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# The Use of CAMELS Model to Evaluate Banks
## -Case Study of Several Commercial Banks in Algeria-

**Dissertation Submitted to the Department of Financial Sciences and Accounting in Partial fulfillment of the Requirements for the Master's Degree in Finance and banks**

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**2019/2020**

# Dedication

*I like to dedicate this research to my beloved parents who has supported me financially and emotionally through all of my college Years*

*I also want to thank my brothers and sister for helping me to get through my college Years and finally to graduate as one of the best of my class and*

*the first in my major.*

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***Abstract:***

This study aims to determine the possibility of using the CAMELS model in evaluating the performance of commercial banks in terms of identifying strengths and weaknesses. The study is divided into two parts: the first part is the theoretical part of the study and second part is the fieldwork of the study. In the theoretical part, the study discussed all the aspects of the performance, financial performance, financial statement, financial statements analyses, concept of appraisal and Bank performance appraisal. The study basically divided the field work into two-parts part, number one introduce the performance of banks chosen two of them are public Banks which are the external Bank of Algeria and the National Bank of Algeria the other two are private Banks which are AL-Salam bank and AL-Baraka bank.

Part number two is the evaluation of the elements of the financial statement of each bank during the period (2012-2017) and measure Banks performance using CAMELS model financial ratios.

The study found that the financial analysis of the financial statements, using standard models in measuring performance, gives outputs that shows the financial analyst the current performance of the bank, and gives him the ability to visualize the future status of this performance. And All banks rely on a strategy to diversify their deposit portfolio to avoid liquidity risks. The values of net profit after taxes in banks have fluctuated continuously throughout the study period, between stability and the rise and fall in their value. All banks adopt a strategy to diversify their deposit portfolio to avoid liquidity risk. The values of net profit after taxes in banks fluctuated continuously throughout the study period between stability and rise and fall in its value. All the banks of the study sample succeeded in exceeding the standard set for the capital adequacy ratio, while there is a variation in the results of the outputs of the rest of the CAMELS model, both for public and private banks.

The study recommended that Banks' administrations must rely on performance measurement standards in general and CAMELS model, in particular, to verify the reality of their performance and find out the weaknesses to avoid them in the future. The bank should focus on the credit worthiness of the client rather than focusing on the guarantees that the client offer. Banks should diversify their investment portfolios according to the scientific standards, as Markowitz standard for diversification. Imposing laws that would raise the quality of loans granted by banks and move away from financial purification operations that the government often undertakes in favor of public banks.

**Key words:** The performance, financial performance, financial statements, financial statements analyses, CAMELS model, Commercial banks, Algeria

**الملخص:**

تهدف هذه الدراسة الى تحديد إمكانية استخدام نموذج CAMELS في تقييم أداء البنوك التجارية من حيث تحديد نقاط القوة ونقاط الضعف. اعتمدت الدراسة على المنهج الوصفي التحليلي مع استخدام أسلوب دراسة الحالة، حيث قسمت الدراسة إلى فصلين، تضمن الفصل الاول الإطار النظري للأداء المالي والقوائم المالية، تحليل القوائم المالية، الأداء البنكي وتقييم الأداء البنكي. أما الفصل الثاني فهو عباره عن الجانب التطبيقي للدراسة والذي اشتمل على الدراسة التطبيقية، تم من خلالها عرض للبنوك عينة الدراسة والمتمثلة في بنكين عموميين، بنك الجزائر الخارجي والبنك الوطني الجزائري، وبنكين من البنوك الخاصة هما بنك السلام وبنك البركة.

تم عرض وتحليل تطور عناصر القوائم المالية خلال الفترة (2012-2017)، وفي الأخير قياس أداء البنوك الأربعة باستخدام النسب المالية التي يشملها نموذج CAMELS.

توصلت الدراسة إلى أن التحليل المالي للقوائم المالية، باستخدام نماذج قياسية في قياس الأداء، تعطي مخرجات توضح للمحلل المالي الأداء الحالي للبنك، وتمنحه القدرة على تصور الوضع المستقبلي لهذا الأداء، حيث تعتمد جميع البنوك على استراتيجية لتنويع محفظتها من الودائع لتجنب مخاطر السيولة. في حين تذبذبت قيم صافي الربح بعد الضرائب في البنوك بشكل مستمر طوال فترة الدراسة بين الاستقرار والارتفاع والانخفاض في قيمتها. كما أن كل البنوك عينة الدراسة نجحت في تجاوز المعيار المحدد لنسبة كفاية رأس المال، في حين أن هناك تباينا في نتائج مخرجات باقي معايير نموذج CAMELSسواء للبنوك العمومية والخاصة.

وعليه أوصت الدراسة بضرورة اعتماد إدارات البنوك على معايير قياس الأداء بشكل عام ومعايير CAMELS بشكل خاص للتحقق من واقع أدائها ومعرفة نقاط الضعف لتجنبها في المستقبل. وأن يركز البنك على الجدارة الائتمانية للعميل بدلاً من التركيز على الضمانات التي يقدمها العميل، بالإضافة إلى ضرورة تنويع البنوك لمحافظها الاستثمارية وفق المعايير العلمية، كمعيار ماركويتز للتنويع. كما توصي الدراسة بضرورة فرض الدولة لقوانين من شأنها رفع جودة القروض الممنوحة من البنوك والابتعاد عن عمليات التطهير المالي التي كثيرا ما تقوم بها الحكومة لصالح البنوك العامة.

**الكلمات المفتاحية:** الأداء، الأداء المالي، القوائم المالية، تحليل القوائم المالية، نموذج CAMELS، البنوك التجارية، الجزائر.

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# List of Abbreviations

| Abbreviation | Description of abbreviation |
|---|---|
| BBA | Al Baraka Bank of Algeria |
| EBA | External Bank of Algeria |
| NBA | National Bank of Algeria |
| SBA | Al- Salam Bank of Algeria |
| APB | Accounting Principles Board |
| CAR | Capital to asset ratio |
| CRWA | Capital to risk-weighted assets ratio |
| ES | Efficient-structure |
| EVA | Economic Value Added |
| MVA | Market Value Added |
| OBS | Off-balance sheet |
| ROA | Return on Assets |
| ROE | Return on Equity |
| RSA | Interest Rate sensitive assets |
| RSL | Interest Rate sensitive liabilities |
| SCP | Structure conduit performance |

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# *Introduction*

## Introduction:

Banks serve as backbone to the financial sector, which facilitate the proper utilization of financial resources of a country. The banking sector is increasingly growing and it has witnessed a huge flow of investment. In addition to simply being involved in the financial intermediation activities, banks are operating in a rapidly innovating industry that urges them to create more specialized financial services to better satisfy the changing needs of their customers.

In order to cope with the complexity and a mix of risk exposure to banking system properly, responsibly, beneficially and sustainably, it is of great importance to evaluate the overall performance of banks by implementing a regulatory banking supervision framework. One of such measures of supervisory information is the CAMELS rating system, which was put into effect firstly in the U.S. in 1979, and now is in use by three U.S. supervisory agencies-the Federal Reserve System, Office of the Comptroller of the Currency (OCC), and Federal Deposit Insurance Corporation (FDIC). It has been proved to be a useful and efficient tool in response to the financial crisis in 2008 by U.S. government.

## Problem Statement

In Algeria, the banking system is suffering from lack of a flexible legislative framework that is able to intervene and compel the banks to comply with the procedures intended to be performed by the regulators, which will reflect on the performance of these banks.

Therefore, the problem of the research revolves around the following question:

**Is it possible to use CAMELS outputs to provide an analysis of the strengths and weaknesses in the performance of banking institutions?**

## Research Questions:

More specifically, the following research questions need to be addressed:

1. Does the process of financial analysis of financial statements of banks help to give an idea about the current level of performance and a perception of future performance?
2. What are the main determinants of banks performance?
3. Can we rely on “CAMELS” outputs to evaluate banks?

**Hypothesis**

In light of the research problem, we can formulate the following hypothesis:

1. The process of financial analysis of financial statements, using standard models in measuring performance, gives outputs that shows the financial analyst the current performance of the bank, and gives him the ability to visualize the future status of this performance.
2. Determinants of bank performance can be split between those that are internal determinants, and external determinants
3. CAMELS model is considered the most appropriate standard for measuring the performance of the banks under study.

**Research objectives**

This research aims to evaluate serval banks in Algeria by analyzing their financial statements using CAMELS model and try to classify banks according to CAMELS outputs.

**Literature Review**

1. **Wdan Bu Abdullah and Choucha Yamina (2013):** Their study aims to try to test the validity of the evaluation CAMELS model of predicting banking failure and early detection of the difficulties faced by banks, which oversees them This methodology makes it possible to analyze and cite six areas of financial and administrative performance, at the National Bank of Algeria and BNP Paribas El Djazaïr.

2. **Golam Mohiuddin (2014)** in his study, an effort has been made to evaluate the financial performance of the two major banks (one is NCB and another one is PCB) operating in Bangladesh. This evaluation has been done by using CAMEL Parameters, the latest model of financial analysis. Through this model, it is highlighted that the position of the banks under the study is sound and satisfactory so far as their capital adequacy, asset quality, management capability and liquidity is concerned.
3. **Iman Zugoud (2015):** The research explains the relationship between the evaluation system with its different dimensions and characteristics and the banking oversight processes with defining the subjects that require special attention. They have tried to assess the bank by using the USA banking system of evaluation, and evaluation results were linked with the elements to be taken into account when carrying out control and in order to confirm the role of evaluation system to support the control process of commercial banks.
4. **Saliha Amari and Ali bin (2015):** This search deals with one of the most important modem entrances used for evaluating banks activities which is US banking evaluation system CAMELS. This system gives each bank a complex rating based on the evaluation and the classification of six major elements related to the financial and the operating conditions of the bank taking into consideration all of the bank's size, the complexity of its activities and the risks that can face its activities. These elements are Capital adequacy, asset quality, management, earning, liquidity, sensitivity to market risk.
5. **Ghassan Farouk Ghandour (2017):** His research discusses the impact of applying the Unified Banking Evaluation model (Camels) on enforcing the banking supervision and control processes. The research explained the nature and consistence of relationship between the evaluation system with its different dimensions and characteristics, and the banking supervision on site and off site; it

analyzed and evaluated the case study of BBSF (as the first private bank in the Syrian banking system).

6. **Fawzan Al-Qaisi (2017)**: his study aimed to analyze the factors affecting the performance of the Jordanian commercial banks using the components of CAMELS model, and to identify the most influential factors. The study used a sample of 13 Jordanian commercial banks listed on the ASE during the period 2009-2014. The study used two variables to measure the banks performance, return on assets (ROA) and return on equity (ROE), while independent variables included the components of CAMELS model.
7. **Muhammad Mahmoud al-Tai and Hussam Abbas Ali (2018)** the main objective is to have a comparative evaluation in order to determine the safety and health of those banks, and the statement of its strengths and weaknesses, and to highlight the role and importance of the model CAMELS, in the comprehensive assessment process, The research found that the CAMELS evaluation model is a comprehensive model, which assesses the banks in all aspects, especially financial and administrative.
8. **Bassam Asaad (2018)** his research aims to evaluate the banks performance by applying the American Banking Evaluation system (CAMELS) on a sample of private banks, in order to assess the performance of banks through a case study to identify the weakness and strengths areas on its performance and identify the banking risks that constitute weakness points in the financial, operational and administrative transactions of the bank.
9. **Bin Khalifa Souad (2018)**: her study aimed to draw attention to the main standards and indicators of early warning and tools to evaluate the performance of the bank to know the status of the bank on one hand and predict the risks of a fall in the near future. The study concluded that the camel's model has an impact on the performance of the Agricultural and Rural Development Bank and, therefore, it respects and applies the model's standards to its performance.

10. **Kwadwo Boateng (2019)** the primary aim of his study was to assess the performance of Ghanaian banks using the CAMELS rating model the rating was based on ratio analysis of the financial statements. Together with an onsite examination by the regulatory authority. 10 banks were selected for a seven-year period.

**Methodology**

The research has selected two effective methods, which divided into descriptive method and analytical method.

- Samples of the Study

  A sample of banks was selected wish are External bank of Algeria (EBA), National Bank of Algeria (NBA), AL-Salam Bank and AL-Baraka Bank.

- Sources of Data

  Financial statements of the selected banks.

- Time range

This study was conducted during the period (2012-2017).

**Research Limitation**

- The student was not able to communicate with the departments of many banks in the banking sector due to the quarantine that was applied in the country due to the spread of Covid-19 virus.
- Banks did not respond to the many emails that I sent.
- The student was unable to expand the sample range due to the lack of financial statements for many banks, which forced me to choose only four banks.
- The lack of time to conduct the study, especially given the circumstances the country was going through.

**Research Organization**

The research effort divided on two main chapters, chapter one for the Theoretical Framework and chapter two for the field study.

In chapter number one the study, primarily focus on the theoretical framework of financial performance in detail. Most of the theoretical aspects of analysis of financial performance are covered in this chapter. It deals broadly with the concept of financial performance, appraisal, financial statements, financial statements analysis and financial performance of banks.

The study basically divided this chapter to four Points first the introduction of the banks, second evaluating the bank's financial statements elements, third measuring Banks performance through CAMELS model and finally displaying the results of the banks ’performance

# *Theoretical Framework*

## 1.1. Introduction

The term performance cannot be put into a tight framework of definition. It is an indistinct phenomenon and it can be interpreted and measured in different ways. Different users from their own point of views can evaluate from various angles.
A financial analyst will judge the performance from profitability and growth point of view. An economic planner will be concerned with the equal distribution of gains and wealth besides efficient utilization of resources.

In this chapter, the study primarily focus on the theoretical framework of financial performance in detail. Most of the theoretical aspects of analysis of financial performance are covered in this chapter. It deals broadly with the concept of financial performance, appraisal, financial statements. financial statements analysis and financial performance of banks.

## 1.2. Performance:

### 1.2.1. Concept of performance:

The word 'Performance is derived from the word 'parfourmen', which means 'to do', 'to carry out' or 'to render'. It refers the act of performing execution, accomplishment, fulfillment, etc. In border sense, performance refers to the accomplishment of a given task measured against preset standards of accuracy, completeness, cost, and speed. In other words, it refers to the degree to which an achievement is being or has been accomplished.[1]

According to **Robert Albans**, "The word "performance" is used to mean the efforts extended to achieve the targets efficiently and effectively. The achievement of targets involves the integrated use of human, financial and natural resources.[2]

In the words of **Frich L. Kohlar**, "The performance is a general term applied to a part or to all the conducts of activities of an organization over a period of time; often with reference to past or projected costs efficiency, management responsibility or accountability or the like." Thus, not just the presentation, but also the quality of results achieved refers to the performance. Performance is used to indicate firm's success, conditions, and compliance. [3]

### 1.2.2. Areas of performance:

There are areas where the performance can be improved by effective assessment of various activities performed by a business enterprise in different areas of operations. The areas of operations may be termed as the areas of performance. The important areas are as follows:[4]

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1- K. Aruljothi & C. Brindha: Financial Performance Analysis of Bannari Amman Spinning Mills in Coimbatore Distric, *Research Review International Journal of Multidisciplinary*, 2018, p 600.
2- Zawadi Ally: Comparative Analysis of Financial Performance of Commercial Banks in Tanzania, *Research Journal of Finance and Accounting*, Vol.4, No.19, 2013, p134.
3- Mwangi Mary Wanjiru: The effect of corporate governance on financial performance of companies listed at Nairobi security exchange, master thesis, Faculty of finance, university of Nairobi, Nairobi, 2013, pp 8-9.
4- Kirtiba L Vaghela: Financial performance analysis of pharmaceutical industry, PhD thesis, Department of Commerce, Saurashtra University, Rajkot, India, 2017, pp 106-107.

- **Service Production**

Service Production is the most important area of performance, and the productivity is the systematic analysis for evaluating the service production function. The service production data can be performed as compared to other competitive banking companies of the banking industry. The service production performance of the banking industry can be compared for different years with the competitive industries.

- **Profitability Performance:**

Profitability is the ability of an enterprise to earn profits. The bank management is vitally interested in profit as it is often used as performance measure. Measurement of profitability is the overall measurement of performance. Profit is also important to financial institutions, bankers and creditors. Moreover, even a nonprofessional also assesses the performance of a business enterprise by its ability to earn profit. Profitability performance can be made by computing and interpreting various profitability ratios.

- **Liquidity Performance:**

By checking the fluctuations most probably in current assets, the researcher can take the estimate of liquidity performance.

- **Working Capital Performance:**

As soon as the heart gets blood, it circulates the same in the body. In the same manner, working capital funds are obtained and circulated in a business. As and when this circulation stops, the business becomes lifeless. Therefore, the analysis of working capital statements and various ratios of its kind may depict required information for the Purpose.[1]

- **Fixed Assets Performance:**

1- Ibid.

According to **Adam Smith,** "Some part of the capital of every master artificer or manufacturer must be fixed in the instrument of his trade." [1]

As fixed assets in nature are along term tangible assets, therefore, they should be financed through long-term sources. In this respect, the ratio of fixed assets to net worth can be calculated to study financing of fixed assets. This ratio is very important as it shows that owners have provided enough funds to finance fixed assets. [2]

- **Social Performance:**

The value of all the resources concerned with the banking industry is called social performance. They may be men, material, money and machines. All these resources, which are to be used for the welfare of society and banking industry, are included to evaluate social performance. The social performance of any bank can be evaluated by considering different parties like government, depositors, financial institutions, investors, account holders and employees. All these parties are members of the society. Some important accounting ratios can be helpful to know the contribution made by the banks to the society.

### 1.2.3. Measurement of performance:

Performance measurement is the process of collecting, analyzing and/or reporting information regarding the performance of an individual, group, organization, system or component.[3]

Definitions of performance measurement tend to be predicated upon an assumption about why the performance is being measured.[4]

According to **Michael Mascon** Performance is: dependent on effort, abilities, traits and the individual's perception of his role. While measuring the performance of a firm

1- Adam Smith: An Inquiry into the nature and causes of the Wealth of Nations, New edition, Scotland, Great Britain, 1776, p 209.
2- R. L. Gupta & Radhaswamy. M: Financial Statement Analysis, Sultan Chand & Sons, New Delhi, India, 1991, p 7.
3- Robert D. Behn: Why Measure Performance?, *Public Administration Review*, Harvard University, Vol. 63, No. 5, 2003, p586.
4-Max Moullin: Performance measurement, *International Journal of Health Care Quality Assurance*, Faculty of Organization and Management, Sheffield Hallam University, UK, 2007, pp181-183.

or an enterprise we need a measuring unit. Human aims and beliefs are mostly realized through the establishment of diverse kinds of associations. All associations were established for fulfillment of some goals and objectives. Thus, association needs performance measurement to find out as to how much is organization has achieved by its course of action for its targets.[1]

According to **Tripathi** "Measurement is the assignment of numerals to characteristics of objects persons, states or events, accounting to rules. What is measured is not the object, person, state or event itself but some characteristics of it. When objects are counted, for example, we do not measure the objects itself but also it is characteristic of being present. We never measure people only by their age, height, weight or some other characteristics."

## 1.3. Financial performance:

### 1.3.1. Concept of financial performance:

Financial performance refers to the degree to which financial objectives being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Financial Performance is a subjective technique to measure, how well a firm use asset from its primary mode of business and generate revenues. It is a process of determining the operational and financial characteristics of a firm from accounting and financial statements.[2]

### 1.3.2. Financial performance analysis:

The financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of balance sheet and profit and loss account. The first task of financial performance

1- Michael Mascon: Management Individual and Organizational Effectiveness, New York: Harper & Row Put, New York, USA, 1981, p331.
2- Reshma Dhingra: Financial performance of public sector enterprises a case study of SAIL, PHD thesis, Faculty of Commerce, Banaras Hindu University, Varanasi, Uttar Pradesh, India, 2016, p 3.

analysis is to select the information relevant to the decision under consideration from the total information contained in the financial statements. The second is to arrange the information in a way to highlight significant relationships. The final task is interpretation and drawing of inferences and conclusions. In short, "financial performance analysis is the process of selection, relation and evaluation."[1]

### 1.3.3. Areas of financial performance analysis:

Financial analysts often assess the firm's production and productivity performance (total business performance), profitability performance, liquidity performance, working capital performance, fixed assets performance, fund flow performance and social performance[2]. Various financial ratios analysis includes:

- Working capital Analysis
- Financial structure Analysis
- Activity Analysis
- Profitability Analysis

### 1.3.4. Significance of financial performance measurement:

The interest of various related groups is affected by the financial performance of a firm. The type of analysis varies according to the specific interest of the party Involved:[3]

- Trade creditors: interested in the liquidity of the firm (appraisal of firm's liquidity)
- Bond holders: interested in the cash-flow ability of the firm (appraisal of firm's capital structure, the major sources and uses of funds, profitability over time, and projection of future profitability)
- Investors: interested in present and expected future earnings as well as stability of these earnings (appraisal of firm's profitability and financial condition)

1- Meigs, W. B. et al: Intermediate Accounting, McGraw – Hill, New York, USA, 1978, pp1049.
2- Marc Helmold and Warda Samara: Progress in Performance Management, Springer International Publishing, Switzerland, 2019, p 133.
3- Imran Azim: Economic Review, Economic & Industrial Publications, Australia, 2009, p 36.

- Management: interested in internal control, better financial condition and better performance (appraisal of firm's present financial condition, evaluation of opportunities in relation to this current position, return on investment provided by various assets of the company etc.)[1]

## 1.4. Appraisal:

### 1.4.1. Concept of appraisal:

Appraisal is closely related to scrutiny of the working systems of company as whole. According to **Sudha Nigam**, "Appraisal is techniques to evaluate past current and projected performance of concern" It is powerful applied tool to examine, to measure, to interpret and to weight critically and draw outputs.

Different specialist who examines the specific problems with their company does an appraisal. Appraisal can be divided into two parts Internal and External.

According to **Pitt Francis**, "Internal appraisal of the company not only means making some of having adequate human, physical and financial resources but seeing that they are optimally employed." [2]

### 1.4.2. Concept of financial performance appraisal:

Simply, financial appraisal is a scientific evaluation of the profitability and financial strength of any business concern. [3] In fact, financial analysis is the process of making an anatomical study of the financial and operational data contained in the profit and loss account and the balance sheet of a given concern and thereby satisfying the information needs of the internal and external users of such data.[4]

Performance appraisal is composed of two words performance and appraisal, Performance indicates how the management of an enterprise has been accomplishing

1- Ibid.
2- Agarwal N.P: Financial appraisal of state ware housing corporation case study of Rajasthan state ware housing corporation, master dissertation, department of E. A. F. M., University of Rajasthan, Jaipur, 1979, pp 3-4.
3- G. S. Batra: Business Management: New Innovations, Deep & Deep Publications, New Delhi, India, 2004, p 40.
4- Ibid.

the goals, which they had set for the enterprise. Performance is a measure of the degree to which an organization fulfills its purpose and the purpose is to achieve its objectives. The measurement of business performance is more complex and difficult, since it must deal with the effectiveness with which capital is employed, the efficiency and profitability of operations, and the value and safety of the various claims against the business. Appraisal refers to critical review with a view to improving performance. It includes the act to examine, to measure, to interpret and to draw conclusions.[1]

Thus, performance appraisal is generally directed towards evaluating the liquidity, stability and profitability of a concern, which put together, symbolizes the financial efficiency of a concern. Performance appraisal of companies is done through financial analysis.

### 1.4.3. Objective of financial performance appraisal:

Performance appraisal involves a broad area of coverage. The perspective throughout is on the effective management of company resources. Performance appraisal can be done through a careful and critical analysis of the financial statement of an enterprise. Usually the financial statement of a business concern comprises two statements: balance sheet or position statement and profit and loss account or income statement. However, in big concerns two more statements are prepared. They are profit and loss appropriation account and fund flow statement. The overall performance of a business cannot be judged without a systemic analysis and interpretation of its financial statements.[2]

Objectives of the performance appraisal

- To find out the financial stability of a business concern
- To assess its earning capacity
- To estimate and evaluate its stock and fixed assets.

1- Harry Levinson, Appraisal of What Performance, Harvard Business Review, https://hbr.org/1976/07/appraisal-of-what-performance, Accessed on March 3, 2020.
2- Sugan C. Jain: Performance appraisal, Raj Publishing House, Delhi, India, 2002, p 02.

- To assess its capacity and ability to repay short- and long-term loans
- To estimate and examine the possibilities of its future growth
- To estimate the administrative efficiency of its management

## 1.5. Financial statements:

### 1.5.1. Concept of financial statements:

A financial statement is a collection of data organized according to logical and consistent accounting procedures. Its purpose is to convey an understanding of some financial aspects of a business firm. It may show a position at a moment in time, as in the case of a balance sheet, or may reveal a series of activities over a given period of time, as in the case of an income statement.[1]

Financial statements are the outcome of summarizing process of accounting. In the words of **John N. Myer** "The financial statements provide a summary of the accounts of a business enterprise, the balance sheet reflecting the assets, liabilities and capital as on a certain date and the income statement showing the results of operations during a certain period." Financial statements are prepared as a result of financial accounting and are the major sources of financial information of an enterprise.[2]

**Smith and Asburne** define financial statements as "the end product of financial accounting in a set of financial statements prepared by the accountant of a business enterprise-that purport to reveal the financial position of the enterprise, the result of its recent activities, and an analysis of what has been done with earnings."[3]

Financial statements (financial reports) In the words of **Anthony** "Financial statements, essentially, are interim reports, presented annually and reflect a division of

1- Peddina Mohana Rao: Financial Statement Analysis and Reporting, Prentice Hall of India Private Ltd, 1st edition, New Delhi, India 2011, p 22.
2- Rao M.E. Thukaram: Management Accounting, New Age International Publisher, New Delhi, India 2003, p 18.
3- M. Sarngadharan and S. Rajitha Kumar: Financial Analysis for Management Decisions, PHI, New Delhi, India, 2011, p 48.

the life of an enterprise into more or less arbitrary accounting period-more frequently a year."[1]

Every business concern wants to know the various financial aspects for effective decision-making. The preparation of financial statement is required in order to achieve the objectives of the firm as a whole. The term financial statements (or financial reports) are formal records of the financial activities and position of a business, person, or other entity. Relevant financial information is presented in a structured manner and in a form, which is easy to understand. They typically include four basic financial statements accompanied by a management discussion and analysis:

**A- Balance Sheets**

Balance sheet, statement of financial position or statement of financial condition is a summary of the financial balances of an organization, whether it be a sole proprietorship, a business partnership a corporation, private limited company or other organization such as Government or not-for-profit entity [2] assets, liabilities and ownership equity are listed as of a specific date, such as the end of its financial year.

A balance sheet is often described as a "snapshot of a company's financial condition". Of the four basic financial statements, the balance sheet is the only statement, which applies to a single point in time of a business' calendar year.

**B- Income statement**

Income statement or profit and loss account is one of the financial statements of a company it shows the company revenues and expenses during a particular period [3]

It indicates how the revenues (also known as the *"top line"*) are transformed into the net income or net profit (the result after all revenues and expenses have been accounted for). The purpose of the income statement is to

1- V. R. Palanivelu: Financial Management (Theory, Problems & Solutions), S. Chand Publishing, Patna, India, 2018, p 47.

2- Santosh Baheti and Aishwarya Joshi Baheti: UGC - NTA - Commerce - SET - NET - JRF - A Comprehensive Look, education publishing, New Delhi, India, 2018, p 104.

3- Nik Kerner: Creating a Business Plan: Your Dream Concept Made Real, BizTeach Inc, 1st edition, California, USA, 2008, p 143.

show managers and investors whether the company made money (profit) or lost money (loss) during the period being reported. An income statement represents a period of time this contrasts with the balance sheet, which represents a single moment in time.[1]

**C- Cash flow statement**

In financial accounting, a cash flow statement, (*statement of cash flows)* is a financial statement that shows how changes in balance sheet accounts and income affect cash and cash equivalents, and breaks the analysis down to operating, investing, and financing activities. Essentially, the cash flow statement is concerned with the flow of cash in and out of the business. As an analytical tool, the statement of cash flows is useful in determining the short-term viability of a company, particularly its ability to pay bills. International Accounting Standard 7 (IAS 7) is the International Accounting Standard that deals with cash flow statements. [2]

**D- Off-balance sheet (OBS)**

Off-balance sheet is a term for assets or liabilities that do not appear on a company's balance sheet. Although not recorded on the balance sheet, they are still assets and liabilities of the company. Off-balance sheet items are typically those not owned by or are a direct obligation of the company. For example, when loans are securitized and sold off as investments, the secured debt is often kept off the bank's books. An operating lease is one of the most common off-balance items.[3]

### 1.5.2. Nature of financial statements:

The financial statements are prepared based on recorded facts. The recorded facts are those, which can be expressed in monetary terms. The statements are prepared for a particular period, generally one year. The transactions are recorded in a chronological order, as and when the events happen.

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1- Ibid.

2- Kevin Patterson: Why God Wants You Wealthy and Government Wants You Poor: Giving yourself permission is the first step in achieving great wealth in your life, iUniverse, Indiana, USA, 2008, p 75.

3- Mohan Prakash: Banking Risk and Insurance Management, Vikas Publishing House, Noida, India, p 254.

The accounting records and financial statements prepared from these records are based on historical costs. The financial statements, by nature, are summaries of the items recorded in the business and these statements are prepared periodically, generally for the accounting period.

The American Institute of Certified Public Accountants states the nature of financial statements as "Financial Statements are prepared for the purpose of presenting a periodical review of report on progress by the management and deal with the status of investment in the business and the results achieved during the period under review. They reflect a combination of recorded facts, accounting principles and personal judgments."[1]

The American Accounting Association expresses in its statement, "Every corporate statement should be based on accounting principles which are sufficiently uniform, objective and well understood to justify opinions as to the condition and progress of business enterprise. Its basic assumption was that the purpose of periodic financial statements of a corporation is to furnish information that is necessary for the formation of dependable judgments."[2]

According to **John N. Myer**, "The financial statements are composed of data which are the result of combinations of:

- Recorded facts concerning the business transactions,
- Conventions adopted to facilitate the accounting technique,
- Postulates, or assumptions made to and
- Personal judgments used in the application of the conventions and postulates.[3]

The following points explain the nature of financial statements:

- **Recorded Facts**

1- Jelsy Joseph Kuppapally: Accounting for Managers, PHI, New Delhi, India, 2010, p 171.
2- Ibid.
3- Chandra Bose: Fundamentals of Financial Management, PHI, 2 edition, New Delhi, India 2011, p 256.

The term ‘recorded facts’ refers to the data taken out from the accounting records. The records are maintained on the basis of actual cost data. The original cost or historical cost is the basis of recording various transactions. The figures of various accounts such as cash in hand, cash in bank, bills receivables, sundry debtors, fixed assets etc. are taken as per the figures recorded in the accounting books. The assets purchased at different times and at different prices are put together and shown at cost prices. As recorded facts are not based on replacement costs, the financial statements do not show current financial condition of the concern.[1]

- **Accounting Conventions**

Certain accounting conventions are followed while preparing financial statements. The convention of valuing inventory at cost or market price, whichever is lower, is followed. The valuing of assets at cost less depreciation principle for balance sheet purposes is followed.

The convention of materiality is followed in dealing with small items like pencils, pens, postage stamps, etc. These items are treated as expenditure in the year in which they are purchased even though they are assets in nature. The stationery is valued at cost and not on the principle of cost or market price whichever is less. The use of accounting conventions makes financial statements comparable, simple and realistic.

- **Postulates**

The accountant makes certain assumptions while making accounting records. One of these assumptions is that the enterprise is treated as a going concern. The other alternative to this postulate is that the concern is to be liquidated, this, is untenable if management shows an intention to liquidate the concern. So the assets are shown on a going concern basis. Another important assumption is to presume that the value of money will remain the same in different periods.

1- Ibid, p 257.

Though there is a drastic change in purchasing power of money the assets purchased at different times will be shown at the amount paid for them. While preparing profit and loss account, the revenue is treated in the year in which the sale was undertaken even though the sale price may be received in a number of years. The assumption is known as realization postulate.[1]

- **Personal Judgments**

Even though certain standard accounting conventions are followed in preparing financial statements but still personal judgment of, the accountant plays an important part. For example, in applying the cost or market value whichever is less to inventory valuation the accountant will have to use his judgment in computing the cost in a particular case. There are a number of methods for valuing stock, viz.; last in first out, first in first out, average cost method, standard cost, base stock method, etc.

The accountant will use one of these methods for valuing materials. The selection of depreciation method, to use one of the several methods for estimating uncollectible debts, to determine the period for writing off intangible assets are some of the examples where judgment of the accountant will play an important role in choosing the most appropriate course of action.[2]

### 1.5.3. Features of financial statements: [3]

- The Financial Statements should be relevant for the purpose for which they are prepared. Unnecessary and confusing disclosures should be avoided and all those that are relevant and material should be reported to the public.
- They should convey full and accurate information about the performance, position, progress and prospects of an enterprise. It is also important that those who prepare

1- Ibid.
2- Ibid.
3- Sugan Chand and S.K. Mangal: Effectiveness of Inventory Control Function in Engineering Industries, *The Indian Journal of Commerce*, Department of Applied Economics & Commerce, Patna University, India, 2002, p 45.

and present the financial statements should not allow their personal prejudices to distort the facts.

- They should be easily comparable with previous statements or with those of similar concerns or industry. Comparability increases the utility of financial statements.
- They should be prepared in a classified form so that a better and meaningful analysis could be made.
- The financial statements should be prepared and presented at the right time. Undue delay in their preparation would reduce the significance and utility of these statements.
- The financial statements must have general acceptability and understanding. This can be achieved only by applying certain "generally accepted accounting principles" in their preparation.
- The financial statements should not be affected by inconsistencies arising out of personal judgment and procedural choices exercised by the accountant.
- Financial Statements should comply with the legal requirements if any, as regards form, contents, and disclosures and methods.[1]

### 1.5.4. Importance of financial statements:

The importance of financial statements lies in their utility to satisfy the varied interest of different categories of parties such as management, creditors, public, etc.[2]

- **Importance to Management:**

Increase in size and complexities of factors affecting the business operations necessitate a scientific and analytical approach in the management of modern business enterprises.

1- Ibid.
2- Sudhindra Bhat: Financial Management, Best Book Publisher Daryaganj Excel Books, New Delhi, India, 2008, p 30.

The management team requires up to date, accurate and systematic financial information for the purposes. Financial statements help the management to understand the position, progress and prospects of business vis-a-vis the industry.

By providing the management with the causes of business results, they enable them to formulate appropriate policies and courses of action for the future. The management communicates only through these financial statements, their performance to various parties and justify their activities and thereby their existence.

A comparative analysis of financial statements reveals the trend in the progress and position of enterprise and enables the management to make suitable changes in the policies to avert unfavorable situations.

- **Importance to the Shareholders:**

Management is separated from ownership in the case of companies. Shareholders cannot, directly, take part in the day-to-day activities of business. However, the results of these activities should be reported to shareholders at the annual general body meeting in the form of financial statements.

These statements enable the shareholders to know about the efficiency and effectiveness of the management and also the earning capacity and financial strength of the company.[1]

By analyzing the financial statements, the prospective shareholders could ascertain the profit earning capacity, present position and future prospects of the company and decide about making their investments in this company.

Published financial statements are the main source of information for the prospective investors.

- **Importance to Lenders/Creditors:**

The financial statements serve as a useful guide for the present and future suppliers and probable lenders of a company.

1- Ibid.

It is through a critical examination of the financial statements that these groups can come to know about the liquidity, profitability and long-term solvency position of a company. This would help them to decide about their future course of action.

- **Importance to Labor:**

Workers are entitled to bonus depending upon the size of profit as disclosed by audited profit and loss account. Thus, P & L a/c becomes greatly important to the workers. In wages negotiations also, the size of profits and profitability achieved are greatly relevant.

- **Importance to the Public:**

Business is a social entity. Various groups of society, though directly not connected with business, are interested in knowing the position, progress and prospects of a business enterprise.[1]

They are financial analysts, lawyers, trade associations, trade unions, financial press, research scholars and teachers, etc. It is only through these published financial statements these people can analyze, judge and comment upon business enterprise.

- **Importance to National Economy:**

The rise and growth of corporate sector, to a great extent, influence the economic progress of a country. Unscrupulous and fraudulent corporate managements shatter the confidence of the general public in joint stock companies, which is essential for economic progress and retard the economic growth of the country.

Financial Statements come to the rescue of general public by providing information by which they can examine and assess the real worth of the company and avoid being cheated by unscrupulous persons.

The law endeavors to raise the level of business morality by compelling the companies to prepare financial statements in a clear and systematic form and disclose material information.

1- Ibid.

### 1.5.5. Objectives of financial statements:

Financial statements are the sources of information based on which conclusions are drawn about the profitability and financial position of a concern. They are the major means employed by firms to present their financial situation of owners, creditors and the public. The primary objective of financial statements is to assist in decision-making.[1]

The Accounting Principles Board of America (APB) states the following objectives of financial statements:

- To provide reliable financial information about economic resources and obligations of a business firm.
- To provide other needed information about changes in such economic resources and obligations.
- To provide reliable information about changes in net resources (resources less obligations) arising out of business activities.
- To provide financial information that assists in estimating the earning potentials of business.

## 1.6. Financial statements analysis:

### 1.6.1. Concept of financial statements analysis:

The term 'financial analysis', also known as analysis and interpretation of financial statements', refers to the process of determining financial strengths and weaknesses of the firm by establishing strategic relationship between the items of the balance sheet, profit and loss account and other operative data.[2] "Analyzing financial statements," according to **Metcalf and Titard**, "is a process of evaluating the

1- Jelsy Joseph Kuppapally: Op-Cit, p 172
2- Rajni Sofat and Preeti Hiro: Strategic financial management, PHI Learning, 2 edition, New Delhi, India, 2015, p 174.

relationship between component parts of a financial statement to obtain a better understanding of a firm's position and performance."[1]

In the words of **Myers**, "Financial statement analysis is largely a study of relationship among the various financial factors in a business as disclosed by a single set-of statements and a study of the trend of these factors as shown in a series of statements."[2]

The purpose of financial analysis is to diagnose the information contained in financial statements so as to judge the profitability and financial soundness of the firm. Just like a doctor examines his patient by recording his body temperature, blood pressure, etc. before making his conclusion regarding the illness and before giving his treatment, a financial analyst analysis the financial statements with various tools of analysis before commenting upon the financial health or weaknesses of an enterprise. The analysis and interpretation of financial statements is essential to bring out the mystery behind the figures in financial statements. Financial statements analysis is an attempt to determine the significance and meaning of the financial statement data so that forecast may be made of the future earnings, ability to pay interest and debt maturities (both current and long-term) and profitability of a sound dividend policy.

### 1.6.2. Types of financial statements analysis:

A distinction may be drawn between various types of financial analysis either on the basis of material used for the same or according to the modus operandi or according to the objective of the analysis.

**1- According to the nature of the analysis**

- **External Analysis:**

It is made by those who do not have access to the detailed records of the company. This group, which has to depend almost entirely on published financial statements,

1- Mahhesh Kulkarni and Suhas Mahajan: Management Accounting, part 1: semester 1, new syllabus, New Delhi, India, 2008, p 2.
2- Banerjee B.K, Accountancy: For Class XII, PHI, New Delhi, India, 2010, p 591.

includes investors, credit agencies and governmental agencies regulating a business in nominal way. The position of the external analyst has been improved in recent times owing to the governmental regulations requiring business undertaking to make available detailed information to the public through audited accounts.[1]

- **Internal Analysis:**

The internal analysis is accomplished by those who have access to the books of accounts and all other information related to business. While conducting this analysis, the analyst is a part of the enterprise he is analyzing. Analysis for managerial purposes is an internal type of analysis and is conducted by executives and employees of the enterprise as well as governmental and court agencies, which may have regulatory and other jurisdiction over the business. [2]

**2- According to modus operandi of analysis**

- **Horizontal Analysis:**

When financial statements for a number of years are reviewed and analyzed, the analysis is called 'horizontal analyses. As it is based on data from year to year rather than on one date or period of time as a whole, this is also known as 'dynamic analysis. This is very useful for long-term trend analysis and planning.

- **Vertical Analysis:**

It is frequently used for referring to ratios developed for one date or for one accounting period. Vertical analysis is also called 'Static Analysis'. This is not very conducive to proper analysis of the firm's financial position and its interpretation, as it does not enable to study data in perspective. This can only be provided by a study conducted over a number of years so that comparisons can be effected. Therefore, vertical analysis is not very useful.[3]

**3- According to the objective of analysis**

1- Sudhindra Bhat: Op.cit, p 35.
2- Ibid.
3- Ibid.

- **Long-term Analysis:**

This analysis is made in order to study the long-term financial stability, solvency and liquidity as well as profitability and earning capacity of a business. The objective of making such an analysts is to know whether in the long-term the concern will be able to earn a minimum amount, which will be sufficient to maintain a reasonable rate of return on the investment so as to provide the funds required for modernization, growth and development of the business.

- **Short-term Analysis:**

This analysis is made to determine the short-term solvency, stability, liquidity and earning capacity of the business. The objective is to know whether in the short-run a business enterprise will have adequate funds readily available to meet its short-term requirements and sufficient borrowing capacity to meet contingencies in the near future.[1]

### 1.6.3. Objective of financial statements analysis:

The main objective of financial statement analysis is to provide information about the financial position, performance and changes in financial position of a company that is useful to a wide range of users in making economic decisions. By examining the past and current financial data, investors can evaluate a company's performance and financial position as well as assessing risks. Financial statement analysis yields valuable information about trends and relationships, the quality of a company's earnings, and the strengths and weaknesses of its financial position.[2]

Financial statements also show the results of the stewardship of management, or the accountability of management for the resources entrusted to them by the shareholders. As Investors, you must always use financial statements to assess the risk, return of your investments, and take investment decisions based on sound analysis.

1- Ibid.

2- Securities and Exchange Commission of Zimbabwe: Capital markets highlights, Economic Journal, Harare, Zimbabwe, 2016, p 1.

### 1.6.4. Limitations of financial statement analysis:

The analysts must take the following limitations of financial statement into consideration:[1]

- **Less accurate:**

Exact precision of the financial statement figures is not possible, because they deal with matters that cannot be stated precisely. The data are prepared according to accounting conversions developed by the accounting profession through many year of experiences.

- **Some significant items omitted:**

The statements do not show the exact position of the business, because it done not take into account some of the factors, which affects it performance and financial position. In other words, it shows the position of financial accounting of the business only. It does not disclose such matter, which are not recorded in accounting.

- **Assets not showing as true value:**

A balance sheet does not show the value of assets, as understood in the ordinary sense. It presents the cost of assets less depreciation according to the accounting convention. In other words, the balance sheet does not show the market value or present replacement value of assets or that it does not show what a business is worth. Particularly during inflationary trended, the worth of assets is grossly underestimated, as the prices of assets would have increased manifold due to rising priced. Besides, the depreciation provided based on old value would be very low, resulting in inflated profit and inadequate provision for replacing the assets.

- **Profit figure relative:**

1- Madhunima Lall and Shikh Sahai: Entrepreneurship, Best Book Publisher Daryaganj Excel Books, Second Edition, New Delhi, India, 2008, p 303.

The profit shown by profit and loss account is relative and not absolute. It means that the profit figures of two concern may be different only because they may adopt different basis for compiling the income statement, though they may use the same accounting convention.

- **Effect of personal judgment:**

However, financial statements are prepared based on generally accepted accounting principles convections, personal judgment plays a significant role.

- **Does not satisfy all parties:**

The financial statement which are published are generally prepared to satisfy the requirements of company law and are to a large extent present from the view point of shareholders and management. Other parties are however, convened with the company for creditors, workers, customers etc. whose requirement, they fail to satisfy.

- **Fails to show all liabilities:**

Taking shelter under the accounting conventions and provision of company law, the balance sheet does not disclose all the liabilities of business. The most of companies do not included eh liabilities account of gratuity payable to their employee and therefore, the balance sheet fails to show the true finical position of the company.[1]

- **Balance sheet date:**

The financial statements are prepared on a certain date for which there is neither any legal provision nor any accounting convention. Hence, most of the concerns select the balance sheet date in such a way that it will show a rosy picture of financial position.[2]

## 1.7. Financial performance of banks:

Banks play very important roles in the economic development of nations as they, to a large extent, wield control over the supply of money in circulation and are the main stimuli of economic progress.

1- Ibid.
2- Ibid.

Economic development is a dynamic and continuous process which is highly dependent upon the mobilization of resources, investment, and the operational efficiency of the various segments of the economy.

Therefore, a strong banking sector is vital for growth, creating jobs, generating wealth, eradicating poverty, entrepreneurial activity and increasing Gross Domestic Product (GDP) growth.

### 1.7.1. Bank performance:

Performance generally in the banking specifically highlight on the one hand the financial institution's ability to generate profit, and on the other hand shows the consequences of financial decisions taken by the bank's management. [1]

In simple words performance means how well a bank is doing and is generally conceptualized as the extent to which the bank is able to utilize its resources to generate business transaction.

According to **Chakrabarti and Chawla** "Profitability is an important measure of firm's performance but it should not be considered as single measure and should also be supported by other measures like efficiency"[2]

**Jha** and **Hui** stated that performance evaluation of banks is associated with how effectively banks use its assets, shareholders equities and liabilities, revenues and expenses.[3]

### 1.7.2. Importance of measuring bank performance:

As the banking sector is considered a vital segment of a modern economy, its efficiency is of vital importance. In order to ensure a healthy financial system and an efficient economy, banks must be carefully evaluated and analyzed.

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1- Loan Batrancea and others: Methods of performance analysis in Banks, PhD thesis, Faculty of Economics and Business Administration, Babes-Bolyai University, Cluj, Romania, p 601.

2- Stephen Martin and David Parker: The Impact of Privatization: Ownership and Corporate Performance in the UK, Routledge, 1 edition, Abingdon, UK, 1997, p 41.

3- Timothy W. Koch and S. Scott MacDonald: Bank Management, south western, 7edition, USA, 2010, p 96.

While banks help business organizations by rendering a wide range of products and services, the products and services are more or less identical from one bank to another, and there is little scope for differentiating between them. Therefore, it is necessary to measure the banks' individual performance to determine their contribution to business development. [1]

It is inevitable that banks continue to attract significant attention from the public and scrutiny by financial regulators as there is a growing need to evaluate banks in a more efficient manner. Not only supervising institutions, regulators and bank management bodies, but also clients of banks, are becoming increasingly concerned about the stability and sustainability of these financial institutions.

There are other reasons to evaluate the performance of banks:

- to determine their operational results and their overall financial condition
- measure their assets quality
- management quality and efficiency, and achievement of their objective
- ascertain their earning quality, liquidity, capital adequacy, and level of bank services.

### 1.7.3. Determinants of bank performance: [2]

Determinants of bank performance can be split between those that are internal and those that are external. Internal determinants are also sometimes called microeconomic determinants or inherent performance, while external determinants are variables that reflect economic and legal environment in which the bank operates.

**A- The internal determinants**

- **Size:**

1- Dhanuskodi Rengasamy: The need to evaluate bank performance, https://www.theborneopost.com/2012/11/06/the-need-to-evaluate-bank-performance/, Accessed March 3, 2020.

2- Nassreddine Garoui et al.: Determinants of Bank performance: viewing test by cognitive mapping technique, *International Journal of Contemporary Economics and Administrative Sciences*, Volume 3, Issue 1, 2013, pp 23-24.

As with many variables, the impact of size on bank performance is hotly debated among researchers. It is possible to divide them into three groups: those who believe that size has a positive impact on performance, those who find a negative impact, and those for whom the impact is not significant.

- **Capitalization:**

Capitalization is usually measured by the ratio of equity to assets ratio (CAR capital to asset ratio). Rapid approach to the question might suggest a higher CAR ratio reduces the ROE due to two mechanisms: A high ratio indicates a lower risk, and the theory of markets to balance advocating a strong relationship at risk and profitability would lead us to infer a lower profitability, An increase in this ratio may indicate that the share of the debt decreases and thus implies a lower earnings from the tax exemption of the debt burden.

- **Liquidity:**

Very often, liquidity is measured by the ratio of loans to assets. The higher the ratio, the lower the bank has liquidity. In fact, the loan agreements have various maturities, and thus, in case of urgent need of capital, the bank can not rely on these loans, since they will only be reimbursed later.

- **Credit quality:**

Credit quality, fairly close to the concept of credit risk, is usually measured by two ratios: the ratio of provisions for credit losses to total loans and the ratio of provisions for doubtful debts on total loans. (To be completely accurate, note that these ratios actually measure the quality of non-credit).

- **Efficiency:**

The efficiency is usually measured by the ratio of costs or result by the ratio of overheads to total assets. [1]

- **Control:**

1- Ibid.

Most authors show that public banks / nationalized are less efficient than private banks. In is true for Iannota et al. (2007), Barth et al. (2004) and Million Cornett (2010). These authors show that the nationalized banks:

- Grant riskier loans, which means a higher credit risk and poor asset quality,
- Know solvency ratios worse than private banks,
- Have a ratio of "core capital" pus low.

- **Degree of diversification:**

The degree of diversification is usually measured by the ratio of non-interest income related to loans on operating income. [1]

- **Amount of bank deposits:**

It is not easy to estimate a priori the impact of the level of bank deposits on bank performance. Indeed, two arguments can be opposed on the one hand, a high level of deposits can increase performance, because they are more stable funding and less expensive than borrowed funds, but on the other hand, such deposits require large teams and specialist departments to manage, causing many expenses

- **The market share:**

The impact of market share has mainly been studied by H. Liu et al. (2010). These authors show that, at least in Japan, a negative relationship between market share and performance (measured by NIM), and regardless of the type of bank. Only the performance of banks and type City Trust are indifferent to this variable

**B- The external determinants[2]**

- **The inflation:**

The first author to address the issue of inflation was Revel (1979). He showed that the impact on performance is dependent on the rate of growth in operating expenses: if these expenses are rising faster than inflation, there is a negative impact on performance. If, however, the growth rate is lower, there is a positive impact.

1- Ibid.
2- Ibid.

- **GDP growth:**

It is easy to assume that the growth in economic activity, measured by GDP, has a positive impact on the performance of banks: a period of high growth leads to higher investment and consumption, which increased the credit, and hence increase the performance of banks.

- **The tax:**

Few authors have attempted to measure the impact of taxation on the performance of banks, and it is certainly something that could be the subject of further research. The result which is expected, namely a negative impact, is what are Demirgüç-Kunt and Huizinga (1999). We can easily understand why: the tax is deducted from the result; it automatically assigns the ROA and ROE.

- **Market concentration:**

Without going into details, note that both theories face in terms of impact of the concentration on the performance of banks. The first, called "Structure conduit performance" (SCP) states that an increase in market share and market concentration leads to monopoly powers. The second, "Efficient-structure" (ES) refutes this idea.

- **The stock market:**

That Naceur et al. (2010) analyzed is not so much the relation "immediate" between the market price of the banks and their performance measured by ROE, ROA and NIM. They further considered the level of stock market development. They find that banks that operate in areas where the stock market is well developed experiencing higher profits that banks operating in areas where the award is undeveloped.

- **The choice of a country:** [1]

Numerous studies have confirmed the existence of highly heterogeneous performance between banks in different countries. Studies by La Porta (1997), Stulz and Williamson (2003) and Beck et al. (2003) and provide evidence suggesting that

1- Ibid.

legal systems, accounting rules, cultures and religions explain differences in cross-border economic growth and business development. In their analysis of European banks over the period 1993-2001, Barros et al. (2007) lead to the same conclusions. They also bring a new element if performance differences between such and such a country such period, do not necessarily mean that the choice of a country brings in itself an advantage in terms of performance over its competitors.[1]

### 1.7.4. Approaches to measure bank performance:

#### 1.7.4.1. (ROA) AND (ROE)

**A- Return on Asset (ROA)**

Return on Assets (ROA) is one of profitability ratios. In the analysis of financial statements, this ratio is most often highlighted, because it is able to indicate company success to create profits. ROA is able to measure the company ability to generate profits in the past to then be projected in the future. Assets in question are overall company properties, obtained from the capital itself or from foreign capital that has been converted into company assets used for corporate sustainability. [2]

- **Calculation of Return on Assets:**

According to Brigham and Houston, return on asset (ROA) is calculated by comparing available net profit for common shareholders to total assets.[3]

**ROA = Available net profit for common shareholders / Total assets**

Higher ROA value indicates better company performance, because of higher return on investment rate. This value reflects the company's return on all assets (or funding) provided to the company[4] **.**

Any factors affecting on Return on Assets are (a). Liquidity Ratio is a ratio to measure a company's ability to meet its short-term liabilities, calculated by comparing

1- Ibid.
2-- IMA, Wiley: CMA Learning System Exam Review 2013 (Test Bank), Wiley, New Jersey, USA, 2012, p 56.
3- Ibid.
4- Gary Porter and Curtis Norton: Using Financial Accounting Information: The Alternative to Debits & Credits, South-Western College, 6 edition, California, USA, 2009, p 21.

its current assets with current liabilities (b). Asset Management Ratio is "The asset management ratio; measures how effectively the company manages its assets"[1]. (c). Debt Management Ratio is asset management ratio to know the extent of company's ability to meet its long-term obligations (debt) used to finance all company activities.

**B- Return on Equity (ROE)**

Return on equity (ROE) is the profitability ratio to measure the company ability to generate profit based on share capital owned by the company.[2]

Return on equity can be calculated as follow:

**ROE= Net Income after Tax / Total Equity**

### 1.7.4.2. (EVA) and (MVA)

**1- Economic Value Added (EVA)**

In the era of 21st century, economic value added plays a significant role for assessing the financial position of the business entity in an effective manner. This term first time used by Stern Stewart & Co. to examine that the surplus value is created through this or not. Before this, traditional methods were used. This method taken into account return on investment and return on assets. The positive EVA sends the sign wealth creation for the shareholders[3]

**EVA = NOPAT – (WACC x Capital Employed)**

- **Weighted Average Cost of Capital (WACC):**

It indicates the average costs of capital of different sources of finances are used in the business entity.

$$\mathbf{WACC} = \sum \mathbf{XW} / \sum \mathbf{W}$$

Where:

1- Gil Fried and Ceyda Mumc: Sport Analytics: A data-driven approach to sport business and management, Routledge, 1 edition, Abingdon, UK, 2016, p 135.

2- Rosikah et al.: Effects of Return on Asset Return on Equity Earning per Share on Corporate Value, *The International Journal of Engineering and Science (IJES)*, Volume 7, Issue 3, 2018, p 08.

3- Izhar Ahmad et al.: A Study of Economic Value Added (EVA) and Market Value Added (MVA) of Hindustan Petroleum Corporation Limited, *Global Journal of Economics and Business*, Vol. 6, No 1, 2019, p 226.

X = Cost of specific source

W = Proportion of specific source

- **Net Operating Profit after Tax:**

It designates the difference between EBIT and adjusted tax. The adjusted tax means cash taxes paid with tax advantage on interest. In other words, NOPAT worked as an instrument, which is, measured that part of the profit that excludes the costs and tax benefits of debt financing.

**Adjusted Tax = Cash Taxes Paid + Tax Advantage on Interest**

- **Capital Employed:**

The capital employed is the combination of fixed as well as current assets, which are used in the enterprise.

**2- Market Value Added (MVA)**

It is a calculation that shows the difference between the market value of a company and capital contributed by the investors. And it indicates the sum of all capital claims held against the company plus the market value of debt and equity.[1]

$$\mathbf{MVA} = \frac{EVA1}{(1+C)1} + \frac{EVA2}{(1+C)2} + \frac{EVA3}{(1+C)3} \ \dots \ \frac{EVAn}{(1+C)n}$$

### 1.7.4.3. Altman Z-score

The Z-score formula may be used to predict the probability that a firm will go into bankruptcy within two years. Z-scores are used to predict corporate defaults and an easy-to-calculate control measure for the financial distress status of companies in academic studies.

The original Z-score formula was as follows:

$$\mathbf{Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5.}$$

$X_1$ = working capital / total assets. Measures liquid assets in relation to the size of the company.

1- Hari V. Krishna and V. S. P. Rao: Management Text and Cases, Best Book Publisher Daryaganj Excel Books, New Delhi, India, 2005, p 648.

$X_2$ = retained earnings / total assets. Measures profitability that reflects the company's age and earning power.

$X_3$ = earnings before interest and taxes / total assets. Measures operating efficiency apart from tax and leveraging factors. It recognizes operating earnings as being important to long-term viability.

$X_4$ = market value of equity / book value of total liabilities. Adds market dimension that can show up security price fluctuation as a possible red flag.

$X_5$ = sales / total assets. Standard measure for total asset turnover (varies greatly from industry to industry).

Usually, the lower the Z-score, the higher the odds that a company is heading for bankruptcy. A Z-score that is lower than 1.8 means that the company is in financial distress and with a high probability of going bankrupt. On the other hand, a score of 3 and above means that the company is in a safe zone and is unlikely to file for bankruptcy. A score of between 1.8 and 3 means that the company is in a grey area and with a moderate chance of filing for bankruptcy.[1]

#### 1.7.4.4. CAMELS model:

The CAMEL rating is a supervisory rating system originally developed in the U.S. to classify a bank's overall condition. It's applied to every bank and credit union in the U.S. (Approximately 8,000 institutions) and is also implemented outside the U.S. by various banking supervisory regulators.

The ratings are assigned based on a ratio analysis of the financial statements, combined with on-site examinations made by a designated supervisory regulator. In the U.S. these supervisory regulators include the Federal Reserve, the Office of the Comptroller of the Currency, the National Credit Union Administration, and the Federal Deposit Insurance Corporation.

1- J.P. Obienugh: Jonbull's Stock Guide: How to Invest Profitably in a Volatile Stock Market, Trafford Publishing, Victoria, Canada, 2010, p 269.

Ratings are not released to the public but only to the top management to prevent a possible bank run on an institution, which receives a CAMELS rating downgrade. Institutions with deteriorating situations and declining CAMELS ratings are subject to ever increasing supervisory scrutiny. Failed institutions are eventually resolved via a formal resolution process designed to protect retail depositors.

#### 1.7.4.4.1. CAMELS components:

**A- Capital adequacy:**

Capital base of financial institutions facilitates depositors in forming their risk perception about the institutions. In addition, it is the key parameter for financial managers to maintain adequate levels of capitalization. Moreover, besides absorbing unanticipated shocks, it signals that the institution will continue to honor its obligations. The most widely used indicator of capital adequacy is capital to risk-weighted assets ratio (CRWA). According to Bank Supervision Regulation Committee (The Basle Committee) of Bank for International Settlements, a minimum 9 per cent CRWA is required.[1]

Capital adequacy ultimately determines how well financial institutions can cope with shocks to their balance sheets. Thus, it is useful to track capital-adequacy ratios that take into account the most important financial risks—foreign exchange, credit, and interest rate risks—by assigning risk weightings to the institution's assets. A sound capital base strengthens confidence of depositors. This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world.[2]

**B- Asset quality:**

Asset quality determines the healthiness of financial institutions against loss of value in the assets. The weakening value of assets, being prime source of banking problems,

1- Raghuram: CAMEL Analysis of top 5 public sector banks, master thesis, Aditya global business school, Kakinada, India, 2018, p 03.
2-International Monetary Fund: External Relations Dept Finance & Development Economies in Transition, International Monetary Fund, 2000, p 40.

directly pour into other areas, as losses are eventually written-off against capital, which ultimately expose the earning capacity of the institution. With this backdrop, the asset quality is gauged in relation to the level and severity of non-performing assets, adequacy of provisions, recoveries, distribution of assets etc. Popular indicators include nonperforming loans to advances, loan default to total advances, and recoveries to loan default ratios. The solvency of financial institutions typically is at risk when their assets become impaired, so it is important to monitor indicators of the quality of their assets in terms of overexposure to specific risks, trends in nonperforming loans, and the health and profitability of bank borrowers— especially the corporate sector[1].

**C- Management:**

Management of financial institution is generally evaluated in terms of capital adequacy, asset quality, earnings and profitability, liquidity and risk sensitivity ratings. In addition, performance evaluation includes compliance with set norms, ability to plan and react to changing circumstances, technical competence, leadership and administrative ability.

Sound management is one of the most important factors behind financial institutions' performance. Indicators of quality of management, however, are primarily applicable to individual institutions, and cannot be easily aggregated across the sector[2]. Furthermore, given the qualitative nature of management, it is difficult to judge its soundness just by looking at financial accounts of the banks. Nevertheless, total advance to total deposit, business per employee and profit per employee helps in gauging the management quality of the banking institutions. Several indicators, however, can jointly serve—as, for instance, efficiency measures do—as an indicator of management soundness

**D- Earnings & Profitability:**

1- Ibid.

2- International Monetary Fund and the World Bank, Finance & Development: International Monetary Fund and the World Bank, 2000, p 53.

Earnings and profitability, the prime source of increase in capital base, is examined with regards to interest rate policies and adequacy of provisioning. In addition, it also helps to support present and future operations of the institutions. The single best indicator used to gauge earning is the Return on Assets (ROA), which is net income after taxes to total asset ratio.[1]

Strong earnings and profitability profile of banks reflects the ability to support present and future operations. More specifically, this determines the capacity to absorb losses, finance its expansion, pay dividends to its shareholders, and build up an adequate level of capital. [2]

Being front line of defense against erosion of capital base from losses, the need for high earnings and profitability can hardly be overemphasized. Although different indicators are used to serve the purpose, the best and most widely used indicator is Return on Assets (ROA).

**E- Liquidity:**

The term liquidity is used in various ways, all relating to availability of, access to, or convertibility into cash. An institution is said to have liquidity if it can easily meet its needs for cash either because it has cash on hand or can otherwise raise or borrow cash. A market is said to be liquid if the instruments it trades can easily be bought or sold in quantity with little impact on market prices[3]. An asset is said to be liquid if the market for that asset is liquid.

The liquidity of an institution depends on:

- The institution's short-term need for cash;
- Cash on hand;
- Available lines of credit;

1- Rohit Bansal and Anoop Mohanty: A Study on Financial Performance of Commercial Banks in India: Application of Camel Model, *Al-Barkaat Journal of Finance and management*, Volume 5, Number 2, 2013, p 62.

2- Ibid.

3- Siddhartha Sarkar: Finance and Policy Analysis, *International Journal of Finance and Policy Analysis*, Volume 3, Number 1, Universal-Publishers, California, USA, 2011, p 05.

- The liquidity of the institution's assets;
- The institution's reputation in the marketplace how willing will counterparty

**F- Sensitivity to market risk:**

It refers to the risk that changes in market conditions could adversely impact earnings and/or capital. Market Risk encompasses exposures associated with changes in interest rates, foreign exchange rates, commodity prices, equity prices, etc. While all of these items are important, the primary risk in most banks is interest rate risk (IRR), which will be the focus of this module. The diversified nature of bank operations makes them vulnerable to various kinds of financial risks. Sensitivity analysis reflects institution’s exposure to interest rate risk, foreign exchange volatility and equity price risks (these risks are summed in market risk). [1]

1- Timothy W. Koch and S. Scott MacDonald: Bank Management, Cengage Learning, Madrid, Spain, 2014, p 34.

## 1.8. Conclusion:

Performance is refer to presentation with quality and result achieved by the management of company and Financial Efficiency is a measure of the organization's ability to translate its financial resources into mission related activities. Therefore, the financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and profit and loss account. Company also calculated different types of profit and last Measurement of profitability is the overall measure of performance profits known, as bottom lines are also important for financial institutions. Analyzing and interpreting various types of profitability ratios can obtain creditor performance of portability.

A timely, consistent, and responsible investor relations program that informs the financial analyst in an unbiased manner. An ability to articulate and communicate the business philosophy and principal strategies of management, and how management is organized to carry them out. Many analytical tools and techniques of financial statement analysis are available. In determining which ones to use, consider its relevance, controllability, consistency, comparability, and simplicity.

*Field study*

## 2.1. Introduction

In order to gain insight and familiarity with the aspects of the study, as well as trying to answer the problem related to the possibility of using the outputs of the financial statements analysis in measuring the performance of banks by studying the case of a sample of banks in Algeria during the period (2012-2017). Where we choose four banks, the External Bank of Algeria, the National Bank of Algeria, AL- Baraka Bank of Algeria, AL-Salam Bank of Algeria, after searching for the banks that provide their financial statements on their websites.

The study basically divided this chapter to four Points first the introduction of the banks second evaluating the bank's financial statements elements third measuring Banks performance through CAMELS model and finally displaying the results of the banks ’performance.

## 2.2. Introducing the banks subject of the study

### 2.2.1. Introducing the national bank of Algeria (NBA) [1]

Algeria did not have a national banking system after independence, but at the end of 1962, it established the first bank, the Algerian central bank, on December 13, 1962, and then the establishment of the National Bank of Algeria in the framework of the state's reliance on nationalization of the banking sector.

The National Bank of Algeria was the first commercial bank in Algeria its social headquarters is located in **"Sheki Varra"** Street in the capital, with an estimated capital of 41.6 billion dinars.

The bank currently includes 277 agencies distributed among 17 regional directorates for exploitation and more than 31 major agencies, and given the financial and human capabilities enjoyed by the Algerian National Bank, as well as its availability on the minimum conditions that allowed him to be the first bank to receive credit from Party of the World Bank, this is on September 5, 1995.

By reviewing and analyzing the historical ownership of the National Bank of Algeria, we note that by 1990 the private contributions in the bank's capital were set, that is, all of these contributions were purchased by the state so that the bank becomes the state's property. the bank is run by a president, general manager and board of directors From various ministries, it works as a bank for long and short term deposits and financing the various needs of exploitation and investment for all economic agents and for all economic sectors such as industry, trade, agriculture ... etc. It was also used as a tool to achieve the government's policy in financial planning by setting loans in the short term and contributing with other financial bodies to develop long and medium-term loans.

### 2.2.2. Introducing the external bank of Algeria (EBA) [2]

1- The National Bank of Algeria website, https://www.bna.dz/, accessed on March 13 2020.
2- The External Bank of Algeria website, https://www.bea.dz/, accessed on March 13 2020.

The External Bank of Algeria was established on October 1st 1967 According to the decree number 67/ 204 With a capital of 24 million dinar, the capital was raised in 1991 to 600 million-dinar (DZD) Then to 24.5 billion dinar in 2001. Its headquarters located in Algeria, and it can establish agencies and branches with the approval of The Minister of Finance, it also can establish agencies outside the country.

The external bank obtained its final structure on June 1st, 1968, and Its establishment represents the last stage of the banking nationalization procedures, Where it is run by a president, general manager, assistant general manager and three counselors, they are charged with managing and applying the bank's policy and representation for others.

Since 1970 the external bank of Algeria is trusted to carry out all banking transactions of major industrial institutions with foreign institutions, and after 21 years of experience thanks to the application of Law No. 01/88 on January 12, 1988 related to the independence of financial institutions, the external bank of algeria changed its form and on February 5, 1989 it became a stock company. While maintaining its primary objective by the law dated October 1, 1967. The external bank of Algeria has two branches abroad:

- The Arab World Bank in Paris
- Arab Bank for Investment and International Trade in Abu Dhabi

### 2.2.3. Introducing AL-Baraka bank of Algeria (BBA) [1]

First mixed capital establishment (public and private). The Bank Al Baraka of Algeria was created on May 20, 1991; with a capital of 500,000,000 DA, it began its banking activities during the month of September 1991.

Its shareholders are the Bank of Agriculture and Rural Development of Algeria (BADR) and the ABG Group. the Bank Al Baraka of Algeria is authorized to carry out all banking, financing and investment operations, in accordance with the principles of

1- AL-Baraka bank website, https://www. albarakabank.dz/, accessed on March 13 2020.

Islamic Shari'a. Active and proactive, since its creation Al Baraka Bank of Algeria (BBA) has never ceased to evolve and diversify its activities with the sole aim of satisfying the direct and latent needs of all its stakeholders.

The most important stages that the Algerian Bank Al Baraka has gone through:

- 1991: Creation of Al Baraka Bank of Algeria (BBA)
- 1994: Financial stability and equilibrium of the Bank.
- 2000: Ranked first among privately owned banking institutions.
- 2002: Redeployment of the Bank to new market segments, namely those of professionals and individuals.
- 2003: Creation of the subsidiary promotion "Dar al Baraka" with a share capital of 1,550,000,000 DA
- 2006: Increase of the bank's capital to 2,500,000,000 DA
- 2009: Second increase of the bank's capital has 10.000.000.000 DA
- 2015: Establishment of the Islamic Finance Research and Training Institute (IRFI).
- 2015: Creation of the subsidiary "SATEC IMMO" with a share capital of 15,000,000 DA

### 2.2.4. Introducing AL-Salam Bank of Algeria (SBA) [1]

A universal bank under Algerian law, Al- Salam Bank of Algeria (SBA) operates in accordance with the moral principles of the Algerian people. It offers compatible Shari'a products certified compliant by the bank's Shari'a council. Al- Salam Bank of Algeria (SBA) was approved by the Bank of Algeria in September 2008. It starts its activity with the main objective of offering its customers innovative banking products and services.

Al- Salam Bank of Algeria (SBA) works in accordance with a clear strategy aimed at supporting the economic growth of all the country's business sectors. It offers

1- AL-Salam bank website, https://www.alsalambank.dz/, accessed on March 13 2020.

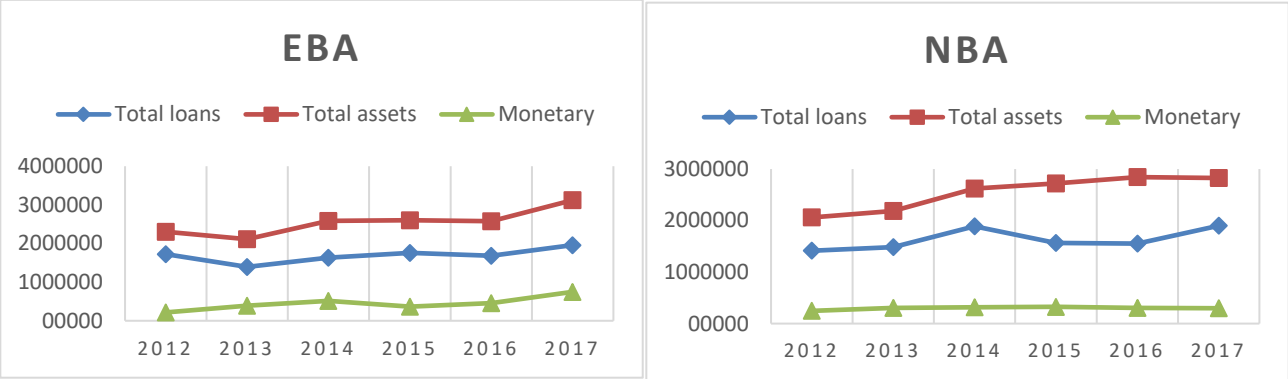
innovative banking services in order to meet the expectations of the market, customers and shareholders. As an alternative bank, Al- Salam Bank of Algeria (SBA) is characterized by its commitment to the principles of Sharia law in all its transactions. [1]

## 2.3. Evaluating banks's financial statements elements

### 2.3.1. Evaluating of public banks financial statements elements

#### A. Balance sheet (assets) evolution:

**Figure 01:** Evolution of EBA and NBA Balance sheet (assets) elements




**Source:** made by the student based on banks financial statements.

**EBA:**

As we can see from the figure number 01 the total assets has known a decrease in the period of (2012-2013) where the assets estimated in (2012) slightly more than 23 billion (DZD) to achieve 21.1 billion (DZD) in (2013).

In 2014 the assets increased to achieve 25.8 billion (DZD), in the period of (2014-2016) we can say that the assets where stable but in (2017) the assets increased to achieve 31.2 billion (DZD). Also, as we can see from the figure that the value of total loans has decreased in the period of (2012-2013) achieving 17.2 billion (DZD) in 2012 and 13.9 billion (DZD) in 2013. Total loans started to increase in the period (2013-2015) achieving 16.3 billon (DZD) in 2014 and 17.5 billion (DZD) in 2015 to decrease again in 2016 achieving 16.7 billion and increase in 2017 by a total of 19.5 billion (DZD).

1- AL-Salam bank website, https://www.alsalambank.dz/, accessed on March 13 2020.

As for monetary as we can see from the figure it started to increase in the period of (2012-2014) achieving 2.1 billion (DZD) in 2012 and 5.1 billion (DZD) in 2014 to start decreasing in 2014 achieving 3.6 billion (DZD) in 2015 and increase again in the period of (2015-2017) to achieve 7.4 billion (DZD) in 2017.

**NBA:**

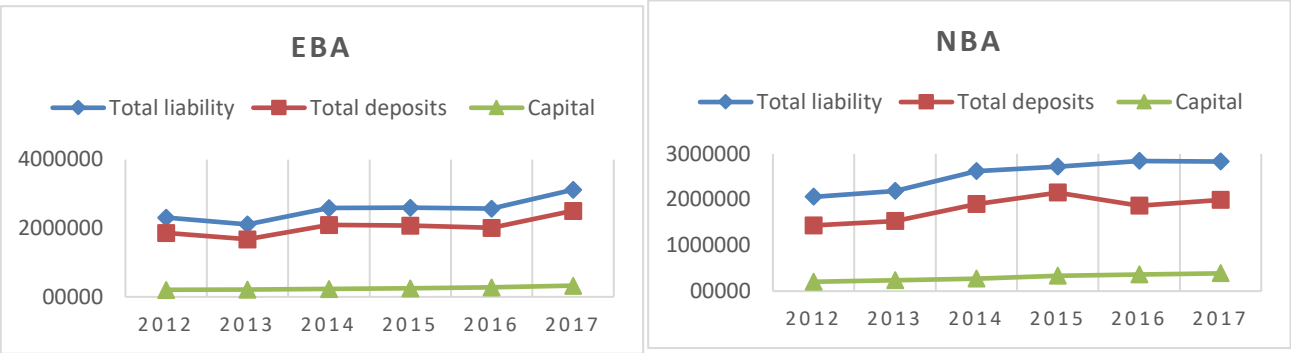
As we can see from the figure, the total assets has known an increase in the period of (2012-2013) where the assets estimated in (2012) 20.6 billion (DZD) and 21.8 billion (DZD) in (2013). It kept increasing all the period of (2014-2016) achieving 26.2 billion (DZD) in (2014), 27.1 billion (DZD) in (2015) and 28.4 billion (DZD) in (2016) to slightly decrease in (2017) achieving 28.2 billion (DZD). As for total loans it has increased in the period of (2012-2014) achieving 14.1 billion (DZD) in (2012), 14.8 billion (DZD) in (2013) and 18.8 billion (DZD) in (2014). As we can see from the figure the total loans has decreased in the period (2014-2016) achieving 15.6 billion (DZD) in (2015) and 15.5 billion (DZD) in (2016) to increase in (2017) by achieving 18.9 billion (DZD). As for monetary as we can see from the figure it started to increase in the period of (2012-2013) achieving 2.4 billion (DZD) in (2012) and 3 billion (DZD) in (2013). In the period of (2013-2016), we can say that monetary was stable with slightly changes achieving 3.1 billion (DZD) in (2014), 3.2 billion (DZD) in (2015) and 3 billion (DZD) in (2016). In (2017) monetary decreased achieving 2.9 billion (DZD).

**B. Balance sheet (liability) evolution**

**EBA:**

As we can see from the figure number 02 the total liability has known a decrease in the period of (2012-2013) where the liability estimated in (2012) slightly more than 23 billion (DZD) to achieve 21.1 billion (DZD) in (2013). In 2014 the liability increased to achieve a total of 25.8 billion (DZD), in the period of (2014-2016) we can say that the liability where stable but in (2017) the liability increased to achieve a total of 31.2 billion (DZD).

**Figure 02:** Evolution of EBA and NBA Balance sheet (liability) elements




**Source:** made by the student based on banks financial statements.

As for the deposits it decreased in the period of (2012-2013) achieving 18.6 billion (DZD) in 2012 and 16.8 billion (DZD) in 2013 to start increase in 2013 achieving 20.9 billion (DZD) in 2014 to stay almost stable in the period (2014-2016) and increase again achieving 25 billion (DZD) in 2017.

As for the capital as we can see from the figure, we can say that it kept increasing all the way in the period of (2012-2017) starting with a total of 2 billion (DZD) in 2012 and ending with a total of 3.2 billion (DZD) in 2017.

**NBA:**

As we can see from the figure the total liability has known an increase in the period of (2012-2014) where the liability estimated in (2012) 20.6 billion (DZD) and 21.8 billion (DZD) in (2013). The total liability kept on increasing all the way in the period of (2013-2016) achieving 26.2 billion (DZD) in (2014), 27.1 billion (DZD) in (2015) and 28.4 billion (DZD) in (2016).In (2017) the total liability has known a slightly decrease achieving 28.2 billion (DZD).

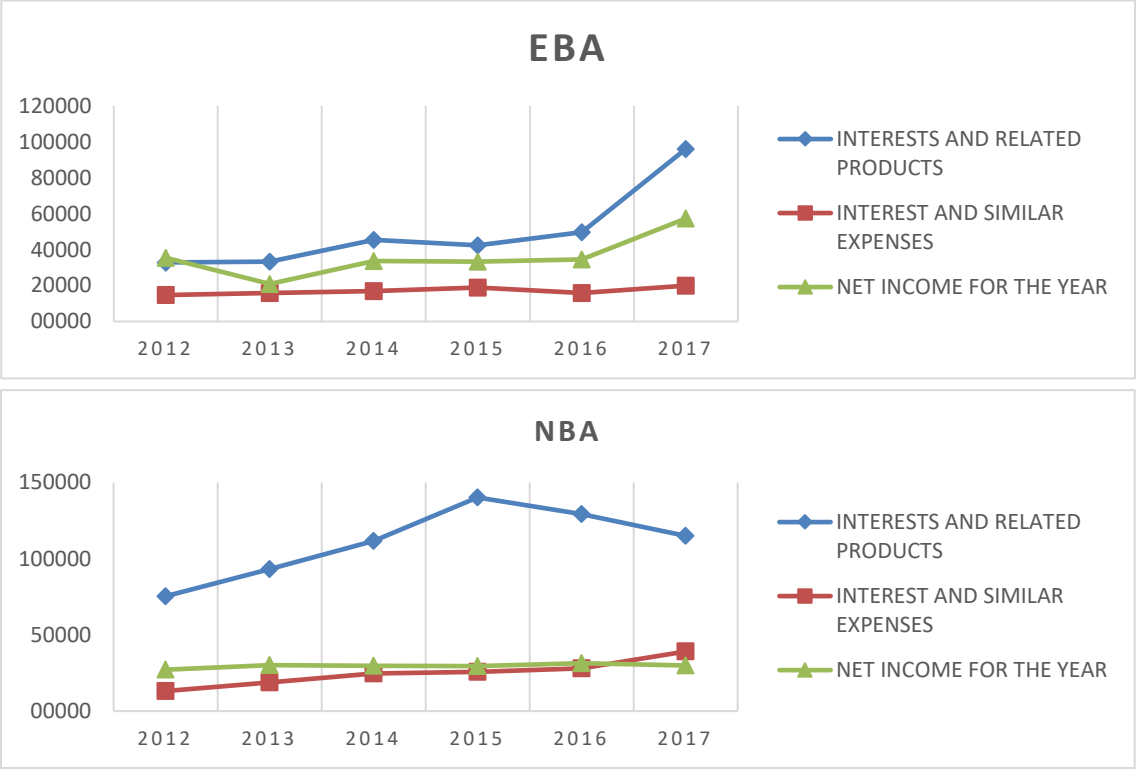
As for the total deposits it kept on increasing in the period of (2012-2015) achieving 14.3 billion (DZD) in (2012), 15.3 billion (DZD) in (2013), 19 billion (DZD) in (2014) and 21.5 billion (DZD) in (2015).

The total deposits has decreased in (2016) achieving 18.6 billion (DZD) and slightly increased in (2017) achieving 19.9 billion (DZD).

As for the capital as we can see from the figure, we can say that it kept increasing all the way in the period of (2012-2017) starting with a total of 2 billion (DZD) in 2012 and ending with a total of 3.8 billion (DZD) in 2017.

**C. Income statement elements evolution**

**Figure 03:** Evolution of EBA and NBA Income statement element




**Source:** made by the student based on (EBA) financial statements.

**EBA:**

As we can see from the figure that interests and related products was almost stable in the period of (2012-2013) achieving 32.8 billion (DZD) in (2012) and slightly increasing in (2013) Achieving 33.3 billion (DZD) and it kept increasing in (2014) achieving 45.5 billion (DZD) to decrease in (2015). In (2017), it increased again achieving 96 billion (DZD).

As for interests and similar expenses it kept on slightly increasing on the period (2012-2015) to decrease on 2016 achieving 15 billion (DZD) and then increase on 2017 achieving almost 20 billion (DZD).

As for net income it decreased on 2013 achieving almost 21 billion (DZD) to increase on 2014 by a number of 33.7 billion (DZD) and we can say that the net income was slightly stable on the period of (2014-2016) but it increased on 2017 achieving 57.3 billion (DZD).

**NBA:**

As we can see from the figure that interests and related products has kept on increasing on the period of (2012-2015) achieving 75.3 billion (DZD) in (2012), 93 billion (DZD) in (2013), 111 billion (DZD) in (2014) and 140 billion (DZD) in (2015).

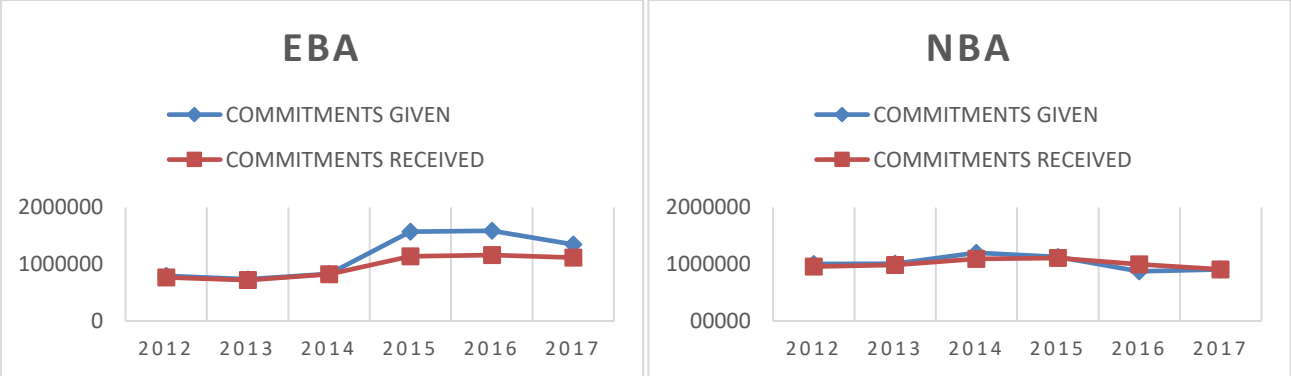
In the period of (2015-2017) interests and related products has decreased achieving 129 billion (DZD) in (2016) and 115 billion (DZD) in (2017).

As for interests and similar expenses it kept on slightly increasing on the period (2012-2017) achieving 13.1 billion (DZD) in (2012), 18.8 billion (DZD) in (2013), 24.5 billion (DZD) in (2014), 25.6 billion (DZD) in (2015), 27.9 billion (DZD) in (2016) and 39.1 billion (DZD) in (2017).

As for net income, it has known vicissitudes in the period of (2012-2017) achieving 27.1 billion (DZD) in (2012), 30.2 billion (DZD) in (2013), 29.7 billion (DZD) in (2014), 29.5 billion (DZD) in (2015), 31.4 billion (DZD) in (2016) and 29.9 billion (DZD) in (2017).

## D. Off-balance sheet elements evolution

**Figure 04:** Evolution of EBA and NBA Off-balance sheet elements




**Source:** made by the student based on banks financial statements.

As we can see from the figure, the commitment given has decreased in the period of (2012-2013) achieving 795 billion (DZD) in (2012) and 735 billion (DZD) in (2013) to increase in 2015 achieving 1573 billion (DZD) and we can say that it was stable all the way until 2016. However, in 2017 the commitment given has decreased achieving 1347 billion (DZD). As for commitment received it decreased in the period of (2012-2013) achieving 767 billion (DZD) in 2012 and 719 billion (DZD) in 2013, in 2014 commitment received increased achieving 823 billion (DZD) to keep increasing all the way to 2016 and decrease in 2017 achieving 1115 billion (DZD).

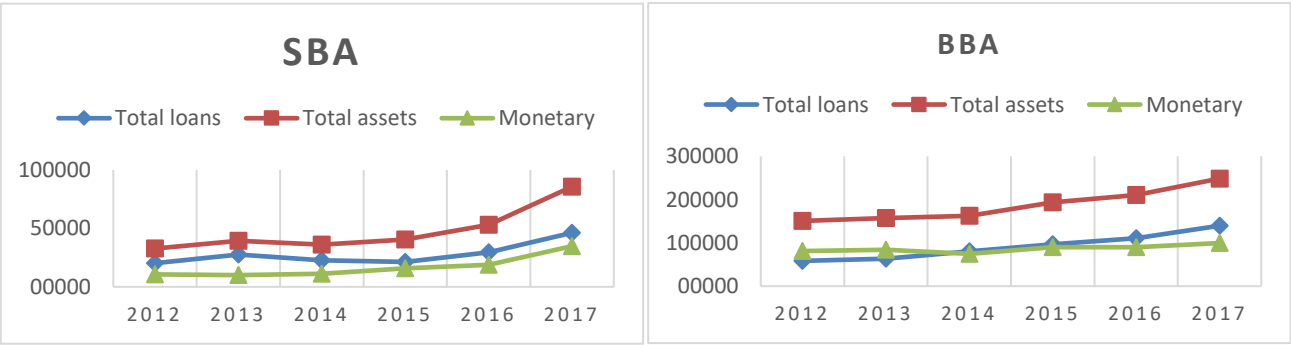
**NBA:**

As we can see from the figure, the commitment given has slightly increased in the period of (2012-2013) achieving 10.03 billion (DZD) in (2012), 10.07 billion (DZD) in (2013) and it kept increasing on (2014) achieving 12.01 billion (DZD). However, it started decreasing in (2015) where it achieved 11.2 billion (DZD) and 8.7 billion (DZD) in (2016) to slightly increase in (2017) achieving 9 billion (DZD). As for commitment received it increased in the period of (2012-2015) achieving 9.6 billion (DZD) in (2012), 9.8 billion (DZD) in (2013), 10.9 billion (DZD) in (2014) and 11 billion (DZD) in (2015) to start decreasing from that year achieving 9.9 billion (DZD) in (2016) and 9 billion (DZD) in (2017).

### 2.3.2. Evaluating of privet banks financial statements elements

#### A. Balance sheet (assets) evolution

**Figure 5:** Evolution of SBA and BBA Balance sheet (assets) elements




**Source:** made by the student based on Banks financial statements.

**SBA:**

As we can see from the figure number 9 the total assets has known an increase in the period of (2012-2013) where the assets estimated in (2012) 32.7 billion (DZD) and 39.5 billion (DZD) in (2013). In (2014) the total assets decreased achieving 36.1 billion (DZD), however it kept increasing all the way until (2017) achieving 40.1 billion (DZD) in (2015), 53.1 billion (DZD) in (2016) and ending with 85.7 billion (DZD) in (2017).

As for total loans it has increased in the period of (2012-2013) achieving 20.2 billion (DZD) in (2012) and 27.5 billion (DZD) in (2013), however it decreased in the next two years achieving 22.6 billion (DZD) in (2014) and 21.3 billion (DZD) in (2015).
In the period of (2016-2017) the total loans has increased achieving 29.5 billion (DZD) in (2016) and 46.3 billion (DZD) in (2017). As we can see from the figure monetary has kept increasing with slightly decrease in (2013) achieving 11.2 billion (DZD) in (2014) and ending with 34.8 billion (DZD) in (2017).

**BBA:**

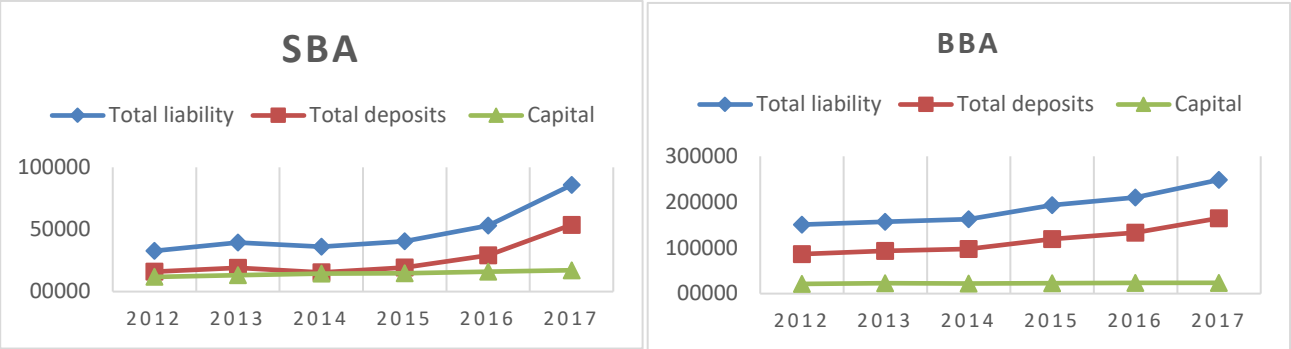
As we can see from the figure number 13 the total assets has known an increase in the study period (2012-2017) where the assets estimated in (2012) 150 billion (DZD), 157 billion (DZD) in (2013), 162 billion (DZD) in (2014), 193 billion (DZD) in (2015), 210 billion (DZD) in (2016) and ending in (2017) with 248 billion (DZD).

As for total loans it has increased also in the period of the study (2012-2017) achieving 58.4 billion (DZD) in (2012), 63.5 billion (DZD) in (2013), 80.6 billion (DZD) in (2014), 96.4 billion (DZD) in (2015), 110 billion (DZD) in (2016) and 139 billion (DZD) in (2017).

As we can see from the figure monetary has increased in the period of (2012-2013) achieving 81.2 billion (DZD) in (2012) and 84.4 billion (DZD) in (2013)
However it decreased in (2014) achieving 74.6 billion (DZD) to increase again in the period of (2015-2017) achieving 89.9 billion (DZD) in (2015), 89.9 billion (DZD) in (2016) and 99.6 billion (DZD) in (2017).

## B. Balance sheet (liability) evolution

**Figure 6:** Evolution of SBA and BBA Balance sheet (liability) elements




**Source:** made by the student based on banks financial statements.

**SBA:**

As we can see from the figure the total liability has known an increase in the period of (2012-2013) where the liability estimated in (2012) 32.7 billion (DZD) and 39.5 billion (DZD) in (2013). However the total liability has decreased in (2014) achieving 36.1 billion (DZD), the total liability kept on increasing in the period of (2015-2017) achieving 40.5 billion (DZD) in (2015), 53.1 billion (DZD) in (2016) and 85.7 billion (DZD) in (2017).

As for the total deposits it has increased in the period of (2012-2013) achieving 16.1 billion (DZD) in (2012) and 19 billion (DZD) in (2013), although it decreased in (2014) it kept increasing in the period of (2015-2017) achieving 19.4 billion (DZD) in (2015), 29 billion (DZD) in (2016) and 53.7 billion (DZD) in (2017).

As for the capital as we can see from the figure we can say that it kept increasing all the way in the period of (2012-2017) starting with a total of 11.8 billion (DZD) in 2012 and ending with a total of 17.1 billion (DZD) in 2017.

**BBA:**

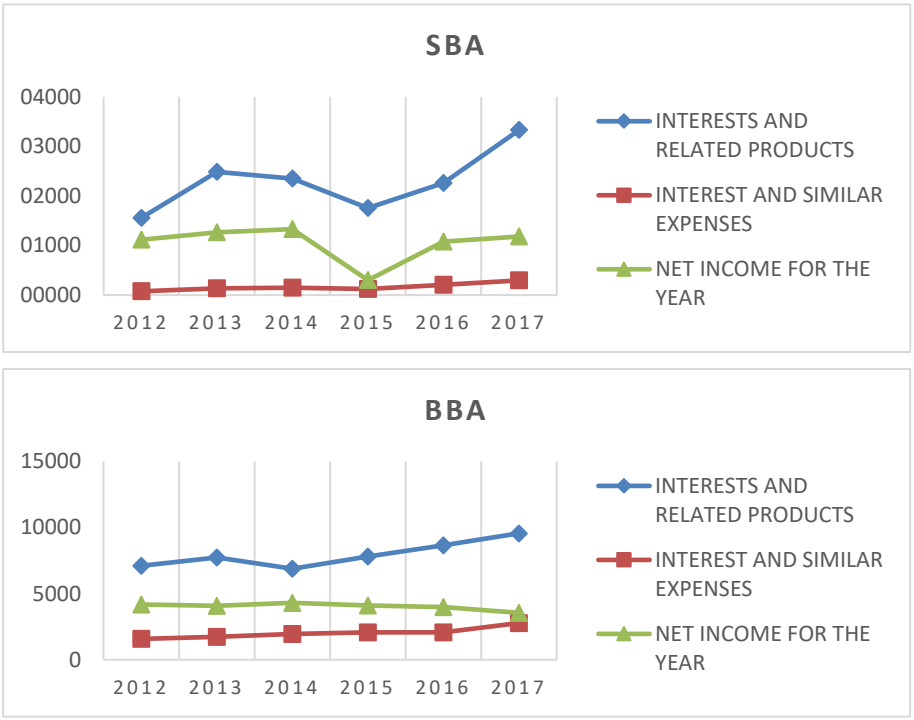
As we can see from the figure the total liability has known an increase in the period of (2012-2017) where the liability estimated in (2012) 150 billion (DZD), 157 billion (DZD) in (2013), 162 billion (DZD) in (2014), 193 billion (DZD) in (2015), 210 billion (DZD) in (2016) and 248 billion (DZD) in (2017).

As for the total deposits it has increased in the period of (2012-2017) achieving 86.3 billion (DZD) in (2012), 93.5 billion (DZD) in (2013), 97.8 billion (DZD) in (2014), 119 billion (DZD) in (2015), 133 billion (DZD) in (2016) and 164 billion (DZD) in (2017).

As we can see from the figure, capital has kept increasing in the period of (2012-2017) with a slightly decrease in (2014).

**C. Income statement elements evolution**

**Figure 7:** Evolution of SBA and BBA Income statement element




**Source:** made by the student based on banks financial statements.

**SBA:**

As we can see from the figure that interests and related products has increased on the period of (2012-2013) achieving 1.5 billion (DZD) in (2012) and 2.4 billion (DZD) in (2013). However, it starts decreasing in the period of (2013-2015) achieving 2.3 billion (DZD) in (2014) and 1.7 billion (DZD) in (2015) to start increasing in (2016-2017) achieving 2.2 billion (DZD) in (2016) and 3.3 billion (DZD) in (2017).

As for interests and similar expenses it kept on slightly increasing on the period (2012-2017) achieving 77 million (DZD) in (2012), 134 million (DZD) in (2013), 149 million (DZD) in (2014), 125 million (DZD) in (2015), 205 million (DZD) in (2016) and 297 million (DZD) in (2017).

As for net income, it started increasing in the period of (2012-2014) achieving 1.1 billion (DZD) in (2012), 1.2 billion (DZD) in (2013) and 1.3 billion (DZD) in (2014). The net income has severely decreased in (2015) achieving 301 million (DZD).
In the period of (2016-2017), net income has increased achieving 1 billion (DZD) in (2016) and 1.1 billion (DZD) in (2017).

**BBA:**

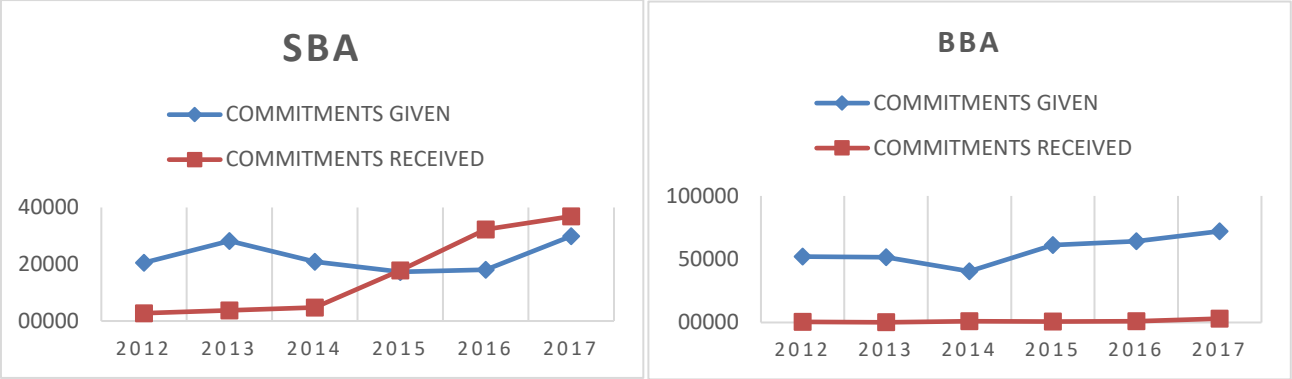
As we can see from the figure that interests and related products has increased on the period of (2012-2013) achieving 7 billion (DZD) in (2012) and 7.7 billion (DZD) in (2013). However, it starts decreasing in the period of (2013-2014) achieving 6.8 billion (DZD) in (2014) to start increasing in (2015-2017) achieving 7.8 billion (DZD) in (2015), 8.6 billion (DZD) in (2016) and 9.5 billion (DZD) in (2017).

As for interests and similar expenses it kept on slightly increasing on the period (2012-2017) achieving 1.5 billion (DZD) in (2012), 1.7 billion (DZD) in (2013), 1.9 billion (DZD) in (2014), 2 billion (DZD) in (2015), 2.08 billion (DZD) in (2016) and 2.7 billion (DZD) in (2017).

As for net income, it decreased in the period of (2012-2013) achieving 4.1 billion (DZD) in (2012) and 4 billion (DZD) in (2013).
The net income increased in (2014) achieving 4.3 billion (DZD) to start decreasing in the period of (2015-2017) achieving 4.1 billion (DZD) in (2015), 3.9 billion (DZD) in (2016) and 3.5 billion (DZD) in (2017).

**D. AL-Salam Bank Off balance sheet elements evolution**

**Figure 8:** Evolution of SBA and BBA Off-balance sheet elements




**Source:** made by the student based on banks financial statements.

**SBA:**

As we can see from the figure, the commitment given has increased in the period of (2012-2013) achieving 20.5 billion (DZD) in (2012) and 28.2 billion (DZD) in (2013). However, it started decreasing in the period of (2013-2015) achieving 20.8 billion (DZD) in (2014) and 17.3 billion (DZD) in (2015) to increase again in (2016) achieving 18.1 billion (DZD) and again in (2017) with 29.8 billion (DZD).

As for commitment received it increased in the period of (2012-2014) achieving 2.7 billion (DZD) in (2012), 3.7 billion (DZD) in (2013) and 4.7 billion (DZD) in (2014). Although it decreased in (2015) it massively increased in (2016) achieving 32.2 billion (DZD) and 36.8 billion (DZD) in (2017).

**BBA:**

As we can see from the figure, the commitment given has decreased in the period of (2012-2014) achieving 52 billion (DZD) in (2012), 51.6 billion (DZD) in (2013) and 40.4 billion (DZD) in (2014). However, it kept on increasing all the period of (2015-2017) achieving 61 billion (DZD) in (2015), 64.2 billion (DZD) in (2016) and 72.1 billion (DZD) in (2017).

As for commitment received, it decreased in the period of (2012-2013) achieving 444 million (DZD) in (2012) and 129 million (DZD) in (2013).

However, it kept on increasing all the period of (2014-2017) with slightly decrease in (2015) achieving 811 million (DZD) in (2015), 890 million (DZD) in (2016) and 3 billion (DZD) in (2017).

## 2.4. CAMELS Rating Base

We have proposed a set of financial ratios that would analyze each indicators of the CAMELS Model, as shown below:

**Table 01:** Financial ratio used to measure the banks performance

| Code | Index | Code | Financial Ratio | Financial Ratio Law |
|---|---|---|---|---|
| **C** | Capital Adequacy | C1 | Capital Adequacy | Capital/Total Deposit |
| | | C2 | General Banking Risk Coverage Rate | Funds for General Banking Risks/ Capital |
| | | C3 | Regular Banking Risk Coverage Rate | (Reserves +Funds for Risk and Charges)/Capital |
| **A** | Asset Quality | A1 | Lending Quality | Non-Performing Loans/Total loans |
| | | A2 | Loans Employment | Total loans / Total assets |
| | | A3 | OBS Commitments Quality | Received Commitments / Given Commitments |
| **M** | Management | M1 | Profit Generation Efficiency | Interest Income / Total Loans |
| | | M2 | Efficient Management of Deposit costs | Interest Expense / Total Deposit |
| | | M3 | Available Money Lending Rate | (Total Deposit + Capital) / Total Loans |
| **E** | Earnings | E1 | Interest Margin | (Interest Income - Interest expense) / Operating Assets |
| | | E2 | Return On Assets | Net Result / Total Assets |
| | | E3 | Return On Capital | Net Result / Capital |
| **L** | Liquidity | L1 | Quick Liquidity | (Monetary +Quasi-Monetary) / Demand Deposits |
| | | L2 | Ordinary Liquidity | (monetary+ quasi-monetary)/Total Deposit |

| | | | | |
|---|---|---|---|---|
| | | L3 | Legal Liquidity | Capital / Total Deposit |
| **S** | Sensitivity to Market Risks | S1 | Interest Rate Risk | Interest Rate Sensitive Assets / Interest Rate Sensitive Liabilities |
| | | S2 | Liquidity Risk | Monetary / Total Deposit |
| | | S3 | Capital Risk | Capital / Risky assets |

**Source:** Self-made based on the theoretical side of the thesis.

### 2.4.1. Measuring banks performance through capital adequacy

It represents the first indicator of the measure of performance in banking activity (CAMELS), and it symbolized by the symbol (C), as we indicated that the rating points for this indicator are as follows:

- The standard of capital adequacy and the quality of capital.
- The integrity of the bank's financial position.
- The ability of the bank's management to attract additional resources to support the capital, whether from major shareholders or others.
- The nature, size and evolution of irregular and incidental assets and liabilities.
- The adequacy of the allocations necessary to form these assets and other potential liabilities.
- The level of risk to which the bank is exposed.
- The type of risk resulting from Off-balance sheet operations.
- The amount of profits and the continuity of the elements generating it.
- Growth equations in the size of assets and future plans in this area.

at this point of the research we tried to shed light on the capital adequacy index of the banks during the 2012/2017 period, we used three different financial ratios to measure the performance of banks in terms of capital adequacy, the components of both the numerator and denominator for these financial ratios were identified With reference to specific foundations and rules that serve the purpose of the research, the financial ratios are as follows:

**A- Capital Adequacy (C 1)**

Calculated by dividing the Capital by the total deposits, as the Basel Committee, with its three copies, and with regard to capital adequacy, set a value between (8%) and (12%) as a criterion for accepting capital adequacy.

**B- General banking risk coverage rate (C 2)**

Calculated by dividing Funds for general banking risks by capital, the numerator of this percentage includes reserves wish formed in accordance with Article No. 9 of System No. (13-14) related to the classification of dues and obligations, Basel Committee set a value equal to at least (5%) to accept this financial percentage.

**C- Regular banking risk coverage rate (C 3)**

Calculated by dividing Funds for risk and charges plus reserves by capital, the numerator of this percentage includes reserves created to cover indirect obligations (Off- balance sheet), Basel Committee set a value equal to at least (10%) to accept this financial percentage.

❖ **Measuring public banks performance through the Capital Adequacy**

The results regard to capital adequacy index for public banks are as shown in the following table:

**Table 02:** Capital Adequacy index (C) for public banks

| | Financial Ratios of the Index (C) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| EBA | capital adequacy (C1) | 0.1105 | 0.1362 | 0.1221 | 0.0104 |
| | General banking risk coverage (C2) | 0.0434 | 0.1118 | 0.0799 | 0.0296 |
| | Regular banking risk coverage (C3) | 0.1794 | 0.3433 | 0.2793 | 0.0645 |
| NBA | capital adequacy (C1) | 0.1429 | 0.1950 | 0.1646 | 0.0240 |
| | General banking risk coverage (C2) | 0.1979 | 0.2742 | 0.2451 | 0.0266 |
| | Regular banking risk coverage (C3) | 0.4627 | 0.5382 | 0.4946 | 0.0332 |

**Source.** Made by the student based on public banks financial statement.

Through the above table and with regard to capital adequacy as an indicator for measuring performance in public banks, we note the following:

**External bank of Algeria (EBA):**

- The value of the capital adequacy (C1) ratio ranged during the (2012-2017) period between the values (0.1105) as lowest value and (0.1362) as highest value with

arithmetic average of (0.1221) and standard deviation of (0.0104). That means that capital (the numerator of this percentage) represent 12.21 % of total deposit value (denominator of this percentage) wish is acceptable by the Basel Committee in its three copies regarding the capital adequacy.

- As for the value of General banking risk coverage (C2) ratio ranged during the (2012-2017) period between the values (0.0434) as lowest value and (0.1118) as highest value with arithmetic average of (0.0799) and standard deviation of (0.0296). That means that Funds for general banking risks (the numerator of this percentage) represent 07.99 % of capital value (denominator of this percentage). This reflects that this provision is sufficient to cover the general banking risks related to direct facilities and related to Off-balance sheet liabilities, compared to the banking industry standard that set at least 5 % for this financial ratio.
- As for the value of Regular banking risk coverage (C3) ratio ranged during the (2012-2017) period between the values (0.1794) as lowest value and (0.3433) as highest value with arithmetic average of (0.2793) and standard deviation of (0.0645). That means that Funds for risk and charges plus reserves (the numerator of this percentage) represent 27.93 % of capital value (denominator of this percentage). This reflects that the provision that created is sufficient to cover the indirect doubtful obligations (Off-balance sheet) this is in accordance with the current precautionary standards, compared to the banking industry standard that set the value at least 10% for this financial percentage.

**National Bank of Algeria (NBA):**

- The value of the capital adequacy (C1) ratio ranged during the (2012-2017) period between the values (0.1429) as lowest value and (0.1950) as highest value with arithmetic average of (0.1646) and standard deviation of (0.0240). That means that capital (the numerator of this percentage) represent 16.46 % of total deposit value (denominator of this percentage) which considered a good ratio according to Basel Committee in its three copies regarding the capital adequacy.

- As for the value of General banking risk coverage (C2) ratio ranged during the (2012-2017) period between the values (0.1979) as lowest value and (0.2742) as highest value with arithmetic average of (0.241) and standard deviation of (0.0266). That means that Funds for general banking risks (the numerator of this percentage) represent 24.10 % of capital value (denominator of this percentage). This reflects that this provision is sufficient to cover the general banking risks related to direct facilities and related to Off-balance sheet liabilities, compared to the banking industry standard that set at least 5 % for this financial ratio.
- As for the value of Regular banking risk coverage (C3) ratio ranged during the (2012-2017) period between the values (0.4627) as lowest value and (0.5382) as highest value with arithmetic average of (0.4946) and standard deviation of (0.0332). That means that Funds for risk and charges plus reserves (the numerator of this percentage) represent 49.46 % of capital value (denominator of this percentage). This reflects that the provision that created is sufficient to cover the indirect doubtful obligations (Off-balance sheet) this is in accordance with the current precautionary standards, compared to the banking industry standard that set the value at least 10% for this financial percentage.

❖ **Measuring the performance of private banks through the capital adequacy**

The results regard to capital adequacy index for private banks are as shown in the following table:

**Table 03:** Capital adequacy index (C) for private banks

| | Financial Ratios of the Index (C) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| AL-Salam | capital adequacy (C1) | 0.3199 | 0.9333 | 0.6656 | 0.2096 |
| | General banking risk coverage (C2) | 0.0205 | 0.0478 | 0.0308 | 0.0107 |
| | Regular banking risk coverage (C3) | 0.0023 | 0.3174 | 0.1130 | 0.1461 |
| AL-Baraka | capital adequacy (C1) | 0.1434 | 0.2456 | 0.2041 | 0.0414 |
| | General banking risk coverage (C2) | 0.0948 | 0.1600 | 0.1253 | 0.0237 |
| | Regular banking risk coverage (C3) | 0.0860 | 0.2960 | 0.2162 | 0.0776 |

**Source:** Made by the student based on private banks financial statement.

Through the above table and with regard to capital adequacy as an indicator for measuring performance in private banks, we note the following:

**AL-Salam Bank:**

- The value of the capital adequacy (C1) ratio ranged during the (2012-2017) period between the values (0.3199) as lowest value and (0.9333) as highest value with arithmetic average of (0.6656) and standard deviation of (0.2096).

  That means that capital (the numerator of this percentage) represent 66.56 % of total deposit value (denominator of this percentage) which considered a good ratio according to Basel Committee in its three copies regarding the capital adequacy, This is due to the large size of the bank's capital on one hand, or the small amount of deposits deposited in the bank on the other hand.
- As for the value of General banking risk coverage (C2) ratio ranged during the (2012-2017) period between the values (0.02051) as lowest value and (0.0478) as highest value with arithmetic average of (0.0308) and standard deviation of (0.0107). That means that Funds for general banking risks (the numerator of this percentage) represent 3.08 % of capital value (denominator of this percentage). This reflects that this provision is not sufficient to cover the general banking risks related to direct facilities and related to Off-balance sheet liabilities, compared to the banking industry standard that set at least 5 % for this financial ratio.
- As for the value of Regular banking risk coverage (C3) ratio ranged during the (2012-2017) period between the values (0.0023) as lowest value and (0.3174) as highest value with arithmetic average of (0.1130) and standard deviation of (0.1461). That means that Funds for risk and charges plus reserves (the numerator of this percentage) represent 11.30 % of capital value (denominator of this percentage). This reflects that the provision that created is sufficient to cover the indirect doubtful obligations (Off-balance sheet) this is in accordance with the current precautionary standards, compared to the banking industry standard that set the value at least 10% for this financial percentage.

**AL-Baraka Bank:**

- The value of the capital adequacy (C1) ratio ranged during the (2012-2017) period between the values (0.1434) as lowest value and (0.2456) as highest value with arithmetic average of (0.2041) and standard deviation of (0.0414). That means that capital (the numerator of this percentage) represent 20.41 % of total deposit value (denominator of this percentage) which considered a good ratio according to Basel Committee in its three copies regarding the capital adequacy.
- As for the value of General banking risk coverage (C2) ratio ranged during the (2012-2017) period between the values (0.0948) as lowest value and (0.1600) as highest value with arithmetic average of (0.1253) and standard deviation of (0.0237). That means that Funds for general banking risks (the numerator of this percentage) represent 12.53 % of capital value (denominator of this percentage). This reflects that this provision is sufficient to cover the general banking risks related to direct facilities and related to Off-balance sheet liabilities, compared to the banking industry standard that set at least 5 % for this financial ratio.
- As for the value of Regular banking risk coverage (C3) ratio ranged during the (2012-2017) period between the values (0.0860) as lowest value and (0.2960) as highest value with arithmetic average of (0.2162) and standard deviation of (0.0776). That means that Funds for risk and charges plus reserves (the numerator of this percentage) represent 21.62 % of capital value (denominator of this percentage). This reflects that the provision that created is sufficient to cover the indirect doubtful obligations (Off-balance sheet) this is in accordance with the current precautionary standards, compared to the banking industry standard that set the value at least 10% for this financial percentage.

### 2.4.2. Measuring banks performance through Asset Quality

It represents the second indicator of the measure of performance in banking activity (CAMELS), and it symbolized by the symbol (A), as we indicated that the rating points for this indicator are as follows:

- Credit policy integrity and adherence to it.
- The level of irregular loans over the total portfolio.
- Sufficient allocations associated with the assets.
- Credit risk arising from off-balance sheet operations.
- The ability to collect irregular loans.

At this point of the research we tried to shed light on the asset quality index of the banks during the 2012/2017 period, we used three different financial ratios to measure the performance of banks in terms of asset quality.

The components of both the numerator and denominator for these financial ratios were identifies with reference to specific foundations and rules that serve the purpose of the research, the financial ratios are as follows:

**A- Lending Quality (A1)**

Calculated by dividing Non-performing loans (NPL) by the Total Loans, bank of Algeria have classified loans into sound loans and doubtful loans, and whenever non-performing loans (NPL) rise due to the inability or willingness of customers to pay, it causes a decrease in the quality of the bank's investment portfolio.

Basel Committee set a value equal to at least (10%) to accept this financial percentage.

**B- Loans Employment Rate (A2)**

Calculated by dividing Total loans by Total Assets, the numerator of this percentage includes the funds provided to clients in the form of loans of various kinds, wish considered the main source banking activity, banks seek to raise the percentage of total loans in their overall assets ., Basel Committee set a value equal to at least (50%) to accept this financial percentage.

**C- Off-Balance-Sheet Commitments Quality (A3)**

Calculated by dividing Received Commitments by Given Commitments, the numerator of this percentage includes Funding commitments received from Financial Institutions, Commitments for guarantees received from Financial Institutions, denominator of this percentage includes Funding commitments in favor of both Financial Institutions and

Customers, Commitments for guarantees by order of both Financial Institutions and Customers, Other given commitments.

Basel Committee set a value equal to at least (100%) to accept this financial percentage.

❖ **Measuring public banks performance through the Asset Quality**

The results regard to Asset Quality index (A) for public banks are as shown in the following table:

**Table 04:** Asset Quality index (A) for public banks

| | Financial Ratios of the Index (A) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| EBA | Lending Quality (A1) | 0.1045 | 0.1555 | 0.1217 | 0.0140 |
| | Loans Employment (A2) | 0.6014 | 0.7295 | 0.6430 | 0.0575 |
| | OBS - Commitments Quality (A3) | 0.7255 | 0.9931 | 0.8701 | 0.1247 |
| NBA | Lending Quality (A1) | 0.0796 | 0.2958 | 0.1319 | 0.0523 |
| | Loans Employment (A2) | 0.5457 | 0.7200 | 0.6464 | 0.0691 |
| | OBS - Commitments Quality (A3) | 0.9123 | 1.1393 | 0.9953 | 0.0768 |

**Source.** Made by the student based on public banks financial statement

Through the above table and with regard to Asset Quality as an indicator for measuring performance in public banks, we note the following:

**External bank of Algeria (EBA):**

❖ The value of Lending Quality (A1) ratio ranged during the (2012-2017) period between the values (0.1045) as lowest value and (0.1555) as highest value with arithmetic average of (0.1217) and standard deviation of (0.0140). That means that Non-performing loans (NPL) (the numerator of this percentage) represent 12.17 % of Total Loans value (denominator of this percentage), wish is considered unacceptable to the banking industry standard, which determined that the percentage of Non-performing loans (NPL) must not exceed 10% of the value of the total loans.

❖ The value of Loans Employment (A2) ratio ranged during the (2012-2017) period between the values (0.6014) as lowest value and (0.7295) as highest value with arithmetic average of (0.6430) and standard deviation of (0.0575). That means that Total Loans (the numerator of this percentage) represent 64.30 % of Total Assets value (denominator of this percentage). This reflects that the External Bank of

Algeria (EBA) has a rather large loan portfolio compared to the value of its assets . As it is one of the most active banks in the banking market in Algeria, (EBA) attracts the most important companies such as **Sonatrach** and **Naftal**, which increases its ability to generate returns through the process of financial intermediation. Wish is considered acceptable to the banking industry standard set at least 50 % for this financial ratio.

- The value of Off-Balance-Sheet Commitments Quality (A3) ratio ranged during the (2012-2017) period between the values (0.7255) as lowest value and (0.9931) as highest value with arithmetic average of (0.8701) and standard deviation of (0.1247).That means that Received Commitments (the numerator of this percentage) represent 87.01 % of Given Commitments value (denominator of this percentage) . Wish considered unacceptable to the banking industry standard set at least 100 % for this financial ratio.

**National Bank of Algeria (NBA):**

- The value of Lending Quality (A1) ratio ranged during the (2012-2017) period between the values (0.0796) as lowest value and (0.2958) as highest value with arithmetic average of (0.1319) and standard deviation of (0.0523). That means that Non-performing loans (NPL) (the numerator of this percentage) represent 13.19 % of Total Loans value (denominator of this percentage), wish is considered unacceptable to the banking industry standard, which determined that the percentage of Non-performing loans (NPL) must not exceed 10% of the value of the total loans.
- The value of Loans Employment (A2) ratio ranged during the (2012-2017) period between the values (0.5457) as lowest value and (0.7200) as highest value with arithmetic average of (0.6464) and standard deviation of (0.0691). That means that Total Loans (the numerator of this percentage) represent 64.64 % of Total Assets value (denominator of this percentage) .This reflects that the National Bank of Algeria (NBA) has a rather large loan portfolio compared to the value of its assets. Which increases its ability to generate returns through the process of financial

intermediation. Wish is considered acceptable to the banking industry standard set at least 50 % for this financial ratio.

- The value of Off-Balance-Sheet Commitments Quality (A3) ratio ranged during the (2012-2017) period between the values (0.9123) as lowest value and (1.1393) as highest value with arithmetic average of (0.9953) and standard deviation of (0.0768). That means that Received Commitments (the numerator of this percentage) represent 99.53 % of Given Commitments value (denominator of this percentage) .This reflects the ability and efficiency of the Algerian National Bank (NBA) to manage the file of Unreal commitments, the banking industry standard set at least 100% for this financial ratio.

- **Measuring Privet Banks performance through the Asset Quality**

The results regard to Asset Quality index (A) for Privet Banks are as shown in the following table:

**Table 05:** Asset Quality index (A) for Privet Banks

| | Financial Ratios of the Index (A) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| AL-Salam | Lending Quality (A1) | 0.1106 | 0.1829 | 0.1461 | 0.0249 |
| | Loans Employment (A2) | 0.5262 | 0.6976 | 0.5942 | 0.0652 |
| | OBS - Commitments Quality (A3) | 0.1343 | 1.7816 | 0.7565 | 0.6937 |
| AL-Baraka | Lending Quality (A1) | 0.0236 | 0.1065 | 0.0584 | 0.0236 |
| | Loans Employment (A2) | 0.3878 | 0.5618 | 0.4790 | 0.0687 |
| | OBS - Commitments Quality (A3) | 0.0025 | 0.0420 | 0.0173 | 0.0139 |

**Source.** Made by the student based on Privet Banks financial statement

Through the above table and with regard to Asset Quality as an indicator for measuring performance in Privet Banks, we note the following:

**AL-Salam Bank:**

- The value of Lending Quality (A1) ratio ranged during the (2012-2017) period between the values (0.1106) as lowest value and (0.1829) as highest value with arithmetic average of (0.1461) and standard deviation of (0.0249). That means that Non-performing loans (NPL) (the numerator of this percentage) represent 14.61 % of Total Loans value (denominator of this percentage), wish is considered

unacceptable to the banking industry standard, which determined that the percentage of Non-performing loans (NPL) must not exceed 10% of the value of the total loans.

- The value of Loans Employment (A2) ratio ranged during the (2012-2017) period between the values (0.5262) as lowest value and (0.6976) as highest value with arithmetic average of (0.5942) and standard deviation of (0.0652). That means that Total Loans (the numerator of this percentage) represent 59.42 % of Total Assets value (denominator of this percentage) .This reflects that AL-Salam Bank has a rather large loan portfolio compared to the value of its assets. Which increases its ability to generate returns through the process of financial intermediation. Wish considered acceptable to the banking industry standard set at least 50 % for this financial ratio.
- The value of Off-Balance-Sheet Commitments Quality (A3) ratio ranged during the (2012-2017) period between the values (0.1343) as lowest value and (1.7816) as highest value with arithmetic average of (0.7565) and standard deviation of (0.6937). That means that Received Commitments (the numerator of this percentage) represent 75.65 % of Given Commitments value (denominator of this percentage) .This reflects the inability and efficiency of AL-Salam Bank to manage the file of Unreal commitments, the banking industry standard set at least 100% for this financial ratio.

**AL-Baraka Bank:**

- The value of Lending Quality (A1) ratio ranged during the (2012-2017) period between the values (0.0236) as lowest value and (0.1065) as highest value with arithmetic average of (0.0584) and standard deviation of (0.0236). That means that Non-performing loans (NPL) (the numerator of this percentage) represent 5.84 % of Total Loans value (denominator of this percentage), wish is considered acceptable to the banking industry standard, which determined that the percentage of Non-performing loans (NPL) must not exceed 10% of the value of the total loans.

- The value of Loans Employment (A2) ratio ranged during the (2012-2017) period between the values (0.3878) as lowest value and (0.5618) as highest value with arithmetic average of (0.4790) and standard deviation of (0.0687). That means that Total Loans (the numerator of this percentage) represent 47.90 % of Total Assets value (denominator of this percentage) .. Wish considered unacceptable to the banking industry standard that set at least 50 % for this financial ratio.
- The value of Off-Balance-Sheet Commitments Quality (A3) ratio ranged during the (2012-2017) period between the values (0.0025) as lowest value and (0.0420) as highest value with arithmetic average of (0.0173) and standard deviation of (0.0139).That means that Received Commitments (the numerator of this percentage) represent 1.73 % of Given Commitments value (denominator of this percentage) . This reflects the inability and efficiency of AL-Baraka Bank to manage the file of Unreal commitments, the banking industry standard set at least 100% for this financial ratio.

### 2.4.3. Measuring banks performance through Management Efficiency

It represents the Third indicator of the measure of performance in banking activity (CAMELS), and it symbolized by the symbol (M), as we indicated that the rating points for this indicator are as follows:

- The level and quality of board supervision.
- Efficiency and ability of administrators.
- The ability to plan and manage risks.
- Information systems effectiveness.
- Internal control system sufficiency.
- laws and regulations compliance.

At this point of the research we tried to shed light on the Management Efficiency index of the banks during the 2012/2017 period, we used three different financial ratios to measure the performance of banks in terms of Management Efficiency, the components

of both the numerator and denominator for these financial ratios were identified With reference to specific foundations and rules that serve the purpose of the research, the financial ratios are as follows:

**A- Profit Generation Efficiency (M1)**

Calculated by dividing Interest Income by the Total Loans, Interest Income represents the returns of the loans grant processes,

The goal of this ratio is to know the amount of Interest Income as a return resulting from the process of granting loans, as well as the ability of the bank to generate this type of return, and the higher the value of this percentage, the better it is. The ratio can be acceptable within the limits of 5% to 10% at least, and therefore it considered one of the most important financial ratios that help the financial analyst to find out the true performance of the bank.

**B- Efficient Management of Deposit Costs (M2)**

Calculated by dividing Interest Expense by the Total Deposit, Interest Expense represent the returns granted to the owners of the deposits.

The goal of this ratio is to know the amount of what the Interest Expense represent as a cost of deposits collection operations, as well as the ability of the bank to manage this type of cost. The lower the value is the better, since there is no specific standard for it, but it must be less than Profit Generation Efficiency (M1) ratio.

**C- Available Money Lending Rate (M3)**

Calculated by dividing Total Deposit plus capital by the Total Loans, The goal of this ratio is to know the extent to which the bank has benefited from the funds available to it as a source for generating profits through the loan granting process, in order to avoid the freezing of funds it has.

The banking industry standard defines the value of at least 100% for acceptance of this financial ratio.

❖ **Measuring Public Banks performance through Management Efficiency**

The results regard to Management Efficiency index (M) for public banks are as shown in the following table:

**Table 06:** Management Efficiency index (M) for Public Banks

| | Financial Ratios of the Index (M) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| EBA | profit generation efficiency (M1) | 0.0224 | 0.0506 | 0.0299 | 0.0107 |
| | Efficient management of deposit costs (M2) | 0.0059 | 0.0107 | 0.0085 | 0.0016 |
| | profit generation efficiency (M3) | 1.1529 | 1.9206 | 1.4254 | 0.2823 |
| NBA | profit generation efficiency (M1) | 0.0533 | 0.0896 | 0.0681 | 0.0147 |
| | Efficient management of deposit costs (M2) | 0.0092 | 0.0196 | 0.0135 | 0.0035 |
| | profit generation efficiency (M3) | 1.1558 | 1.5875 | 1.2985 | 0.1766 |

**Source.** Made by the student based on Public Banks financial statement

Through the above table and with regard to Management Efficiency index (M) as an indicator for measuring performance in public banks, we note the following:

**External bank of Algeria (EBA):**

- The value of Profit Generation Efficiency (M1) ratio ranged during the (2012-2017) period between the values (0.0224) as lowest value and (0.0506) as highest value with arithmetic average of (0.0299) and standard deviation of (0.0107). That means that Interest Income (the numerator of this percentage) represent 2.99 % of Total Loans value (denominator of this percentage), wish is unacceptable because the banking industry standards set the ratio within the limits of 5% to 10% at least.
- The value of Efficient Management of Deposit Costs (M2) ratio ranged during the (2012-2017) period between the values (0.0059) as lowest value and (0.0107) as highest value with arithmetic average of (0.0016) and standard deviation of (0.0085). That means that Interest Expense (the numerator of this percentage) represent 0.85% of Total Deposit value (denominator of this percentage), wish is acceptable because it is less than Profit Generation Efficiency (M1) ratio.
- The value of Available Money Lending Rate (M3) ranged during the (2012-2017) period between the values (1.1529) as lowest value and (1.9206) as highest value

with arithmetic average of (1.4254) and standard deviation of (0.2823). That means that Total Deposit plus capital (the numerator of this percentage) represents 142% of Total Loans value (denominator of this percentage). This reflects the bank's efficiency in utilizing available financial resources to generate profits through loan granting operations, the banking industry standards set the ratio at least 100%.

**National Bank of Algeria (NBA):**

- The value of Profit Generation Efficiency (M1) ratio ranged during the (2012-2017) period between the values (0.0533) as lowest value and (0.0896) as highest value with arithmetic average of (0.0681) and standard deviation of (0.0147). That means that Interest Income (the numerator of this percentage) represent 6.81 % of Total Loans value (denominator of this percentage), wish is acceptable because the banking industry standards set the ratio within the limits of 5% to 10% at least.
- The value of Efficient Management of Deposit Costs (M2) ratio ranged during the (2012-2017) period between the values (0.0092) as lowest value and (0.0196) as highest value with arithmetic average of (0.0135) and standard deviation of (0.0035). That means that Interest Expense (the numerator of this percentage) represent 1.35% of Total Deposit value (denominator of this percentage), wish is acceptable because it is less than Profit Generation Efficiency (M1) ratio.
- The value of Available Money Lending Rate (M3) ranged during the (2012-2017) period between the values (1.1558) as lowest value and (1.5875) as highest value with arithmetic average of (1.2985) and standard deviation of (0.1766). That means that Total Deposit plus capital (the numerator of this percentage) represents 129% of Total Loans value (denominator of this percentage). This reflects the bank's efficiency in utilizing available financial resources to generate profits through loan granting operations, the banking industry standards set the ratio at least 100%.

❖ **Measuring Privet Banks performance through Management**

The results regard to Management Efficiency index (M) for Privet Banks are as shown in the following table:

**Table 07:** Management Efficiency index (M) for Privet Banks

| | Financial Ratios of the Index (M) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| AL-Salam | profit generation efficiency (M1) | 0.0719 | 0.1040 | 0.0836 | 0.0118 |
| | Efficient management of deposit costs (M2) | 0.0048 | 0.0097 | 0.0068 | 0.0017 |
| | profit generation efficiency (M3) | 0.8178 | 0.8520 | 0.8357 | 0.0142 |
| AL-Baraka | profit generation efficiency (M1) | 0.0685 | 0.1217 | 0.0951 | 0.0259 |
| | Efficient management of deposit costs (M2) | 0.0156 | 0.0199 | 0.0927 | 0.0230 |
| | profit generation efficiency (M3) | 1.3499 | 1.8339 | 1.5662 | 0.2152 |

**Source.** Made by the student based on Privet Banks financial statement

Through the above table and with regard to Management Efficiency as an indicator for measuring performance in Privet Banks, we note the following:

**AL-Salam Bank:**

- The value of Profit Generation Efficiency (M1) ratio ranged during the (2012-2017) period between the values (0.0719) as lowest value and (0.1040) as highest value with arithmetic average of (0.0836) and standard deviation of (0.0118). That means that Interest Income (the numerator of this percentage) represent 8.36 % of Total Loans value (denominator of this percentage), wish is acceptable because the banking industry standards set the ratio within the limits of 5% to 10% at least.
- The value of Efficient Management of Deposit Costs (M2) ratio ranged during the (2012-2017) period between the values (0.0048) as lowest value and (0.0097) as highest value with arithmetic average of (0.0068) and standard deviation of (0.0017). That means that Interest Expense (the numerator of this percentage) represent 0.68% of Total Deposit value (denominator of this percentage), wish is acceptable because it is less than Profit Generation Efficiency (M1) ratio.
- The value of Available Money Lending Rate (M3) ranged during the (2012-2017) period between the values (0.8178) as lowest value and (0.8520) as highest value with arithmetic average of (0.8357) and standard deviation of (0.0142). That means that Total Deposit plus capital (the numerator of this percentage) represents 83.57% of Total Loans value (denominator of this percentage). Wish is unacceptable; the

banking industry standard defines the value of at least 100% for acceptance of this financial ratio.

**AL-Baraka Bank:**

- The value of Efficient Management of Deposit Costs (M2) ratio ranged during the (2012-2017) period between the values (0.0685) as lowest value and (0.1217) as highest value with arithmetic average of (0.0951) and standard deviation of (0.0259). That means that Interest Income (the numerator of this percentage) represent 9.51% of Total Loans value (denominator of this percentage), wish is acceptable because the banking industry standards set the ratio within the limits of 5% to 10% at least.
- The value of Efficient Management of Deposit Costs (M2) ratio ranged during the (2012-2017) period between the values (0.0156) as lowest value and (0.0199) as highest value with arithmetic average of (0.0927) and standard deviation of (0.0230). That means that Interest Expense (the numerator of this percentage) represent 9.27% of Total Deposit value (denominator of this percentage), wish is acceptable because it is less than Profit Generation Efficiency (M1) ratio.
- The value of Available Money Lending Rate (M3) ranged during the (2012-2017) period between the values (1.3499) as lowest value and (1.8339) as highest value with arithmetic average of (1.5662) and standard deviation of (0.2152). That means that Total Deposit plus capital (the numerator of this percentage) represents 156% of Total Loans value (denominator of this percentage). This reflects the bank's efficiency in utilizing available financial resources to generate profits through loan granting operations, the banking industry standards set the ratio at least 100%.

### 2.4.4. Measuring banks performance through Earnings

It represents the fourth indicator of the measure of performance in banking activity (CAMELS), and it symbolized by the symbol (E), as we indicated that the rating points for this indicator are as follows:

- The ability to support capital.
- The possibility of a low level of profits as a result of market risks.
- Sufficient allocations and the ability to support them.
- The level of expenses compared to the business volume.

at this point of the research we tried to shed light on the Earnings index of the banks during the 2012/2017 period, we used three different financial ratios to measure the performance of banks in terms of Earnings, the components of both the numerator and denominator for these financial ratios were identified With reference to specific foundations and rules that serve the purpose of the research, the financial ratios are as follows:

**A- Interest Margin Ratio (E1):**

Calculated by dividing (Interest Income-Interest expense) by Operating assets, as interest income is the proceeds of granting loans, and the Interest expense is the cost of collecting deposits, Operating assets represent all assets except for fixed assets. The banking industry standard defines the value equal to at least 1% to accept this ratio.

**B- Return On Assets (E2):**

Calculated by dividing Net profit after taxes by Total Assets, the numerator of this percentage includes the net profit of banking activity after deducting tax on corporate profits, If the bank achieves a high return on assets, the reason is that the bank is more efficient in controlling costs, which is reflected in the high profit margin index. Or that the bank uses the assets in an optimal way. The industry standard set the value of at least 1% to accept this percentage.

**C- Return On Capital (E3) :**

Calculated by dividing Net profit after taxes by Capital, the numerator of this percentage includes the net profit of banking activity after deducting tax on corporate profits, the objective of this ratio is to measure the rate of return of bank owners, It also roughly shows the net profits that capital owners receive when they invest in the bank. The industry standard set the value of at least 10% to accept this percentage.

❖ **Measuring Public Banks performance through Earnings**

The results regard to Earnings index (E) for Public Banks are as shown in the following table:

**Table 08:** Earnings index (E) for Public Banks

| | Financial Ratios of the Index (E) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| EBA | Interest margin (E1) | 0.0079 | 0.0245 | 0.0124 | 0.0063 |
| | Return on assets (E2) | 0.0099 | 0.0184 | 0.0138 | 0.0028 |
| | Return on capital (E2) | 0.1002 | 0.1748 | 0.1422 | 0.0285 |
| NBA | Interest margin (E1) | 0.0271 | 0.0425 | 0.0340 | 0.0052 |
| | Return on assets (E2) | 0.0106 | 0.0138 | 0.0118 | 0.0014 |
| | Return on capital (E2) | 0.0772 | 0.1324 | 0.1032 | 0.0228 |

**Source.** Made by the student based on Public Banks financial statement

Through the above table and with regard to Earnings index (E) as an indicator for measuring performance in public banks, we note the following:

**External bank of Algeria (EBA):**

- The value of Interest Margin Ratio (E1) ranged during the (2012-2017) period between the values (0.0079) as lowest value and (0.0245) as highest value with arithmetic average of (0.0124) and standard deviation of (0.0063). That means that (Interest income - Interest expense) (the numerator of this percentage) represent 1.24 % of Operating Assets value (denominator of this percentage), wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.
- The value of Return on Assets (E2) ranged during the (2012-2017) period between the values (0.0099) as lowest value and (0.0184) as highest value with arithmetic average of (0.0138) and standard deviation of (0.0028). That means that Net profit after taxes (the numerator of this percentage) represent 1.38 % of Total Assets value (denominator of this percentage), This means that External bank of Algeria (EBA) possesses efficiency in controlling costs and uses the assets in an optimal way. Wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.

- The value of Return on Capital (E3) ranged during the (2012-2017) period between the values (0.1002) as lowest value and (0.1748) as highest value with arithmetic average of (0.1422) and standard deviation of (0.0285). That means that Net profit after taxes (the numerator of this percentage) represent 14.22% of Capital value (denominator of this percentage); this means that the Algeria External Bank has an efficiency in generating profits from capital investments. Wish is acceptable because the banking industry standard defines the value equal to at least 10% to accept this ratio.

**National Bank of Algeria (NBA):**

- The value of Interest Margin Ratio (E1) ranged during the (2012-2017) period between the values (0.0271) as lowest value and (0.0425) as highest value with arithmetic average of (0.0340) and standard deviation of (0.0052). That means that (Interest income - Interest expense) (the numerator of this percentage) represent 3.40 % of Operating Assets value (denominator of this percentage), wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.
- The value of Return on Assets (E2) ranged during the (2012-2017) period between the values (0.0106) as lowest value and (0.0138) as highest value with arithmetic average of (0.0118) and standard deviation of (0.0014). That means that Net profit after taxes (the numerator of this percentage) represent 1.18 % of Total Assets value (denominator of this percentage), this means that National Bank of Algeria (NBA) possesses efficiency in controlling costs and uses the assets in an optimal way. Wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.
- The value of Return on Capital (E3) ranged during the (2012-2017) period between the values (0.0772) as lowest value and (0.1324) as highest value with arithmetic average of (0.1032) and standard deviation of (0.0228). That means that Net profit after taxes (the numerator of this percentage) represent 10.32% of Capital value

(denominator of this percentage); this means that National Bank of Algeria (NBA) has an efficiency in generating profits from capital investments. Wish is acceptable because the banking industry standard defines the value equal to at least 10% to accept this ratio.

❖ **Measuring Privet Banks performance through Earnings**

The results regard to Earnings index (E) for Privet Banks are as shown in the following table:

**Table 09:** Earnings index (E) for Privet Banks

| | Financial Ratios of the Index (E) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| AL-Salam | Interest margin (E1) | 0.0368 | 0.0638 | 0.0491 | 0.0113 |
| | Return on assets (E2) | 0.0074 | 0.0369 | 0.0241 | 0.0120 |
| | Return on capital (E3) | 0.0203 | 0.0955 | 0.0733 | 0.0289 |
| AL-Baraka | Interest margin (E1) | 0.0277 | 0.0388 | 0.0328 | 0.0044 |
| | Return on assets (E2) | 0.0143 | 0.0278 | 0.0225 | 0.0053 |
| | Return on capital (E3) | 0.1500 | 0.1975 | 0.1789 | 0.0175 |

**Source.** Made by the student based on Privet Banks financial statement

Through the above table and with regard to Earnings index as an indicator for measuring performance in Privet Banks, we note the following:

**AL-Salam Bank:**

- The value of Interest Margin Ratio (E1) ranged during the (2012-2017) period between the values (0.0368) as lowest value and (0.0638) as highest value with arithmetic average of (0.0491) and standard deviation of (0.0113). That means that (Interest income - Interest expense) (the numerator of this percentage) represent 4.91 % of Operating Assets value (denominator of this percentage), wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.
- The value of Return on Assets (E2) ranged during the (2012-2017) period between the values (0.0074) as lowest value and (0.0369) as highest value with arithmetic average of (0.0241) and standard deviation of (0.0120). That means that Net profit after taxes (the numerator of this percentage) represent 2.41 % of Total Assets value

(denominator of this percentage), this means that AL-Salam Bank possesses efficiency in controlling costs and uses the assets in an optimal way. Wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.

- The value of Return on Capital (E3) ranged during the (2012-2017) period between the values (0.0203) as lowest value and (0.0955) as highest value with arithmetic average of (0.0733) and standard deviation of (0.0289). That means that Net profit after taxes (the numerator of this percentage) represent 7.33% of Capital value (denominator of this percentage); this means that AL-Salam Bank don't have an efficiency in generating profits from capital investments. Wish is unacceptable because the banking industry standard defines the value equal to at least 10% to accept this ratio.

**AL-Baraka Bank:**

- The value of Interest Margin Ratio (E1) ranged during the (2012-2017) period between the values (0.0277) as lowest value and (0.0388) as highest value with arithmetic average of (0.0328) and standard deviation of (0.0044). That means that (Interest income - Interest expense) (the numerator of this percentage) represent 3.28 % of Operating Assets value (denominator of this percentage), wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.
- The value of Return on Assets (E2) ranged during the (2012-2017) period between the values (0.0143) as lowest value and (0.0278) as highest value with arithmetic average of (0.0225) and standard deviation of (0.0053). That means that Net profit after taxes (the numerator of this percentage) represent .225 % of Total Assets value (denominator of this percentage), this means that AL-Baraka Bank possesses efficiency in controlling costs and uses the assets in an optimal way. Wish is acceptable because the banking industry standard defines the value equal to at least 1% to accept this ratio.

- The value of Return on Capital (E3) ranged during the (2012-2017) period between the values (0.1500) as lowest value and (0.1975) as highest value with arithmetic average of (0.1789) and standard deviation of (0.0175). That means that Net profit after taxes (the numerator of this percentage) represent .1789% of Capital value (denominator of this percentage); this means that AL-Baraka Bank has an efficiency in generating profits from capital investments. Wish is acceptable because the banking industry standard defines the value equal to at least 10% to accept this ratio.

### 2.4.5. Measuring banks performance through Liquidity

It represents the fifth indicator of the measure of performance in banking activity (CAMELS), and it symbolized by the symbol (L), as we indicated that the rating points for this indicator are as follows:

- The ability to provide liquidity at an affordable cost.
- The asset's size convertible into cash, with no significant losses.
- Sufficient sources of liquidity, compared to current and future needs.
- Short-term resources to fund long-term assets.
- Deposits stability, efficiency in asset and liability management.

At this point of the research, we tried to shed light on the Liquidity index (L) of the banks during the 2012/2017 period. We used three different financial ratios to measure the performance of banks in terms of Liquidity. The components of both the numerator and denominator for these financial ratios were identified with reference to specific foundations and rules, which serve the purpose of the research, the financial ratios are as follows:

**A- Quick Liquidity (L1)**

Calculated by dividing monetary plus quasi-monetary by demand deposits, the numerator of this percentage includes money in the bank's treasury, money with the central bank, net deposits with other banks, and treasury bills .The denominator of this percentage includes demand deposits, the demand deposits are deposits at the disposal

of their owners, and they can withdraw them in whole or in part whenever they like, and without prior notice, the deposit are in the possession of the bank but at absolute disposal of its owner. The bank does not have the right to impose conditions during the withdraw. The goal of this ratio is to know the bank's ability to cope with the requests and withdrawals of depositors, especially those with demand deposits, against its cash or quasi-cash liquidity. The higher the value of this ratio, the better the bank's performance. The banking industry standard specifies two-thirds equal to the value of at least 66.66% to accept this financial ratio.

**B- Ordinary Liquidity (L2)**

Calculated by dividing monetary plus quasi-monetary by Total Deposit, The goal of this ratio is to know the bank's ability to meet the demands of all depositors, the higher the value of this ratio, the better the bank's performance .The banking industry standard specifies one-third equal to the value of at least 33.33% to accept this financial ratio.

**C- Statutory Liquidity (L3)**

Calculated by dividing capital by Total Deposit, Statutory liquidity or statutory reserve is use within supervision rules of banks by the central bank. The banking industry standard specifies at least 10% to accept this financial ratio.

❖ **Measuring Public Banks performance through Liquidity index (L):**

The results regard to Liquidity index (L) for Public Banks are as shown in the following table:

**Table 10:** Liquidity index (L) for Public Banks

| | Financial Ratios of the Index (L) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| EBA | Quick liquidity (L1) | 0.1465 | 0.2894 | 0.1841 | 0.0485 |
| | Ordinary liquidity (L2) | 0.1452 | 0.2081 | 0.1795 | 0.0232 |
| | Legal liquidity (L3) | 0.1105 | 0.1362 | 0.1221 | 0.0104 |
| NBA | Quick liquidity (L1) | 0.0643 | 0.5891 | 0.3926 | 0.1614 |
| | Ordinary liquidity (L2) | 0.2606 | 0.7071 | 0.3926 | 0.1614 |
| | Legal liquidity (L3) | 0.1429 | 0.1950 | 0.1646 | 0.0240 |

**Source.** Made by the student based on Public Banks financial statement.

Through the above table and with regard to Liquidity index (L) as an indicator for measuring performance in public banks, we note the following:

**External bank of Algeria (EBA):**

- The value of Quick Liquidity (L1) ranged during the (2012-2017) period between the values (0.1465) as lowest value and (0.2894) as highest value with arithmetic average of (0.1841) and standard deviation of (0.0485). That means monetary and quasi-monetary (the numerator of this percentage) represent 18.41 % of demand deposits value (denominator of this percentage), this reflects the inability of External bank of Algeria (EBA) to cover the holders of demand deposits .The banking industry standard set the value two-thirds equal to the value of at least 66.66% to accept this financial ratio.
- The value of Ordinary Liquidity (L2) ranged during the (2012-2017) period between the values (0.1452) as lowest value and (0.2081) as highest value with arithmetic average of (0.1795) and standard deviation of (0.0232). That means monetary and quasi-monetary (the numerator of this percentage) represent 17.95 % of Total deposits value (denominator of this percentage), this reflects the inability of External bank of Algeria (EBA) to cover the holders of deposits .The banking industry standard set the value one-thirds equal to the value of at least 33.33% to accept this financial ratio.
- The value of Statutory Liquidity (L3) ranged during the (2012-2017) period between the values (0.1105) as lowest value and (0.1362) as highest value with arithmetic average of (0.1221) and standard deviation of (0.0104). That means capital (the numerator of this percentage) represent 12.21 % of Total deposits value (denominator of this percentage), this reflects the good performance of the External bank of Algeria (EBA) in implementing the banking supervision rules imposed by the central bank. Wish is acceptable by the banking industry standard that set at least 10% to accept this financial ratio.

**National Bank of Algeria (NBA):**

- The value of Quick Liquidity (L1) ranged during the (2012-2017) period between the values (0.0643) as lowest value and (0.5891) as highest value with arithmetic average of (0.3926) and standard deviation of (0.1614). That means monetary and quasi-monetary (the numerator of this percentage) represent 39.26 % of demand deposits value (denominator of this percentage), this reflects the inability of National Bank of Algeria (NBA) to cover the holders of demand deposits .The banking industry standard set the value two-thirds equal to the value of at least 66.66% to accept this financial ratio.
- The value of Ordinary Liquidity (L2) ranged during the (2012-2017) period between the values (0.2606) as lowest value and (0.7071) as highest value with arithmetic average of (0.3926) and standard deviation of (0.1614). That means monetary and quasi-monetary (the numerator of this percentage) represent 39.26 % of Total deposits value (denominator of this percentage), this reflects the ability of National Bank of Algeria (NBA) to cover the holders of deposits .The banking industry standard set the value one-thirds equal to the value of at least 33.33% to accept this financial ratio.
- The value of Statutory Liquidity (L3) ranged during the (2012-2017) period between the values (0.1429) as lowest value and (0.19450) as highest value with arithmetic average of (0.1646) and standard deviation of (0.0240). That means capital (the numerator of this percentage) represent 16.46 % of Total deposits value (denominator of this percentage), this reflects the good performance of the National Bank of Algeria (NBA) in implementing the banking supervision rules imposed by the central bank. Wish is acceptable by the banking industry standard that set at least 10% to accept this financial ratio.

❖ **Measuring Privet Banks performance through Liquidity**

The results regard to Liquidity index (L) for Privet Banks are as shown in the following table:

**Table 11:** Liquidity index (L) for Privet Banks

| | Financial Ratios of the Index (L) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| AL-Salam | Quick liquidity (L1) | 0.8427 | 1.5131 | 1.1501 | 0.2060 |
| | Ordinary liquidity (L2) | 0.8718 | 1.3771 | 1.1501 | 0.2060 |
| | Legal liquidity (L3) | 0.3199 | 0.9333 | 0.6656 | 0.2096 |
| AL-Baraka | Quick liquidity (L1) | 0.3476 | 1.2500 | 0.7834 | 0.1259 |
| | Ordinary liquidity (L2) | 0.6145 | 0.9441 | 0.7834 | 0.1259 |
| | Legal liquidity (L3) | 0.1434 | 0.2456 | 0.2041 | 0.0414 |

**Source.** Made by the student based on Privet Banks financial statement.

Through the above table and with regard to Liquidity index as an indicator for measuring performance in Privet Banks, we note the following:

**AL-Salam Bank:**

- The value of Quick Liquidity (L1) ranged during the (2012-2017) period between the values (0.8427) as lowest value and (1.5131) as highest value with arithmetic average of (1.1501) and standard deviation of (0.2060). That means monetary and quasi-monetary (the numerator of this percentage) represent 115 % of demand deposits value (denominator of this percentage), this reflects the ability of AL-Salam Bank to cover the holders of demand deposits .The banking industry standard set the value two-thirds equal to the value of at least 66.66% to accept this financial ratio.
- The value of Ordinary Liquidity (L2) ranged during the (2012-2017) period between the values (0.8718) as lowest value and (1.3771) as highest value with arithmetic average of (1.1501) and standard deviation of (0.2060). That means monetary and quasi-monetary (the numerator of this percentage) represent 115% of Total deposits value (denominator of this percentage), this reflects the ability of AL-Salam Bank to cover the holders of deposits .The banking industry standard set the value one-thirds equal to the value of at least 33.33% to accept this financial ratio.
- The value of Statutory Liquidity (L3) ranged during the (2012-2017) period between the values (0.3199) as lowest value and (0.9333) as highest value with arithmetic average of (0.6656) and standard deviation of (0.2096). That means capital (the numerator of this percentage) represent 62.65 % of Total deposits value (denominator of this percentage), this reflects the good performance of AL-Salam

Bank in implementing the banking supervision rules imposed by the central bank. Wish is acceptable by the banking industry standard that set at least 10% to accept this financial ratio.

**AL-Baraka Bank:**

- The value of Quick Liquidity (L1) ranged during the (2012-2017) period between the values (0.3476) as lowest value and (1.2500) as highest value with arithmetic average of (0.7834) and standard deviation of (0.1259). That means monetary and quasi-monetary (the numerator of this percentage) represent 78.34 % of demand deposits value (denominator of this percentage), this reflects the ability of AL-Baraka Bank to cover the holders of demand deposits .The banking industry standard set the value two-thirds equal to the value of at least 66.66% to accept this financial ratio.
- The value of Ordinary Liquidity (L2) ranged during the (2012-2017) period between the values (0.6145) as lowest value and (0.9441) as highest value with arithmetic average of (0.7834) and standard deviation of (0.1259). That means monetary and quasi-monetary (the numerator of this percentage) represent 78.34% of Total deposits value (denominator of this percentage), this reflects the ability AL-Baraka Bank to cover the holders of deposits .The banking industry standard set the value one-thirds equal to the value of at least 33.33% to accept this financial ratio.
- The value of Statutory Liquidity (L3) ranged during the (2012-2017) period between the values (0.1434) as lowest value and (0.2456) as highest value with arithmetic average of (0.2041) and standard deviation of (0.0414). That means capital (the numerator of this percentage) represent 20.41 % of Total deposits value (denominator of this percentage), this reflects the good performance of AL-Baraka Bank in implementing the banking supervision rules imposed by the central bank. Wish is acceptable by the banking industry standard that set at least 10% to accept this financial ratio.

### 2.4.6. Measuring banks performance through Sensitivity to Market Risks

It represents the sixth indicator of the measure of performance in banking activity (CAMELS), and it symbolized by the symbol (S).

at this point of the research we tried to shed light Sensitivity To Market Risks index (S) of the banks during the 2012/2017 period, we used three different financial ratios to measure the performance of banks in terms of Sensitivity To Market Risks, the components of both the numerator and denominator for these financial ratios were identified With reference to specific foundations and rules that serve the purpose of the research, the financial ratios are as follows:

**A- Interest Rate Risk (S1)**

Calculated by dividing Interest rate sensitive assets by Interest rate sensitive liabilities. The numerator of this ratio includes all the elements of the bank's assets sensitive to the interest rate, and loans are the most important element of these assets, as the denominator of this ratio includes all the elements of the bank's liabilities sensitive to the interest rate, and deposits are the most important element of these liabilities. The lower this percentage, the better the bank will perform in managing interest rate risk. The banking industry standard specifies a maximum of 100% to accept this financial ratio

**B- Liquidity Risk (S2)**

Calculated by dividing Monetary by Total Deposit. The numerator of this ratio includes the money in the bank’s treasury and its branches, In order to meet withdrawal requests from depositors; the denominator of this ratio includes all types of deposits. The goal of this ratio is to find out the amount of risk the bank bears in reconciling the withdrawals and deposits of its customers, this indicates the bank’s efficiency in managing liquidity risk, and the banking industry standard specifies at least 15% to accept this percentage.

**C- Capital Risk (S3)**

Calculated by dividing Capital by Risky Assets. The numerator of this ratio includes all assets minus monetary, confirmed financial investments and fixed assets because

fixed assets can only be liquidate when the bank goes bankrupt. This ratio also called the repayment rate, as it measures how much the bank can bear from its own funds from risky assets and the higher this percentage, the more it will protect depositors. The banking industry standard specifies at least 20% to accept this financial percentage .

❖ **Measuring Public Banks performance through Sensitivity to Market Risks**

The results regard to Sensitivity to Market Risks index (S) for public banks are as shown in the following table:

**Table 12:** Sensitivity to Market Risks index (S) for Public Banks

| | Financial Ratios of the Index (S) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| EBA | Interest Rate Risk (S1) | 0.5635 | 1.0202 | 0.8166 | 0.1653 |
| | Liquidity Risk (S2) | 0.1191 | 0.1825 | 0.1491 | 0.0218 |
| | Capital Risk (S3) | 0.1216 | 0.1747 | 0.1513 | 0.0203 |
| NBA | Interest Rate Risk (S1) | 0.7275 | 0.9903 | 0.9090 | 0.1068 |
| | Liquidity Risk (S2) | 0.1499 | 0.2002 | 0.1673 | 0.0183 |
| | Capital Risk (S3) | 0.1428 | 0.2317 | 0.1815 | 0.0379 |

**Source.** Made by the student based on Public Banks financial statement.

Through the above table and with regard to Sensitivity to Market Risks as an indicator for measuring performance in public banks, we note the following:

**External bank of Algeria (EBA):**

- The value of Interest Rate Risk (S1) ratio ranged during the (2012-2017) period between the values (0.5635) as lowest value and (1.0202) as highest value with arithmetic average of (0.8166) and standard deviation of (0.1653). That means that Interest rate sensitive assets (the numerator of this percentage) represent 81.66 % of Interest rate sensitive liabilities value (denominator of this percentage) .This reflects the ability of the External bank of Algeria (EBA) to manage interest rate risk, by making its Interest rate sensitive assets less than its Interest rate sensitive liabilities.

The banking industry standard specifies a maximum of 100% to accept this financial ratio.

- The value of Liquidity Risk (S2) ratio ranged during the (2012-2017) period between the values (0.1191) as lowest value and (0.1825) as highest value with arithmetic average of (0.1491) and standard deviation of (0.0218). That means that Monetary (the numerator of this percentage) represent 14.91 % of Total Deposit value (denominator of this percentage) .This reflects the ability of External bank of Algeria (EBA) to manage liquidity risk by providing the cash needed to counter depositor's withdrawals. The banking industry standard specifies at least 15% to accept this percentage.
- The value of Capital Risk (S3) ratio ranged during the (2012-2017) period between the values (0.1216) as lowest value and (0.1747) as highest value with arithmetic average of (0.1513) and standard deviation of (0.0203). That means that Capital (the numerator of this percentage) represent 15.13 % of Risky Assets value (denominator of this percentage) .This reflects the inability of the External bank of Algeria (EBA) to manage the capital risks, as the capital cannot cover the bank's obligations when it goes bankrupt, which does not enhance the bank's reputation with its clients. The banking industry standard specifies at least 20% to accept this financial percentage.

**National Bank of Algeria (NBA):**

- The value of Interest Rate Risk (S1) ratio ranged during the (2012-2017) period between the values (0.7275) as lowest value and (0.9903) as highest value with arithmetic average of (0.9090) and standard deviation of (0.1068). That means that Interest rate sensitive assets (the numerator of this percentage) represent 90.90% of Interest rate sensitive liabilities value (denominator of this percentage) .This reflects the ability of National Bank of Algeria (NBA) to manage interest rate risk, by making its Interest rate sensitive assets less than its Interest rate sensitive liabilities. The banking industry standard specifies a maximum of 100% to accept this financial ratio.

- The value of Liquidity Risk (S2) ratio ranged during the (2012-2017) period between the values (0.1499) as lowest value and (0.2002) as highest value with arithmetic average of (0.1673) and standard deviation of (0.0183). That means that Monetary (the numerator of this percentage) represent 16.73 % of Total Deposit value (denominator of this percentage) .This reflects the ability of National Bank of Algeria (NBA) to manage liquidity risk by providing the cash needed to counter depositor's withdrawals. The banking industry standard specifies at least 15% to accept this percentage.
- The value of Capital Risk (S3) ratio ranged during the (2012-2017) period between the values (0.1428) as lowest value and (0.2317) as highest value with arithmetic average of (0.1815) and standard deviation of (0.0379). That means that Capital (the numerator of this percentage) represent .1815 % of Risky Assets value (denominator of this percentage) .This reflects the inability of National Bank of Algeria (NBA) to manage the capital risks, as the capital cannot cover the bank's obligations when it goes bankrupt, which does not enhance the bank's reputation with its clients. The banking industry standard specifies at least 20% to accept this financial percentage.

❖ **Measuring Privet Banks performance Sensitivity to Market Risks**

The results regard to Sensitivity to Market Risks index (S) for Privet Banks are as shown in the following table:

**Table 13:** Sensitivity to Market Risks index (S) for Privet Banks

| | Financial Ratios of the Index (S) | Lowest value | Highest value | Arithmetic Average | Standard deviation |
|---|---|---|---|---|---|
| AL-Salam | Interest Rate Risk (S1) | 1.5963 | 2.3439 | 1.9937 | 0.2553 |
| | Liquidity Risk (S2) | 0.5255 | 0.8168 | 0.6708 | 0.0968 |
| | Capital Risk (S3) | 0.1929 | 0.3812 | 0.3107 | 0.0658 |
| AL-Baraka | Interest Rate Risk (S1) | 0.6767 | 0.8470 | 0.7777 | 0.0782 |
| | Liquidity Risk (S2) | 0.6041 | 0.9406 | 0.7733 | 0.1295 |
| | Capital Risk (S3) | 0.1651 | 0.3467 | 0.2587 | 0.0746 |

**Source:** Made by the student based on Privet Banks financial statement.

Through the above table and with regard to Sensitivity to Market Risks as an indicator for measuring performance in Privet Banks, we note the following:

**AL-Salam Bank:**

- The value of Interest Rate Risk (S1) ratio ranged during the (2012-2017) period between the values (1.5963) as lowest value and (2.3439) as highest value with arithmetic average of (1.9937) and standard deviation of (0.2553). That means that Interest rate sensitive assets (the numerator of this percentage) represent 199% of Interest rate sensitive liabilities value (denominator of this percentage) .This reflects the inability of AL-Salam Bank to manage interest rate risk, by making its Interest rate sensitive assets more than its Interest rate sensitive liabilities. The banking industry standard specifies a maximum of 100% to accept this financial ratio.
- The value of Liquidity Risk (S2) ratio ranged during the (2012-2017) period between the values (0.5255) as lowest value and (0.8168) as highest value with arithmetic average of (0.6708) and standard deviation of (0.0968). That means that Monetary (the numerator of this percentage) represent 67.08 % of Total Deposit value (denominator of this percentage) .This reflects the ability of AL-Salam Bank to manage liquidity risk by providing the cash needed to counter depositor's withdrawals. The banking industry standard specifies at least 15% to accept this percentage.
- The value of Capital Risk (S3) ratio ranged during the (2012-2017) period between the values (0.1929) as lowest value and (0.3812) as highest value with arithmetic average of (0.3107) and standard deviation of (0.0658). That means that Capital (the numerator of this percentage) represent 37.07 % of Risky Assets value (denominator of this percentage) .This reflects the ability of AL-Salam Bank to manage the capital risks, as the capital can cover the bank's obligations when it goes bankrupt, which enhance the bank's reputation with its clients. The banking industry standard specifies at least 20% to accept this financial percentage.

**AL-Baraka Bank:**

- The value of Interest Rate Risk (S1) ratio ranged during the (2012-2017) period between the values (0.6767) as lowest value and (0.8470) as highest value with

arithmetic average of (0.7777) and standard deviation of (0.0782). That means that Interest rate sensitive assets (the numerator of this percentage) represent 77.77% of Interest rate sensitive liabilities value (denominator of this percentage) .This reflects the ability of AL-Baraka Bank to manage interest rate risk, by making its Interest rate sensitive assets less than its Interest rate sensitive liabilities. The banking industry standard specifies a maximum of 100% to accept this financial ratio.

- The value of Liquidity Risk (S2) ratio ranged during the (2012-2017) period between the values (0.6041) as lowest value and (0.9406) as highest value with arithmetic average of (0.7733) and standard deviation of (0.1295). That means that Monetary (the numerator of this percentage) represent 77.33 % of Total Deposit value (denominator of this percentage) .This reflects the ability of AL-Baraka Bank to manage liquidity risk by providing the cash needed to counter depositor's withdrawals. The banking industry standard specifies at least 15% to accept this percentage.
- The value of Capital Risk (S3) ratio ranged during the (2012-2017) period between the values (0.1651) as lowest value and (0.3467) as highest value with arithmetic average of (0.2587) and standard deviation of (0.0746). That means that Capital (the numerator of this percentage) represent 25.87 % of Risky Assets value (denominator of this percentage) .This reflects the ability of AL-Baraka Bank to manage the capital risks, as the capital can cover the bank's obligations when it goes bankrupt, which enhance the bank's reputation with its clients. The banking industry standard specifies at least 20% to accept this financial percentage.

## 2.5. Displaying the results of the banks performance

We will rely on the 18 financial ratios result where we have given one mark to the bank who has achieve a good performance on the ratio and by returning to the five classifications suggested by the CAMELS model, the results are as follows:

**Table 14: Banks performance results**

| R | | External Bank of Algeria | National Bank of Algeria | Al- Salam Bank | Al Baraka Bank |
|---|---|---|---|---|---|
| **C 1** | **≥ 08 %** | 1 | 1 | 1 | 1 |
| **C 2** | **≥ 05 %** | 1 | 1 | 0 | 1 |
| **C 3** | **≥ 10 %** | 1 | 1 | 1 | 1 |
| A 1 | ≥ 10 % | 1 | 1 | 1 | 0 |
| A 2 | ≥ 50 % | 1 | 1 | 1 | 0 |
| A 3 | ≥ 100 % | 0 | 0 | 0 | 0 |
| M 1 | ≥ 10 % | 0 | 0 | 0 | 0 |
| M 2 | ≤ M 1 | 1 | 1 | 1 | 1 |
| M 3 | ≥ 100 % | 1 | 1 | 0 | 0 |
| E 1 | ≥ 01 % | 1 | 1 | 1 | 1 |
| E 2 | ≥ 01 % | 1 | 1 | 1 | 1 |
| E 3 | ≥ 10 % | 1 | 1 | 0 | 0 |
| L 1 | ≥ 66.66 % | 0 | 0 | 1 | 1 |
| L 2 | ≥ 33.33 % | 0 | 1 | 1 | 1 |
| L 3 | ≥ 10 % | 1 | 1 | 1 | 1 |
| S 1 | ≤ 100 % | 1 | 1 | 0 | 1 |
| S 2 | ≥ 15 % | 0 | 1 | 1 | 1 |
| S 3 | ≥ 20 % | 0 | 0 | 1 | 1 |
| Total marks | | 12 | 14 | 12 | 12 |
| Performance type | | **satisfactory performance** | **satisfactory performance** | **satisfactory performance** | **satisfactory performance** |

**Source:** Self-made based on CAMELS financial ratios results.

**A- From 0 to 3.6 Marks**

Considered unsatisfactory performance that is critically deficient and in need of immediate remedial attention. Such performance, by itself or in combination with other weaknesses, directly threatens the viability of the bank. The volume and severity of problems are beyond management's ability or willingness to control or correct. Banks in this group have a high probability of failure and will likely require liquidation and

the payoff of shareholders, or some other form of emergency assistance, merger, or acquisition.

**B- From 3.6 to 7.2 Marks**

Refers to poor performance that is of serious supervisory concern. Risk management practices are generally unacceptable relative to the bank's size, complexity, and risk profile. Key performance measures are likely to be negative. If left unchecked, such performance would likely lead to conditions that could threaten the viability of the bank. There may be significant noncompliance with laws and regulations. The board of directors and management are not satisfactorily resolving the weaknesses and problems. A high potential for failure is present but is not yet imminent or pronounced. Banks in this group require close supervisory attention.

**C- From 7.2 to 10.8 Marks**

Represents performance that is flawed to some degree and is of supervisory concern. Risk management practices may be less than satisfactory relative to the bank's size, complexity, and risk profile. Management may not identify nor provide mitigation of significant risks. Both historical and projected key performance measures may generally be flat or negative to the extent that safe and sound operations may be adversely affected. Banks in this group are only nominally resistant to the onset of adverse business conditions and could easily deteriorate if concerted action is not effective in correcting certain identifiable areas of weakness.

**D- From 10.8 to 14.4 Marks**

Reflects satisfactory performance and risk management practices that consistently provide for safe and sound operations. Management identifies most risks and compensates accordingly. Both historical and projected key performance measures should generally be positive with any exceptions being those that do not directly affect safe and sound operations. Banks in this group are stable and able to withstand business fluctuations quite well; however, minor areas of weakness may be present which could develop into conditions of greater concern. These weaknesses are well within the board

of directors' and management's capabilities and willingness to correct. These banks are in substantial compliance with laws and regulations. The supervisory response is limited to the extent that minor adjustments are resolved in the normal course of business and that operations continue to be satisfactory.

**E- From 14.4 to 18 Marks**

Indicates strong performance and risk management practices that consistently provide for safe and sound operations. Management clearly identifies all risks and employs compensating factors mitigating concerns. The historical trend and projections for key performance measures are consistently positive. Banks and credit unions in this group resist external economic and financial disturbances and withstand the unexpected actions of business conditions more ably than banks and credit unions with a lower composite rating. Any weaknesses are minor and can be handled in a routine manner by the board of directors and management. These banks and credit unions are in substantial compliance with laws and regulations. Such institutions give no cause for supervisory concern.

## 2.6. Conclusion

Through this chapter, in which the selected banks are introduced. Two public banks were chosen, namely the external Bank of Algeria and the national Bank of Algeria, as well as two private banks, namely Al- Salam Bank and Al baraka Bank.

This is in order to know the development of the elements of the financial statements, as well as to know the most important changes that occurred on these elements during the study period.

Based on the performance measurement using the CAMELS standard, the performance of all banks was rated as satisfactory by obtaining a total score ranging between 12 and 14 points, which reflects the reality of the actual performance of banks that do not take into account the commercial viability when carrying out their activities.

# *Conclusion*

After conducting this study, with its both theoretical and practical parts In

Which we dealt in the theoretical chapter with the theoretical framework of financial performance, Financial performance analysis, Concept of appraisal, financial statement and financial statement analysis. We also discussed the concept of bank performance and the Importance of measuring bank performance.

In the practical part, we introduced the banks subject of the study, we also evaluated their financial statements elements and measured their performance by using CAMELS rating base and finally we displayed the results of the banks performance.

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## I- Results presentation

We reached a set of results, including those related to the theoretical side and those related to the practical work, through which to test the hypotheses proposed in the introduction of this study in order to provide a set of suggestions.

### I-I Results obtained from the theoretical part of the study

1- The process of performance evaluation in general is considered a more comprehensive and accurate process than measuring or monitoring performance, because it does not only mean showing results, but rather depends on analyzing these results and making sure that they are going according to the established objectives and developing solutions.

2- Performance measurement is intended to measure the performance of the activities of the economic unit combined, based on the results achieved at the end of the accounting cycle, which is usually a year. in addition to try to find out the reasons that led to these results and suggest solutions to overcome the causes of negative results in order to reach good performance in the future.

3- Determinants of bank performance can be split between those that are internal and those that are external. Internal determinants are also sometimes called

microeconomic determinants or inherent performance, while external determinants are variables that reflect economic and legal environment in which the bank operates.

4- Financial analysis of banking performance helps in ensuring the availability of liquidity and measuring the level of profitability in light of investment and financing decisions, as well as profits in the framework of the quest to maximize the current value in the bank, given that the financial goals are to increase the current value of the bank and maintain liquidity to protect it from the risk of bankruptcy and achieve an appropriate return on Investment

5- Measuring the performance of banks is of great importance due to the specificity of the bank's activity, the enormity of the funds with which it deals, and velocity of circulation of private and deposited funds, which requires decision-makers to verify the efficiency of the performance and to achieve the best results at the lowest costs.

6- Financial analysis of banking performance is a series of financial methods that can be used to determine the point of strength or weakness of banks, and financial ratios are mainly used in this analysis in order to compare past performance with current and expected performance and to know the areas of difference, to reach a diagnosis of the positives and negatives of banks' performance in order to enhance the positives and address Negatives.

7- There are many standards adopted in analyzing the performance of banks, such as return on assets, return on equity, CAMELS model. Wish is considered the most important and most used by financial analysts.

8- A large number of financial ratios can be used when analyzing the financial position of any bank, which can be divided into several groups, and each group of these ratios standardizes and studies a specific part of the performance, depending on the intended purpose of the financial analysis.

**I-II Results obtained from the practical part**

Using the case study approach, chapter number two included the introduction of the banks and the presentation of the elements of their financial statements during the period (2012-2017). It also included measuring the performance, where we reached the following results:

**Results related to the development of the components of banks' financial statements during the 2012/2017 period**

1- Both the external bank of Algeria and the national bank of Algeria own the largest amount of assets and liabilities compared to other banks in the study, which allows these two banks to own the largest share of loans and deposits of all kinds, and increases their competitiveness with other banks

2- Both the external bank of Algeria and the national bank of Algeria own the largest amount of loans, due to the state's imposition on these banks to finance projects and support the youth (ANSJ, CNAC, ANGEM).

3- All banks rely on a strategy to diversify their deposit portfolio to avoid liquidity risks.

4- The values of net profit after taxes in banks have fluctuated continuously throughout the study period, between stability and the rise and fall in their value.

5- The great development that affected the assets of private banks during the study period is due to the increase in the number of agencies for these banks and the development of their activity.

**Results related to Banks performance measurement using CAMELS model**

1- with regard to the capital adequacy (C1) and Regular banking risk coverage rate (C3) all banks have succeeded in exceeding the standard set for the capital adequacy ratio, as for general banking risk coverage rate (C2) AL-Salam bank has fail to exceed the standard set for (C2) ratio

2- as for Asset quality all banks have succeeded in exceeding the standard set for Lending Quality (A1) and Loans Employment (A2) except Al-Baraka Bank in the

other hand all banks have fail to exceed the standard set for Off-Balance-Sheet Commitments Quality (A3)

3- as for Management Efficiency all banks have fail to exceed the standard set for profit generation efficiency (M1) and succeeded in exceeding the standard set for Efficient management of deposit costs (M2) in the other hand the privet banks have fail to exceed the standard set for profit generation efficiency (M3)

4- As for Earnings ratio all banks have succeeded in exceeding the standard set for Interest margin (E1) and Return on assets (E2) in the other hand the privet bank has fail to exceed the standard set for Return on capital (E2)

5- As for Liquidity ratio the public banks have fail to exceed the standard set for Quick liquidity (L1) and for Ordinary liquidity (L2) External Bank of Algeria have fail to exceed the standard set for it in the other hand all banks have exceed the standard set for Legal liquidity (L3)

6- As for sensitivity to market risks Al- Salam Bank have fail to exceed the standard set for Interest Rate Risk (S1) and the external bank of Algeria have fail to exceed the standard set for Liquidity Risk (S2) in the other hand the public banks have fail to exceed the standard set for Capital Risk (S3)

the hypotheses test in light of the results

## II- Judging the study hypotheses in light of the results

**Testing the first hypothesis**

We suggested the following hypothesis: The process of financial analysis of financial statements, using standard models in measuring performance, gives outputs that shows the financial analyst the current performance of the bank, and gives him the ability to visualize the future status of this performance. It is a valid hypothesis based on result number one, two and six obtained from the theoretical part

**Testing the second hypothesis**

We suggested the following hypothesis: Determinants of bank performance can be split between those that are internal determinants, and external determinants. It is a valid hypothesis based on result number three obtained from the theoretical part

**Testing the third hypothesis**

We suggested the following hypothesis: CAMELS model is considered the most appropriate standard for measuring the performance of the banks under study.
It is a valid hypothesis based on result number seven obtained from the theoretical part and the results related to banks performance measurement.

## III- Further studies Suggestions

- All banks especially the public banks must improve the type of services they provide, whether related to collecting deposits or granting loans.
- A ratio of 30% of the bank's monetary must be determined to avoid liquidity risk
- Banks' administrations must rely on performance measurement standards in general and CAMELS standards, in particular, to verify the reality of their performance and find out the weaknesses to avoid them in the future.
- The bank should focus on the credit worthiness of the client rather than focusing on the guarantees that the client offer.
- Banks should diversify their investment portfolios according to the scientific standards, as Markowitz standard for diversification, in order to reduce risks.
- The monetary authority represented by the Central Bank and the Ministry of Finance should raise the degree of banking supervision on banks because bank failure will greatly affect other economic sectors and may lead to financial crises.
- Imposing laws that would raise the quality of loans granted by banks and move away from financial purification operations that the government often undertakes in favor of public banks.

- Banks, in particular, and other economic institutions and other departments, must be transparent with regard to publishing their financial statements and annual reports to the public so that researchers can carry out their field research.

**IV- prospects of the study**

Through the results and through what has been observed, the student believes that future studies in this topic can cover the following points:

- Doing more research based on standard models
- Distribute the sample size to include more banks
- Expand the time range

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# *Appendices*

# Appendix 01: EBA financial statements

## 2012 – 2013 financial statements:

**BILAN AU 31/12/2013 - SCF**

| ORDRE | ACTIF | CODIFICATION | 31/12/2013 | 31/12/2012 | EVOLUTION |
|---|---|---|---|---|---|
| 1 | CAISSE, BANQUE CENTRALE, TRÉSOR PUBLIC, CENTRE DES CHÈQUES POSTAUX | BA0100 | 390 351 460 930,38 | 642 459 372 297,30 | (252 107 911 366,93) |
| 2 | ACTIFS FINANCIERS DÉTENUS À DES FINS DE TRANSACTION | BA0200 | 0,00 | 0,00 | - |
| 3 | ACTIFS FINANCIERS DISPONIBLES À LA VENTE | BA0300 | 9 342 969 854,64 | 11 719 220,00 | 9 331 250 634,64 |
| 4 | PRÊTS ET CRÉANCES SUR LES INSTITUTIONS FINANCIÈRES | BA0400 | 643 242 639 825,49 | 713 783 259 293,11 | (70 540 619 467,62) |
| 5 | PRÊTS ET CRÉANCES SUR LA CLIENTÈLE | BA0500 | 751 291 690 340,97 | 575 834 839 064,21 | 175 456 851 276,76 |
| 6 | ACTIFS FINANCIERS DÉTENUS JUSQU' À L'ÉCHÉANCE | BA0600 | 177 174 152 348,68 | 190 871 591 663,14 | (13 697 439 314,46) |
| 7 | IMPÔTS COURANTS - ACTIF | BA0700 | 20 132 038 817,93 | 18 367 037 425,17 | 1 765 001 392,76 |
| 8 | IMPÔTS DIFFÉRÉS - ACTIF | BA0800 | 1 375 123 870,76 | 1 351 758 513,98 | 23 365 356,78 |
| 9 | AUTRES ACTIFS | BA0900 | 69 050 254 063,29 | 94 835 957 265,32 | (25 785 703 202,03) |
| 10 | COMPTES DE RÉGULARISATION | BA1000 | 8 995 651 408,85 | 22 219 958 439,21 | (13 224 307 030,36) |
| 11 | PARTICIPATION DANS LES FILIALES, LES CO-ENTREPRISES OU LES ENTITÉES ASSOCIÉES | BA1100 | 21 592 282 996,50 | 23 861 515 793,76 | (2 269 232 797,26) |
| 12 | IMMEUBLES DE PLACEMENT | BA1200 | 0,00 | 0,00 | - |
| 13 | IMMOBILISATIONS CORPORELLES | BA1300 | 18 695 843 471,51 | 19 148 724 914,70 | (452 881 443,19) |
| 14 | IMMOBILISATIONS INCORPORELLES | BA1400 | 199 346 300,51 | 191 794 783,68 | 7 551 516,83 |
| 15 | ÉCART D'ACQUISITION | BA1500 | 0,00 | 0,00 | - |
| **TOTAL DE L'ACTIF** | | | **2 111 443 454 229,51** | **2 302 937 528 673,58** | **(191 494 074 444,07)** |

| ORDRE | PASSIF | CODIFICATION | 31/12/2013 | 31/12/2012 | EVOLUTION |
|---|---|---|---|---|---|
| 1 | BANQUE CENTRALE | BP0100 | 0,00 | 0,00 | - |
| 2 | DETTES ENVERS LES INSTITUTIONS FINANCIÈRES | BP0200 | 1 135 406 743,04 | 15 604 849 323,99 | (14 469 442 580,95) |
| 3 | DETTES ENVERS LA CLIENTÈLE | BP0300 | 1 679 475 901 848,97 | 1 846 239 125 888,33 | (166 763 224 039,36) |
| 4 | DETTES REPRÉSENTÉES PAR UN TITRE | BP0400 | 41 838 931 136,29 | 40 506 183 346,14 | 1 332 747 790,15 |
| 5 | IMPÔTS COURANTS - PASSIF | BP0500 | 10 633 807 021,26 | 15 037 918 974,63 | (4 404 111 953,36) |
| 6 | IMPÔTS DIFFÉRÉS - PASSIF | BP0600 | 581 313,06 | 80 842,62 | 500 470,44 |
| 7 | AUTRES PASSIFS | BP0700 | 55 743 696 277,96 | 55 211 153 325,35 | 532 542 952,61 |
| 8 | COMPTES DE RÉGULARISATION | BP0800 | 33 965 872 065,55 | 44 223 762 556,35 | (10 257 890 490,80) |
| 9 | PROVISIONS POUR RISQUES ET CHARGES | BP0900 | 8 270 156 687,13 | 6 279 062 165,82 | 1 991 094 521,31 |
| 10 | SUBVENTIONS D'ÉQUIPEMENT - AUTRES SUBVENTIONS D'INVESTISSEMENTS | BP1000 | 0,00 | 0,00 | - |
| 11 | FONDS POUR RISQUES BANCAIRES GÉNÉRAUX | BP1100 | 9 070 563 752,17 | 9 417 216 183,48 | (346 652 431,31) |
| 12 | DETTES SUBORDONNÉES | BP1200 | 67 276 520 000,00 | 67 276 520 000,00 | - |
| 13 | CAPITAL | BP1300 | 100 000 000 000,00 | 76 000 000 000,00 | 24 000 000 000,00 |
| 14 | PRIMES LIÉES AU CAPITAL | BP1400 | 0,00 | 0,00 | - |
| 15 | RÉSERVES | BP1500 | 56 132 294 831,29 | 64 574 991 449,46 | (8 442 696 618,17) |
| 16 | ECART D'ÉVALUATION | BP1600 | -43 416 963,00 | -1 835 639,90 | (41 581 323,10) |
| 17 | ECART DE RÉÉVALUATION | BP1700 | 12 456 077 117,23 | 12 456 077 117,23 | - |
| 18 | REPORT À NOUVEAU (+/-) | BP1800 | 14 555 119 758,25 | 14 555 119 758,25 | - |
| 19 | RÉSULTAT DE L'EXERCICE (+/-) | BP1900 | 20 931 942 640,30 | 35 557 303 381,83 | (14 625 360 741,53) |
| **TOTAL DU PASSIF** | | | **2 111 443 454 229,51** | **2 302 937 528 673,58** | **(191 494 074 444,07)** |

## HORS BILAN 2013 - SCF

| ORDRE | ENGAGEMENTS | CODIFICATION | 31/12/2013 | 31/12/2012 | EVOLUTION |
|---|---|---|---|---|---|
| | | | | | |
| **A** | **ENGAGEMENTS DONNES** | | **735 466 356 099,73** | **795 853 602 565,28** | **(60 387 246 465,56)** |
| 1 | ENGAGEMENTS DE FINANCEMENT EN FAVEUR DES INSTITUTIONS FINANCIERES | HB0100 | - | - | - |
| 2 | ENGAGEMENTS DE FINANCEMENT EN FAVEUR DE LA CLIENTELE | HB0200 | 421 286 951 177,80 | 464 177 934 926,30 | (42 890 983 748,50) |
| 3 | ENGAGEMENTS DE GARANTIE D'ORDRE DES INSTITUTIONS FINANCIERES | HB0300 | 138 198 928 113,38 | 115 714 466 695,10 | 22 484 461 418,28 |
| 4 | ENGAGEMENTS DE GARANTIE D'ORDRE DE LA CLIENTELE | HB0400 | 175 980 476 808,55 | 215 961 200 943,89 | (39 980 724 135,34) |
| 5 | AUTRES ENGAGEMENTS DONNES | HB0500 | - | - | - |
| | | | | | |
| **B** | **ENGAGEMENTS RECUS** | | **719 333 005 267,21** | **767 992 971 580,93** | **(48 659 966 313,71)** |
| 6 | ENGAGEMENTS DE FINANCEMENT RECUS DES INSTITUTIONS FINANCIERES | HB0600 | - | - | - |
| 7 | ENGAGEMENTS DE GARANTIE RECUS DES INSTITUTIONS FINANCIERES | HB0700 | 712 657 288 267,21 | 761 185 933 580,93 | (48 528 645 313,71) |
| 8 | AUTRES ENGAGEMENTS RECUS | HB0800 | 6 675 717 000,00 | 6 807 038 000,00 | (131 321 000,00) |

| POUR CONFIRMATION | | CODIFICATION | 31/12/2013 | 31/12/2012 | EVOLUTION |
|---|---|---|---|---|---|
| | | | | | |
| 9 | CONTREPARTIE DES ENGAGEMENTS DONNES | HB0900 | 735 466 356 099,73 | 795 853 602 565,28 | (60 387 246 465,56) |
| 10 | CONTREPARTIE DES ENGAGEMENTS RECUS | HB1000 | 719 333 005 267,21 | 767 992 971 580,93 | (48 659 966 313,71) |

## TABLEAU DES COMPTES DE RESULTATS AU 31/12/2013- SCF

| ORDRE | COMPTES DE RESULTATS | CODIFICATION | 31/12/2013 | 31/12/2012 | EVOLUTION |
|---|---|---|---|---|---|
| 1 | (+) INTÉRÊTS ET PRODUITS ASSIMILÉS | CP1100 | 33 303 635 037,32 | 32 874 176 650,33 | 429 458 386,99 |
| 2 | (-) INTÉRÊTS ETCHARGES ASSIMILÉES | CC1100 | (15 919 101 194,86) | (14 757 147 501,93) | (1 161 953 692,93) |
| 3 | (+) COMMISSIONS (PRODUITS) | CP1200 | 21 091 333 514,12 | 23 513 814 539,36 | (2 422 481 025,24) |
| 4 | (-) COMMISSIONS (CHARGES) | CC1200 | (1 241 756 278,34) | (1 387 196 275,80) | 145 439 997,46 |
| 5 | (+/-) GAINS OU PERTES NETS SUR ACTIFS FINANCIERS DÉTENUS À DES FINS DE TRANSACTION | CP/CC1300 | 43 908 044,51 | 267 924 808,28 | (224 016 763,77) |
| 6 | (+/-) GAINS OU PERTES NETS SUR ACTIFS FINANCIERS DISPONIBLES À LA VENTE | CP/CC1400 | (13 879 393,63) | (35 850 235,42) | 21 970 841,79 |
| 7 | (+) PRODUITS DES AUTRES ACTIVITÉS | CP1500 | 16 423 367 234,42 | 9 018 149 723,06 | 7 405 217 511,36 |
| 8 | (-) CHARGES DES AUTRES ACTIVITÉS | CC1500 | (8 064 714 714,90) | (4 984 541 823,81) | (3 080 172 891,09) |
| **9** | **PRODUIT NET BANCAIRE** | | **45 622 792 248,64** | **44 509 329 884,07** | **1 113 462 364,57** |
| 10 | (-) CHARGES GÉNÉRALES D'EXPLOITATION | CC2600 | (16 196 291 299,30) | (17 226 450 981,12) | 1 030 159 681,82 |
| 11 | (-) DOTATIONS AUX AMORTISSEMENTS ET AUX PERTES DE VALEUR SUR IMMOBILISATIONS INCORPORELLES ET C | CC2700 | (1 172 708 454,67) | (1 223 375 250,45) | 50 666 795,78 |
| **12** | **RÉSULTAT BRUT D'EXPLOITATION** | | **28 253 792 494,67** | **26 059 503 652,50** | 2 194 288 842,17 |
| 13 | (-) DOTATIONS AUX PROVISIONS, AUX PERTES DE VALEUR ET CRÉANCES IRRÉCOUVRABLES | CC3800 | (2 510 782 778,96) | (363 048 191,21) | (2 147 734 587,75) |
| 14 | (+) REPRISES DE PROVISIONS, DE PERTES DE VALEUR ET RÉCUPÉRATION SUR CRÉANCES AMORTIES | CP3900 | 2 566 992 034,41 | 21 334 946 285,49 | (18 767 954 251,08) |
| **15** | **RÉSULTAT D'EXPLOITATION** | | **28 310 001 750,12** | **47 031 401 746,78** | (18 721 399 996,66) |
| 16 | (+/-) GAINS OU PERTES NETS SUR AUTRES ACTIFS | CP/CC4100 | 447 218,49 | 551 004,33 | (103 785,84) |
| 17 | (+) ÉLÉMENTS EXTRAORDINAIRES (PRODUITS) | CP4200 | - | | |
| 18 | (-) ÉLÉMENTS EXTRAORDINAIRES (CHARGES) | CC4300 | - | | |
| **19** | **RÉSULTAT AVANT IMPÔTS** | | **28 310 448 968,61** | **47 031 952 751,11** | (18 721 503 782,50) |
| 20 | (-) IMPÔTS SUR LES RÉSULTATS ET ASSIMILÉS | CR5000 | (7 378 506 328,30) | (11 474 649 369,28) | 4 096 143 040,98 |
| **21** | **RÉSULTAT NET DE L'EXERCICE** | | **20 931 942 640,31** | **35 557 303 381,83** | **(14 625 360 741,52)** |

## Appendix 02: NBA financial statements

## 2014 financial statements:

### Bilan au 31 décembre 2014 En milliers de Dinars

| ACTIF | Déc - 14 |
|---|---|
| Caisse, banque centrale, trésor public, centre de chèques postaux. | 318 233 779 |
| Actifs financiers détenus à des fins de transaction | 212 |
| Actifs financiers disponibles à la vente | 230 569 742 |
| Prêts et créances sur les institutions financières | 55 145 087 |
| Prêts et créances sur la clientèle | 1 831 665 625 |
| Actifs financiers détenus jusqu'à l'échéance | 14 032 319 |
| Impôts courants - Actif | 12 678 581 |
| Impôts différés - Actif | 643 381 |
| Autres actifs | 39 924 437 |
| Comptes de régularisation | 77 806 314 |
| Participations dans les filiales, les co-entreprises ou les entités associées | 17 467 981 |
| Immeubles de placement | |
| Immobilisations nettes corporelles | 22 190 068 |
| Immobilisations incorporelles nettes | 261 760 |
| Ecart d'acquisition | - |
| TOTAL DE L'ACTIF | 2 620 619 286 |

| PASSIF | Déc - 14 |
|---|---|
| Banque centrale | |
| Dettes envers les institutions financières | 162 789 197 |
| Dettes envers la clientèle | 1 742 545 916 |
| Dettes représentées par un titre | 18 698 362 |
| Impôts courants - Passif | 9 958 741 |
| Impôts différés - Passif | 389 090 |
| Autres passifs | 288 693 599 |
| Comptes de régularisation | 91 192 610 |
| Provisions pour risques et charges | 23 990 196 |
| Subventions d'équipement-autres subventions d'investissements | |
| Fonds pour risques bancaires généraux | 68 044 201 |
| Dettes subordonnées | 14 000 000 |
| Capital | 41 600 000 |
| Primes liées au capital | |
| Réserves | 106 245 349 |
| Ecart d'évaluation | 2 862 137 |
| Ecart de réévaluation | 14 122 289 |
| Report à nouveau (+/-) | 5 703 142 |
| Résultat de l'exercice (+/-) | 29 784 457 |
| TOTAL DU PASSIF | 2 620 619 286 |

### Compte de résultats de l'exercice 2014

| En milliers de Dinars | Déc - 14 |
|---|---|
| + Intérêts et produits assimilés | 111 560 106 |
| - Intérêts et charges assimilées | -24 588 757 |
| + Commissions (produits) | 1 785 268 |
| - Commissions (charges) | -47 262 |
| +/- Gains ou pertes nets sur actifs financiers détenus à des fins de transaction | 19 |
| +/- Gains ou pertes nets sur actifs financiers disponibles à la vente | 265 133 |
| + Produits des autres activités | 132 073 |
| - Charges des autres activités | - |
| PRODUIT NET BANCAIRE | 89 106 580 |
| - Charges générales d'exploitation | -15 871 056 |
| - Dotations aux amortissements et aux pertes de valeurs sur immobilisations incorporelles et corporelles | -1 325 244 |
| RESULTAT BRUT D'EXPLOITATION | 71 910 280 |
| - Dotations aux provisions, aux pertes de valeurs et créances irrécouvrables | -74 801 315 |
| + Reprises de provisions, de pertes de valeur et récupération sur créances amorties | 42 787 301 |
| RESULTAT D'EXPLOITATION | 39 896 266 |
| +/- Gains ou pertes nets sur autres actifs | |
| + Eléments extraordinaires (produits) | |
| - Eléments extraordinaires (charges) | -153 068 |
| RESULTAT AVANT IMPOT | 39 896 266 |
| -Impots sur les resultats et assimilés | -9 958 741 |
| EXEDENT DES PRODUITS SUR LES CHARGES OU INSUFISANCE DES PRODUITS SUR LES CHARGES | 29 784 457 |

### HORS BILAN AU 31 décembre 2014

| En milliers de Dinars | Déc - 14 |
|---|---|
| ENGAGEMENTS | |
| ENGAGEMENTS DONNES : | 1 201 719 003 |
| Engagements de financement en faveur des institutions financières | 25 797 563 |
| Engagements de financement en faveur de la clientèle | 328 584 847 |
| Engagements de garantie d'ordre des institutions financières | 568 253 621 |
| Engagements de garantie d'ordre de la clientèle | 279 082 972 |
| Autres engagements donnés | |
| ENGAGEMENTS REÇUS : | 1 096 270 618 |
| Engagements de financement reçus des institutions financières | |
| Engagements de garantie reçus des institutions financières | 530 975 045 |
| Autres engagements reçus | 565 295 573 |

## Appendix 03: SBA financial statements

## 2014 – 2015 financial statements:

| | | الالتزامات | الإيضاح | 2015 | 2014 |
|---|---|---|---|---|---|
| | أ | **التزامات ممنوحة** | | | |
| 1 | | التزامات التمويل لفائدة الهيئات المالية | | | |
| 2 | | التزامات التمويل لفائدة الزبائن | 1.3 | 9 310 106 | 13 737 238 |
| 3 | | التزامات ضمان بأمر من الهيئات المالية | | | |
| 4 | | التزامات ضمان بأمر من الزبائن | 2.3 | 8 007 907 | 7 156 377 |
| 5 | | التزامات أخرى ممنوحة | | | |
| | ب | **التزامات محصل عليها** | | | |
| 6 | | التزامات التمويل المحصل عليها من الهيئات المالية | | | |
| 7 | | التزامات الضمان المحصل عليها من الهيئات المالية | 3.3 | 2 000 676 | 932 553 |
| 8 | | التزامات أخرى محصل عليها | 4.3 | 15 794 689 | 3 816 973 |
| 15 | | احتياطات | | 399 999 | 261 668 |
| 16 | | فارق التقييم | | | |
| 17 | | فارق إعادة التقييم | | | |
| 18 | | ترحيل من جديد (+/-) | | 3 599 991 | 2 355 008 |
| 19 | | نتيجة السنة المالية (+/-) | | 301 357 | 1 383 314 |
| | | **مجموع الخصوم** | | **40 575 207** | **36 309 089** |

## Appendix 04: BBA financial statements

## 2017 financial statements

| | البند | المذكرة | السنوات المالية | |
|---|---|---|---|---|
| | | | 2016 | 2017 |
| 1 | الصندوق، بنك الجزائر، مركز الصكوك البريدية | 2,1 | 89 902 868 | 99 616 004 |
| 2 | أصول أخرى ممسوكة لأغراض تجارية | | 0 | 0 |
| 3 | أصول مالية قابلة للبيع | | 0 | 0 |
| 4 | تمويلات ممنوحة للمؤسسات مالية | 2,2 | 3 179 827 | 3 123 641 |
| 5 | تمويلات ممنوحة للزبائن | 2,3 | 107 531 185 | 136 553 371 |
| 6 | أصول مالية ممسوكة الى غاية تاريخ الاستحقاق | | 0 | 0 |
| 7 | ضرائب جارية -أصول | 2,4 | 1 473 416 | 1 391 936 |
| 8 | ضرائب مؤجلة-أصول | 2,5 | 211 565 | 205 398 |
| 9 | أصول أخرى | 2,6 | 1 538 005 | 1 824 740 |
| 10 | حسابات التسوية | 2,7 | 1 423 515 | 645 644 |
| 11 | المساهمة في شركات، مؤسسات و وحدات | 2,8 | 1 670 691 | 1 718 778 |
| 12 | عقارات مخصصة كودائع | | 0 | 0 |
| 13 | أصول ثابتة | 2,9 | 3 374 185 | 3 553 182 |
| 14 | أصول غير ثابتة | 2,10 | 38 364 | 0 |
| 15 | فارق الاقتناء | | 0 | 0 |
| | مجموع الأصول | | 210 343 621 | 248 632 694 |

| | البند | المذكرة | السنوات المالية | |
|---|---|---|---|---|
| | | | 2016 | 2017 |
| أ | التزامات ممنوحة | | 64 210 227 | 72 107 955 |
| 1 | التزامات تمويل لفائدة المؤسسات المالية | | 0,00 | 0 |
| 2 | التزامات تمويل لفائدة الزبائن | 3,1 | 57 847 675 | 65 991 844 |
| 3 | التزامات ضمانات لأمر مؤسسات مالية | 3,2 | 195 001 | 234 487 |
| 4 | التزامات ضمانات لأمر الزبائن | 3,3 | 6 167 551 | 5 881 625 |
| 5 | التزامات أخرى ممنوحة | | 0 | 0 |
| ب | التزامات مستلمة | | 890 001 | 3 028 999 |
| 6 | التزامات تمويل مستلمة من المؤسسات المالية | | 0,00 | 0 |
| 7 | التزامات و ضمانات مستلمة من مؤسسات مالية | 3,2 | 890 001 | 3 028 999 |
| 8 | التزامات أخرى مستلمة | | 0,00 | 0 |