of significance of (0.020), which is greater than its tabular value, which is (5,318). Asset management has a significant influence on a profitability of a bank.

It became obvious that the equation has crucial potential in terms of the determination coefficient (\( R^2 \)) of (0.511), while the corrected determination coefficient (\( R^2 \)) is (0.450), which means that 51% of the variation in the dependent variable (profitability of banks) may be attributed to the changes in the independent variable (ROI). Other variables not included in the model account for the remaining 49 percent of the variance.

Table 8. The consequences of the constant values and regression coefficients in measuring the impact of asset management on the profitability of the bank, tabular (T) magnitude at a level of significance of (0.05) = 1.86

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|-------|
|       | B | Std. Error | Beta | | |
| 1 Fixed return on investment | 1.145 | .771 | .036 | .013 | .715 | 2.892 | .020 |

The consequences for statistical analysis according to Table 8 depicted significant effect under a level of significance (0.05), as the considered (T) magnitude reached (2.892) at the level of significance (0.020) greater than its tabular value, which is equivalent to (1.86), which means rejection a null hypothesis (B0 = 0) and the acceptance of the alternative hypothesis (B1≠0), suggesting that there is a significant impact for asset managing on the bank's profitability. The estimated regression equation for the impact of asset management on the profitability of the bank can be formulated as follows:

Bank profitability = 1.145 + (0.036) return on investment

The magnitude of the regression coefficient in the above equation (0.036) indicates that an increase of one unit in the independent variable (return on investment) will also cause an increase in the dependent variable (bank profitability) by (4%), meaning that the relationship is direct between independent and dependent variable. Based on that, and based on the statistical consequences, and after verifying the set of considerations that explain the significance for regression equation, we infer the rejection of a null hypothesis and an acceptance of the alternative hypothesis, thus, providing an answer that indicates: "There is a statistically significant effect of asset management in achieving bank's profitability".

5. **Conclusions**

1. Through the bank's financial analysis, we found a connection among total assets and return on assets and between investment and return on investment. This relationship is inverse. That is, the greater the total assets or investment amount, the lower the return on them.
2. Through statistical analysis and testing of the research hypotheses, we found that there is a direct connection between research variables (return on assets and profitability), as it turned out that there is an effect between them, as the magnitude of (T) touched (6.477) at a significance level (0.020), which is bigger than the tabular magnitude (5.318), which is greater than the tabular magnitude at the level of (0.020).

3. Through statistical analysis and testing of the research hypotheses, we found that there is a direct relationship between research variables (investment and profitability), as it became clear that there is an effect between them, as the magnitude of (T) touched (2.892) at a significance level of (0.020), which is greater than the tabular magnitude of (1.86).

Declaration of competing interest
The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

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