The role of financial analysis tools in assessing the financial performance of banks Case study of the Algerian bank

Le rôle des outils d'analyse financière dans l'évaluation de la performance financière des banques Etude de cas de la banque algérienne

Louglaithi lakhdar [1*], gharbi hamza [2]

[1]University of M'sila (algeria), **lakhdar.louglaithi@univ-msila.dz**
[2] [1]University of M'sila (algeria), **hamza.gharbi@univ-msila.dz**

Abstract:

This study aimed to try to evaluate the performance of banks by applying the most important financial indicators that measure performance, including the rate of return on equity (ROE) as well as the rate of return on assets (ROA), as well as measuring the profit margin (PM), in addition to the asset benefit rate (UA), in addition to the latest indicator in this E study which is the rate of leverage multiplier (title multiplier) (EM). The study used the financial reports for the 2015-2017 financial year of the Algerian External Bank. The study found. With the need to rely on financial analysis indicators in order to evaluate the performance of banks by identifying the problems they are experiencing and taking the necessary corrective measures

Keywords: *Financial Performance, Financial Reports, Financial Ratios.*
Jel Classification Codes M29; M49

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* *Corresponding author*

Résumé:

Cette étude visait à essayer d'évaluer la performance des banques en appliquant les principaux indicateurs financiers qui mesurent la performance, y compris le taux de rendement des capitaux propres (ROE) ainsi que le taux de rendement des actifs (ROA), ainsi qu'en mesurant le marge bénéficiaire (PM), en plus du taux de prestation d'actifs (UC), en plus du dernier indicateur de cette étude E qui est le taux de multiplicateur de levier (multiplicateur de titre) (EM). L'étude a utilisé les rapports financiers de l'exercice 2015-2017 de la Banque extérieure algérienne. L'étude a trouvé. Avec la nécessité de s'appuyer sur des indicateurs d'analyse financière pour évaluer la performance des banques en identifiant les problèmes qu'elles rencontrent et en prenant les mesures correctives nécessaires

Mots clés: *performance financière, rapports financiers, ratios financiers.*

Jel Classification Codes M29; M49

1. INTRODUCTION

The importance of financial analysis is highlighted in providing the basic financial indicators for evaluating bank performance, and determining its efficiency and effectiveness in managing its assets optimally, as changes in economic and social structures require reliance on financial analysis to evaluate performance and show the compatibility of objectives. Achieved with what is planned and identifying and supporting positions of power and vulnerability centers and developing them through the development of well-thought-out financial plans and policies, The importance of financial analysis was reflected in the evaluation of the performance of the past and present periods, considering that this process was independent of the decision-making process, but in light of economic development and technological progress, financial analysis indicators must be considered the

main tool of the future planning process aimed at to evaluate the bank's performance and develop its activities.

I.1. The problem of research:

The problem with the study is to what extent financial analysis tools contribute to evaluating the performance of banks?

I.2. Research hypotheses:

In the light of the specific objectives of the research, the following hypotheses have been developed:

- The effectiveness of the use of financial analysis indicators in banks will increase the role and effectiveness of the performance of banks by identifying the problems they are experiencing and taking corrective action.

- Lack of interest in using the bank's financial analysis leads to a decrease in efficiency Management in the use of its various assets, thus reducing the return on invested as.

I.3. Previous studies:

➤ Study (Mark A. Petersen & Ilse Schoeman) with an article entitled "Modeling of Banking Profit via Return-on-Assets and Return-on-Equity(2008)

The study concluded that model bank profitability via return-on-assets (ROA) and return on-equity (ROE) in a stochastic setting. We recall that the ROA is an indication of the operational efficiency of the bank while the ROE is a measure of equity holder returns and the potential growth on their investment.

As regards the ROE, banks hold capital in order to prevent bank failure and meet bank capital requirements set by the regulatory authorities. However, they do not want to hold too much capital because by doing so, they will lower the returns to equity holders. In order to model the dynamics of the ROA and ROE, we derive stochastic differential equations driven by L´evy processes that contain information about the value processes of net profit after tax, equity capital and total assets. In particular, we are able to compare Merton and Black-Scholes type models and provide simulations for the aforementioned profitability indicators (Petersen, 2008).

➢ Saleem Study, Q., & Rehman with an article entitled Impacts of liquidity ratios on profitability. Interdisciplinary journal of research in business(2011)

This study aims to reveal the relationship between liquidity and profitability, so that each company has to maintain this relationship while conducting day-to-day operations. The results show that there is a significant impact of the liquid ratio only on the return on shareholders' equity while there is little impact on the return on shareholders' equity and return on investment, The results also showed that return on equity is not significantly affected by three ratios of the current ratio, a fast ratio and a liquidity ratio, while the return on investment is significantly affected by current ratios, rapid ratios and liquidity ratios. The main results of the study showed that each (variable) ratio has a significant impact on the financial positions of institutions with different amounts and that the liquidity ratios are primarily. Profitability ratios also play an important role in corporate financial positions. Each stakeholder has an interest in the company's liquidity situation. The supplier of the goods examines the company's liquidity before selling the goods by credit. Employees should also be concerned about the company's liquidity to see if the company can meet its employee obligations - salary, pensions, savings fund, etc. Therefore, the company needs to maintain sufficient liquidity so that liquidity has a significant impact on profits, part of which affects profits that will be divided into shareholders. Liquidity and profitability are closely related because one increases other declines (Saleem, 2011).

➢ Victor Curtis Lartey & Samuel Antwi & Eric Kofi Boadi 'The Relationship between Liquidity and Profitability of Listed Banks in Ghana'

The study sought to find out the relationship between liquidity and the profitability of banks listed on the Ghana Stock Exchange. Seven of the nine banks included in the study participated. The study was descriptive in nature. The longitudinal time dimension, specifically, adopted the painting method. Document analysis was the main research procedure adopted to collect secondary data for the study. The financial reports of the seven listed banks were studied and the relevant liquidity and profitability ratios were

calculated. The direction of liquidity and profitability was determined using time series analysis. The main liquidity ratio fell on the profitability ratio. It was found that during the period 2005-2010, both the liquidity and profitability of listed banks were declining. Again, it was also found that there was a very weak positive relationship between liquidity and the profitability of Ghana-listed banks (Lartey, 2013).

➢ Study of Al Nimer, Munther, Lina Warrad, and Rania Al Omari in an article The Impact of Liquidity on Jordanian Banks Profitability through Return on Assets (2015)

This study sought to see if liquidity through a rapid ratio has a significant impact on the profitability of Jordanian banks through return on assets (ROA). The study used the 2005-2011 financial reports of 15 Jordanian banks listed on the ASE. The study revealed that there is a significant effect of an independent variable rapid ratio of the variable return of the asset (ROA). This means that profitability through asset return (ROA) in Jordanian banks is heavily influenced by liquidity through a rapid ratio (Al Nimer, 2015).

I.4. The concept of financial analysis and its uses

Definition of financial analysis: Financial analysis can be defined as follows

- Financial analysis is an important tool that the bank can use to judge the success or failure of the policies followed by the bank (AnneliLogman, 2000, p. 7).
- Financial analysis can be defined as an approach that relies on a critical examination of the accounting and financial information provided by a company, aimed at assessing the most objective possible financial and economic performance (profitability, the importance of management options...), and their solvency (Lahille, 2017, p. 01).
- Financial analysis can also be defined as a set of methods and tools to diagnose a business or group and judge its performance from their accounts. It is used in forecasting and leads to strategic thinking

(Josette, 2006, p. 03).

- Financial analysis is the processing of financial statements to assess business and determine long-term profitability, and involves the use of data and information to create the most appropriate and mathematical models aimed at obtaining information used in performance evaluation and good decision-making. Best for areas of strength and weakness (Fahmi, 2008, p. 03).

- Financial analysis is a process through which a set of quantitative and qualitative indicators about the economic activity of the project is explored and derived, which contributes to determining the importance and characteristics of the operational and financial activities of the project through information extracted from the financial statements and other sources, so that these indicators can then be used to evaluate the performance of the enterprise for the purpose of Decision making (Matar, 2006, p. 03).

- The analysis is carried out by external and internal analysts. External analysis is carried out by creditors or external owners because they represent past financiers and are very likely to inquire about what they have deposited. The external analysis is based on historical financial statements, while the internal analyst should show more in the internal planning lists that look to the future (Robert W, 1975, p. 59).

- **I.5. Uses of financial analysis:**

Financial analysis is used to identify and judge the level of performance of the bank and to take special decisions. Financial analysis can be used for the following purposes: (F.Brigham, 2000, p. 08)

▪ Credit Analysis: This analysis is carried out by lenders (banks, for example) in order to identify the risks that they may be exposed in the event of the inability of the bank to pay its obligations on time.

▪ Investment Analysis: The ones who do this analysis are individual and corporate investors as they focus on the safety of their investments and the amount of returns on them, as this type of analysis is used to evaluate the efficiency of the bank in creating new

investment areas in addition to measuring profitability And the bank's liquidity.

- Merger & Acquisition Analysis: This type of analysis is used during mergers between two banks so that the valuation of the current value of the bank to be purchased is carried out and the expected future performance of the bank after the merger in the future.
- Financial Planning: Financial planning is one of the most important functions of the departments and the planning process is to conceptualize the bank's expected performance in the future and here financial analysis plays an important role in this process in terms of evaluating past performance and estimating the expected performance in the future.
- Financial Control: Financial control is defined as an evaluation and review of the works to ensure that their implementation is in accordance with the established standards and foundations in order to detect mistakes, deviations and weaknesses and address them in a timely manner.
- Performance Analysis: Performance evaluation of the organization is one of the most important uses of financial analysis, through the reassessment process, judging the level of profits and the ability of the institution to provide liquidity and payment of obligations and its ability to credit in addition to the valuation of assets, either Those who benefit from this evaluation are the management of the institution, investors, lenders, official entities and houses of financial expertise.

I.6. Financial analysis objectives:

There are many objectives that financial analysis serves in general, including: (Hamdan, 2009, p. 33)

-To know the reality of the financial situation of the institution.

-Determining the ability of the institution to service its debt and its ability to borrow.

-Evaluating the fiscal and operational policy.

-Judge the efficiency of management

-Identify the trends taken by the performance of the institution

-Assess the feasibility of investing in the organization.

-Use the information available to make decisions about oversight and evaluation.

-Find out the status of the organization within the sector in which it operates.

II– Methods and Materials:

The applied study aims to measure the role of financial analysis tools in assessing the financial performance of banks Case study of the Bank of Algeria.The applied study covers:

II –1. The variables of the applied study:

The financial performance of banks is assessed through a set of financial ratios and we have identified a set of financial ratios that measure the financial performance of banks as follows:

1. The variables of this study:

The variability of this study is the financial performance of banks

2. Independent variables:

We tried to limit the variables shown below:

- **Return On Equity Rate=ROE**

- **Return On Assets=ROA**

- **Profit Margin=PM**

- **Utility Assets=UA**

- **Equity Multiplier=EM**

3. Period of time covered by the study:

The study covers the period from 2015 to 2017, based on the financial budgets of the external bank Algeria and the income statement of the bank.

II -2. Testing hypotheses

To test the hypotheses, the financial ratios of the study variables were made and a comparison was made between the years of study and extracting the results.

III- Results and discussion :

1. **Presenting the bank under study**

   The External Bank of Algeria was established on October 01, 1967 with a capital of 20 million Algerian dinars, and has gone through several stages during its development, playing the role of facilitator (loan provision), development in the field of national planning and economic and financial relations between Algeria and other countries, and represents its main role in carrying out all Banking operations between major industrial enterprises and foreign institutions.

   During the 1980s, thanks to the application of Law 88-02 of January 12, 1988, which concerned the independence of the institution, the External Bank of Algeria underwent new changes, one of the first banks to become independent institutions under decree 88-61 on January 12, 1988.

   It is a government institution established during the period of independence after the nationalization of External banks under Decree No. 67/204 of 01 October 1967, and is a state-owned deposit bank and subject to commercial law, based in Algiers, whose task at the time of its establishment was to finance foreign trade. It has several specialties, such as granting credits for imports and giving guarantees to Algerian exporters to facilitate their tasks (Latrzche, 2003, pp. 178-179).

2. **The functions and functions of the Algerian external bank BEA**

   2.1 Tasks: mention them
   - Developing commercial relations between private dealers and the public sector.
   - Study bank loans granted to customers and subject them to the conditions of the Directorate in the case of loans with high amounts.
   - Receiving various deposits.
   - Financing major economic projects.
   - Providing services to customers of public institutions as well as private customers within the framework.

- Financing import and export operations with the bodies and networks of the bank.

  2-2 Functions:

- Facilitate and develop economic relations between Algeria and other countries.

- Intervene with its standby guarantee and guarantee the fulfillment or even loan agreements with foreign correspondents to promote business deals with other countries.

- Re-management of public warehouses or the purchase and sale of real estate operations not related to the activity of the company or take social measures for the benefit of its beneficiaries.

- Establishes and puts at the disposal of interested institutions a central service department for business information abroad and a department for the promotion of operations with abroad.

3. **Financial Performance Assessment Indicators of the External Bank of Algeria.**

3.1 Return On Equity Rate:

This rate is used as a basis for analyzing commercial bank profitability and this return is the ratio between the net cycle result and total equity. This indicator aims to measure the percentage of return per dinar of equity and the higher the return the more the bank is able to distribute more profits to shareholders and is calculated according to the following relationship:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholders' Equity}}$$

From this relationship, this results in a decrease in equity capital, as the return on equity increases, so the owners of the bank (equity) owners may not want to hold a lot of equity capital. However, capital cannot be low, as this level of bank capital is regulated by capital adequacy (Petersen, 2008, p. 04) .

It is calculated according to the previous relationship:

- Return on equity for the year 2015 is calculated as follows:

$$\boldsymbol{ROE}_{2015} = \frac{100892860143.50}{33418665080.57} = \% \, 33.12$$

- Return on equity for the year 2016 is calculated as follows:

$$ROE_{2016} == \frac{150565294232.64}{34572413175.99} = \% \, 22.96$$

Return on Equity 2017 is calculated as follows:

$$ROE_{2017} == \frac{150826534078.07}{57365644936.72} = \% \, 38.03$$

Through the results obtained we record fluctuations in the level of return on property rights, where we recorded the highest value in 2017, while the year 2016 saw its lowest value as described in table 01, where there was volatility during 2015 and 2016 year to return to the rise in 2017 due to the record of decline decreased The level of net result, i.e. it did not cover equity, where it reached 33418665080.57 while 2016 decreased to 34572413175.99. The level of its rise and the level of distribution of dividends to shareholders.

3.2 Return On Assets:

This indicator aims to reveal the bank's efficiency in employing its assets to achieve a certain level of profitability, as it benefits from knowledge of the relationship between profitability and all its assets, and provides ROA information on the amount of profits generated on average by each asset unit. So the ROA is an indicator of how efficient the bank's management is.
To calculate the bank's return on assets, you need to know two parts of the information. First, you need to find net income, which can be found in the bank's income statement. After that, you need to find the bank's assets (loans, securities, cash, etc.), which can be found on the bank's balance sheet. To calculate the return on assets, simply divide the net income by total assets, then multiply by 100 to express it as a percentage, calculated according to the following relationship:

$$Return \; On \; Assets = \frac{Net \; Income}{Total \; Assets}$$

The profit ratio of assets varies by sector, but in general, the higher the ROA profit level, the better. For this reason, ROA comparison of the

company has been often the cost of other companies in the same sector or against their ROA numbers from previous periods. Low ROA is almost always a problem, but investors and analysts should keep in mind that ROA does not take into account outstanding commitments and may indicate a higher profit level than is actually derived. (investinganswers, 2020)

It is calculated according to the previous relationship:

- The rate of return on assets for 2015 is calculated according to the following:

$$ROA_{2015} = \frac{33\ 418\ 665\ 080,57}{2602811618703.04} = \%\ 1.28$$

- The return of property rights for 2016 is calculated according to the following:

$$ROA_{2016} == \frac{34572413175.99}{2574006188481.65} = \%\ 1.34$$

- Return on equity of 2017 and calculated according to the following:

$$ROA_{2017} == \frac{57365644936.72}{3122177721501.37} = \%\ 01.83$$

Through the results obtained in Table 2, which represents the return on assets of The External Bank of Algeria, we note that the lowest value of 1.28 in 2015 was recorded due to a decrease in the level of net result, while the rest of the other years, which means 2016 and 2017, which recorded the highest value of the rate. We note an improvement in this rate, which reflects the Bank's ability to employ its assets in order to achieve a certain level of profitability.

3.3 Profit Margin:

This margin reflects the percentage of each dinar of net income (net result) achieved from total revenues, where the aim of measuring this margin is to know the extent to which the bank is able to control its expenses and reduce its taxes and is calculated according to the following relationship:

$$\textbf{Profit Margin} = \frac{\text{Net Income}}{\text{Net Sales}}$$

- Profit margin of 2015 and calculated according to the following:

$$PM_{2015} == \frac{333418665080.5}{134861725261.39} = \%24.78$$

- Profit margin of 2016 and calculated according to the following:

$$PM_{2016} == \frac{34572413175.99}{87\ 266\ 542\ 351,31} = \%\ 39.61$$

- Profit margin of 2017 and calculated according to the following:

$$PM_{2017} == \frac{57365644936.72}{120\ 867\ 412\ 751,17} = \%\ 47.46$$

We note through table 03 that fluctuations are recorded at the level of the profit margin index, where we recorded our highest value in 2017 at 47.46, while 2015 recorded the lowest value of 24.78, reflecting the bank's inability to reduce and control its expenses and taxes.

3.4 .Utility Assets:

The goal is to know the extent to which commercial bank assets are able to generate revenue and these revenues are divided into interest income and income generated from other sources and we can calculate it according to the following relationship:

$$\text{Utility Assets} = \frac{\text{Total revenue}}{\text{Total assets}}$$

- Profit margin of 2015 and calculated according to the following:

$$UA_{2015} == \frac{134861725261.39}{2602811618703.02} = \%5.18$$

- The benefit of the assets for the year 2016 and calculated according to the following:

$$UA_{2016} == \frac{68013137139.31}{2574006188481.65} = \%\ 2.64$$

- Profit margin of 2017 and calculated according to the following:

$$UA_{2017} == \frac{174552563331.48}{3122177721501.37} = \% \, 5.59$$

We note through Table 4 that the benefit of the bank's external assets fluctuates, which leads to the inability of the bank's assets to generate revenue, which confirms that the Bank does not diversify in an investment, whether it is an investment in the portfolio or making contributions to various SMEs and Beer as well as individual funding.

3.5 Equity Multiplier

Measures the degree of leverage of the bank where it aims to compare the assets of the commercial bank with its own funds where the greater value of this indicator indicates the adoption of a greater degree of financing in debt compared to private funds and can be calculated according to the following relationship:

$$\text{Equity Multiplie}r = \frac{Total\ Assets}{Total\ Equity}$$

It is calculated according to the previous relationship:
- The 2015 (property right multiplier) is calculated according to the following:

$$EM_{2015} == \frac{100892860143.50}{2602811618703.02} = 25.79$$

- The benefit of the assets for the year 2016 and calculated according to the following:

$$EM_{2016} = \frac{150565294232.64}{2574006188481.65} = 47.09$$

- Profit margin of 2017 and calculated according to the following:

$$EM_{2017} == \frac{150826534078.07}{3122177721501.37} = 20.70$$

The results obtained in Table 05 indicate that fluctuations in the level of leverage of the External Bank of Algeria recorded a rate of 25.79 in 2015 to decrease in 2016 to 47.09 to continue to rise in 2017, to 20.70.

This explains the bank's reliance on debt financing in 2015 and 2017 on private funds, as opposed to 2016, when we recorded a lower rate of leverage. This was evident from the various financial ratios calculated at the level of this bank, which showed a defect in the External Bank of Algeria, which was represented by the fluctuations occurred.

IV - Conclusion:

Financial analysis is a tool through which the financial performance of banking institutions is assessed as well as useful in knowing the aspects and points that need to be studied and attention in order to improve them and work to develop them in order to maintain the status that achieves continuity and survival in the face of intensified competition

Through this study, the following results were reached:

- ❖ The rate of return on equity is also recording continuous changes during the years studied.
- ❖ The inability of the External Bank of Algeria to control and control its expenses as well as reduce its taxes, as illustrated by the profit margin rate, possibly due to the increase in the number of agencies, but without registering any added value, mentioning any increase in expenses only.
- ❖ The Bank varies in its investments, whether it is an investment in the portfolio of securities or making contributions in various small, medium and large projects as well as financing individuals.
- ❖ In terms of the leverage rate, we note that the External Bank of Algeria is low in 2017 compared to 2016 with an estimated 3.61.
- ❖ Based on the results achieved through the applied study at the level of the Bank Foreing Algeria

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