Evaluating the Performance of Commercial Banks Using the CAMELS Index - Case Study of the National Bank of Algeria (BNA) During the Period (2018-2023)

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Abstract: *This study aims to evaluate the financial performance of the National Bank of Algeria (BNA) during the period from 2018 to 2023, based on the CAMELS model as one of the control models used in assessing the safety of banks ' financial positions and measuring the efficiency of their performance. This model is based on six basic axes: capital adequacy, asset quality, management efficiency, profitability, liquidity and sensitivity to market risks. To achieve the objectives of the study, the descriptive and analytical approach was adopted by studying and analyzing a set of financial indicators extracted from the accounting data of the National Bank of Algeria, and following up their development during the study period.*

The study concluded that the financial performance of the National Bank of Algeria was characterized by differences between its components, where it recorded positive results in some indicators, in contrast to the existence of aspects that require more attention, especially with regard to the cost of resources, cash liquidity, credit risk management and the market.

Keywords: Bank Financial Performance, CAMELS Model, National Bank of Algeria.

Jel Classification: G21, G28, G32

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Introduction

The process of evaluating the activity of banks has become extremely important in order to maintain the robustness and integrity of the banking system, especially in light of the development of banks ' business, the breadth and diversity of their products and the resulting increase and diversity in banking risks, for this reason, in light of these changes, banking institutions had no choice but to search for New appropriate and effective ways to assess their performance and activity so that they could adopt it as an early warning mechanism, and as a monitoring tool to use it to reveal their strengths and weaknesses in order to alert them of any and the methods of classifying the performance of commercial banks have led to the emergence of various criteria regarding this, such as the CAMELS criterion, which is one of The most important modern evaluation models used to measure the integrity of bank performance and develop it to ensure the continuity of the bank and raise its competitiveness, and it also helps to detect financial imbalances in the activity of banking institutions early, which gives them the opportunity not to be exposed to financial problems that may lead them to collapse or bankruptcy.

The American banking rating system CAMELS is based on six important and necessary indicators in assessing the activity of any bank: capital adequacy, asset quality, sound management, profitability, liquidity, and the degree of sensitivity to market risks, so any application of this system in assessing the activity of any bank requires a precise and clear understanding of all these indicators, as well as the availability of all the information that can facilitate the process of determining the values of the criteria that fall within the scope of each of the previous six indicators, which was confirmed when we studied the financial position of the National Bank of Algeria using indicators and criteria system. CAMELS.

This study tried to evaluate the performance of the National Bank of Algeria (NBA) for the period (2018-2023) using the CAMELS model to try to find out the performance provided by this bank.

- **The problem of the study:**

The banking business is characterized by constant change and renewal, both at the level of internal mechanisms of work and at the level of the environment and the ocean, so the solvency of capital is considered commensurate with the risks to which it is exposed, and the fact that the American standard of assessment CAMELS is a quick indicator to take note of the financial situation of any bank and know its rating.

Based on the above, the main problematic of the study can be formulated as follows**:**

To What Extent Can the CAMELS Model be Efficient and Effective in Assessing the Financial Performance of the National Bank of Algeria under Study?

- **Sub-questions:**

To answer the problematic of the study, the following sub-questions can be formulated:

- What is meant by evaluating financial performance?
- What does the CAMELS model depend on in evaluating banking performance?
- Can the camels standard be applied at the National Bank of Algeria?

- **Study hypotheses:**

Based on the above questions, the study is based on testing the validity of the following hypotheses:

- Assessment of banking performance is an indicator of efficiency and effectiveness in the use of available resources;
- The effectiveness of the CAMELS standard in assessing banking performance depends on the presence of information about the bank's financial statements;
- The determinants of the effectiveness of the CAMELS model in assessing banking performance lie in the study and analysis of financial information.

- **Study objectives:**

The objectives of the study can be summarized in the following points:

- Highlighting the important role that the CAMELS model plays in evaluating the performance of commercial banks, especially the National Bank of Algeria.
- Knowledge of the indicators that make up the CAMELS standard that can be adopted as a criterion for evaluating the financial performance of the bank.
- Shed light on the applied model of the CAMELS standard at the National Bank of Algeria in order to know its role in evaluating the performance of this bank.

- **Importance of The study**:

The importance of the topic lies in the following:

- The importance of financial assessment of banks ' performance and considering it as a matter of importance for many interested and scholars due to the weight represented by banks and its sensitivity to their economic role.
- The applied importance of the CAMELS model as one of the modern methods in the field of evaluating bank performance.

- **Study limits:**

-Spatial limits: the limits of the study are manifested in the evaluation of performance using the camels criterion and our field of study was limited to the National Bank of Algeria.

-Time limits: the time limits relate to a study of the financial statements of the National Bank of Algeria (BNA) for the period from 2018 to 2023.

- **Curriculum of study:**

The descriptive approach was adopted in the theoretical aspect in order to answer the problems, describe the study variables and extract the most important scientific

studies related to the subject in order to clarify what is related to the camels criterion .

In the applied aspect, the case study method is using a set of financial ratios and some tools.

First/ the theoretical aspect of the study

1. Definition of Financial Performance assessment

The bank's performance assessment is defined as " a diagnosis of strengths and weaknesses, so that this diagnosis contributes to the construction and formulation of the scheme of decisions for the management of the bank's assets and liabilities.

Financial performance assessment is also defined as" the process of measuring the results achieved or expected in the light of predetermined criteria to determine which can be measured, and then the extent of achievement of the defined objectives to determine the level of effectiveness and determine the relative importance between the results and the resources used, allowing to judge the degree of efficiency (Al-Huda, 2024-2025, page 21).

It is also considered part of the ongoing administrative work, which includes the set of actions taken by the administration to ensure that the available resources are used efficiently and effectively and in accordance with the previously established technical and economic criteria.

It also provides the management with the necessary information to make important decisions, both for development and for investment, and when making fundamental changes that show the perception achieved by the institution (the bank) during its March, whether for the better or for the worse.

Bank financial performance is assessed by a set of indicators that measure the success and development of banks. Bank Financial Performance Indicators serve as criteria by which it is possible to assess the extent to which banks are achieving their goals.

Indicators for Assessing the Financial Performance of Commercial Banks

There are many indicators to assess the financial performance of commercial banks, so that we find what is traditional and what is modern, the most important of which is the CAMELS banking performance assessment index and can be highlighted as follows:

2.1. The Concept of the CAMELS Standard

It is defined as a system for determining the safety and security of banks by dealing with problems of banks that are not in compliance with banking rules and legislation.

It was also defined as an effective unified regulatory system for evaluating the performance of banks to determine their financial viability by diagnosing their strengths and weaknesses based on six essential elements to enable the supervisory authority to intervene to correct the situation and protect financial integrity in the banking sector(Mohammed and Imam, 2010, p. 19)

The CAMELS method is a set of indicators through which the financial position of any bank is analyzed and the degree of its rating is known. this method is considered one of the direct control methods carried out by field inspection, as the supervisory authorities in America have worked to take the results of the CAMELS standard and rely on them in decision-making (Bouregba, year of publication unknown, Page 2).

2.2. Stages of Development of the CAMELS Standard

The CAMELS standard has gone through several stages before it reached its current form, and the most important stages of its development can be summarized as follows (Boulkour):

2.2.1. CAEL MODEL: It is a tool for desk banking supervision and relies on the analysis of quarterly reports and then develop a quarterly assessment and classification based on four of the six components of the model, and these four elements are capital adequacy, asset quality, profitability and liquidity, and the standard does not include the management element and sensitivity to market risks.

2.2.2. CAMEL MODEL: A new element has been added to the elements of the previous model, and the model is one of the direct control methods carried out through field inspection, where both departments and supervisory authorities worked to take into account its results.

2.2.3 CAMEL MODEL: More than the CEAL model and rely on them in decisions because they reflect the real reality of the bank's position, The model takes into account five main elements: capital adequacy, asset quality, management and profitability, and liquidity.

2.2.4. CAMELS MODEL: The model was developed by introducing the sixth element to it, which is sensitivity to market risks and thus making the model more efficient to serve the evaluation process and to stand on banking performance by devising a model that helps banks to make an internal evaluation and classification of their operating branches and measure the level of efficiency of performance of their internal branches instead of relying only on profitability as a criterion for measuring the performance of branches, in accordance with the principle of self-control, which banks seek to activate in accordance with the Basel II recommendations so that each bank evaluates itself and stands on the reality of its financial position. the CAMELS method consists of a set of indicators through which the financial situation of any bank is analyzed and the degree of his classification, this is considered The method is one of the direct control methods that

is carried out by field inspection, where the supervisory authorities in America worked to take the results of the CAMELS standard and rely on them in making decisions.

2.3.CAMELS Standard Classification Grades

Table No. (1): Classification Grades of the Camels Standard

Classification level	Degree of classification	index	The bank's position	The bank's position
First	1-1.4	Strong	The position is sound in all respects	No action is taken.
Second	1.5-2.4	Good	Relatively intact with some shortcomings.	Address the negatives.
Third	2.5-3.4	Acceptable	Shows elements of weakness and strength.	Close monitoring and follow-up.
Fourth	3.5-4.4	Weak	A risk that may lead to failure.	Field repair and follow-up program.
Fifth	4.5-5	Critical	Very dangerous.	Permanent control and supervision

Source: prepared by the two researchers based on: Boulkour

Components of the Standard CAMELS

According to the federal regulators in the USA, the general civil status of each bank is regularly assessed with the identification of the risks it faces through the checks they carry out for the preparation of periodic reports, as well as the classification of the bank according to a unified system and ranking, which consists of six(06) indicators of performance compiled in the WORDCAMELS, where each letter of this word indicates a specific type.

3.1. Capital Adequacy according to the American CAMELS Model

The issue of capital adequacy or what is known as strengthening the financial position is one of the modern trends in bank management, it has gone through several stages over time during its development, but before that we will be exposed to the concept of capital adequacy. And It is a measure of the amount of the bank's capital expressed as a percentage of its risk-weighted assets and is an indicator It reflects whether the bank has sufficient capital to withstand unforeseen losses arising in the future and on the basis of some degree of financial leverage (Bayraktar & Ghazav, 2018).

Adequacy Ratio= (Net Special Funds / Credit Risk weighted Assets+Market Risk+Operational Risk)*100

Table No. (2): the degree of capital adequacy classification according to the CAMELS criterion

Degree of classification	Type of classification	capital adequacy ratio
1	Well Capitalized	Greater than or equal to 10 %
2	Adequately	Greater than or equal to 8%
3	Under Capitalized	Less than 8%
4	Significantly Under Capitalized	Less than 6%
5	Critically Under Capitalized	Less than or equal to 2%

Source: Boulkour

3.2. Asset Quality according to the American CAMELS Model

In general, the degree of credibility of capital ratios depends on the degree of reliability of the quality and quality indicators of assets, and the insolvency risks in financial institutions come mostly from the quality of assets and the difficulty of their liquefaction are of particular importance in the valuation system because it is the decisive part in the activity that leads the bank operations towards revenue, because the bank's bias on good assets will mean generating more income and a better assessment of both liquidity, management and capital (Souleiman, 2016, Page 2).

We calculate the following proportions:

- **Weighted rating ratio**: this ratio measures the size of non-performing debt allocations from equity and allocations if this ratio is decreasing, this means that the bank has a regular movement in collecting loan installments and interest.

Weighted Classification ratio (WCR) = Allocations / Property Rights + Allocations

Table No. 03: weighted rating ratio (WCR) by CAMELS index

Classification	weighted rating ratio (WCR)
1	WCR <05%
2	05% <WCR < 15%
3	15% < WCR < 35%
4	35% <WCR <60%
5	WCR > 60%

Source: Boulkour

- EM financial leverage ratio: This ratio measures the extent to which the bank has gone to finance its assets from third-party funds, as a high leverage ratio may indicate an increase in the risks to which the bank is exposed, but at the expense of achieving lower returns, the relationship between risk and return is a direct relationship as:

Leverage ratio = total deposits / total assets

Table No. 04: shows the percentage of financial leverage classification by CAMELS index

Classification	Leverage ratio (A)
1	A <60%
2	60% < A < 64%
3	65% < A < 70%
4	70% < A <80%
5	A > 80%

Source: (Al-Baghdadi and other, 2018)

The asset quality classification reflects the size of current and future risks related to lending, investment portfolio, completed real estate and off-balance sheet activities. the classification also reflects the management's ability to identify, measure, control and Control Risks that affect the value of investments.

3.3. Management Quality according to the American Model CAMELS

It is defined as the process of planning, decision-making, Organization, leadership, motivation and control exercised in obtaining The organization focuses on human, financial and information resources, mixing, consolidating and converting them into outputs with high efficiency (Aaid, 2010, P. 69).

Table No. (5): the degree of classification of management by the CAMELS criterion

Degree of classification	Type of classification	The ratio of total operating expenses/ total profit
1	Strong	Less than or equal to 25 %
2	Good	26%-30 %
3	Acceptable	31%-38%
4	Weak	39%-45%
5	Critical	Greater than or equal to 46%

Source: Boulkour

3.4. Earning Management according to the American CAMELS Model

3.4.1. Definition of Profitability Management: The bank's management considers profits as one of the important elements to ensure the continuity of the bank's performance, as they are directly affected by the quality of assets and their effectiveness is measured by determining the percentage of return on average assets from the starting point to provide profits in addition to studying and analyzing the following factors (Asaad, 2018, page 296):

- The adequacy of profits to cope with losses, strengthen capital adequacy and raise reasonable profits ;
- The quality and composition of the elements of net income, including the impact of taxes;

- The size and trends of the various elements of net income;
- The extent of dependence on exceptional items, securities operations, high-risk activities or non-traditional sources of income;
- Effective budget preparation and visibility on income and expenditure items;
- Adequacy of provisions and reserves for loan losses.

3.4.2.Profitability management calculation formulas: Calculated as follows:

Return on total assets ratio (ROA) = net result/ total assets

return on equity ratio(ROE) = net result/ Property rights

3.4.3. Classification of the quality of profitability according to the American model CAMELS:

Table No. 6: classification of the ratio of return on assets and return on rights by the CAMELS criterion

Degree of classification	ROA	ROE
1	ROA ≥ 1%	ROE ≥ 0.2%
2	0.75% < ROA < 1%	0.4% < ROE < 0.2%
3	0.5% < ROA < 0.75%	0.05% < ROE < 0.4%
4	0.25% < ROA <5%	0.01% < ROE <0.05%
5	ROA < 0.25%	ROE < 0.01%

Source: ben Amrou, 2017, P. 40

3.5. Liquidity Quality according to the American CAMELS model

The availability of liquidity in banks is one of the most important indicators that customers rely on for differentiation between banks, and one of the most important means of preventing bankruptcy risks through the ability to face obligations such as unexpected and circumstantial withdrawal requests, which can turn into a crisis, especially if not addressed and controlled.

3.5.1. The concept of liquidity quality: There are many definitions of liquidity, including the following: Liquidity is defined as: the ability of the bank to convert its pledges into cash on demand and must be differentiated into The liquidity of the asset means that it can be converted into cash on the date it will be realized, while the negotiability means that the bank can obtain the value of that asset before the date it will be realized by rediscounting it with the central bank or with another bank (Ajami, 2005, page 197).

Liquidity is also defined as: the bank's ability to meet both regular and extraordinary withdrawals of depositors, and meet Borrowers ' needs are timely and without having to sell securities at a big loss and borrow at high interest rates (Bouregba, without Year of publication).

3.5.2.Liquidity ratios: The bank's liquidity can be assessed based on the following ratio: the ratio of liquid assets to total assets.

Table No. (7): degree of liquidity classification according to the CAMELS criterion

Degree of classification	Type of classification	the ratio of liquid assets to total assets
1	Strong	Greater than or equal to 50 %
2	Good	45%-49.99%
3	Acceptable	38%-44.99%
4	Weak	33%-37.99%
5	Critical	Less than or equal to 32%

Source: Boulkour

3.6. Sensitivity to Market Risk according to the American Model CAMELS

This indicator is relatively new compared to other components of the system, as it was added only in 1997 as an evolution of the CAMELS model, in light of the financial and banking developments that occurred at the international level and made it more vulnerable to crises.

3.6.1.Definition of Sensitivity to Market Risks: this primarily concerns the investment portfolio for banking institutions, as these portfolios contain a large number of financial instruments, including stocks, Government and foreign bonds, institutional bonds and financial derivatives, and each of them has different metrics, but there is one statistical measure that measures these risks, the VAR scale, which measures the maximum expected loss in the investment portfolio during a certain period of time.

The degree of sensitivity of banks can be assessed by the following dimensions: (Bouregba, without Year of publication)

- Sensitivity of financial institutions to market risks;
- The ability of managers of financial institutions to identify, measure and monitor market risks;
- The complexity of the risks of operations is not covered.

3.6.2. Calculation of Market Risk trend Sensitivity: Calculated as follows:

Gap GAP = interest rate sensitive assets RSAs - interest rate sensitive liabilities RSLs

This ratio measures the gap between risk-sensitive assets and liabilities, if the result is negative, it means that liabilities are more risk-sensitive than assets and vice versa.

Second / Applied Aspect: Evaluating the Performance of the National Bank of Algeria using the CAMELS index

1.Introduction to the National Bank of Algeria

The National Bank of Algeria (BNA): it is one of the commercial banks operating in Algeria, established by Decree No. 66/178 on June 13, 1966 on the Algerian-Tunisian financial loan network, in addition to financing the National Bank of Algeria for the industry and commerce sector, and it also finances the agricultural sector until the establishment of the Bank of Agriculture and Rural Development in

1982, the bank has tried since its inception to open several agencies throughout the country in order to expand in order to this expansion in a number of agencies has been accompanied by an evolution in resources in order to perform its role in the best way (www.bna .dz).

2.Analysis of financial statements and presentation of results of the National Bank of Algeria

2.1. capital adequacy index analysis (C)

The capital adequacy indicator is the amount of capital that a bank or other financial institution should have as required by any financial regulator, usually expressed in the ratio of capital adequacy of ownership to a percentage of risk-weighted assets, as a result of the quotient of dividing own funds by total deposits. The capital adequacy of the National Bank of Algeria can be measured according to the following table:

Table No. (8): the ratio of private funds to total deposits of the National Bank of Algeria during the period (2018-2023)

Statement	2018	2019	2020	2021	2022	2023
Special funds	28824027 7	29941878 7	32074257 3	38048968 2	41720987 3	45217822 6
Deposits	19829258 88	21035246 86	19015138 60	20222875 11	24566673 04	29409346 39
Special funds/ total deposits	14.53%	14.23%	16.86%	18.81%	16.98%	%15.37

Source: prepared by the two researchers based on (annual reports of the National Bank of Algeria for the period 2018-2023)

This indicator relates to the extent to which the bank is able to strengthen its financial position through its own resources, provide a margin of protection that allows it to withstand possible losses and fulfill its obligations. In the study, the ratio of private funds to total deposits was used as an indicator of the level of coverage of deposits with private funds.

The ratio of private funds to deposits increased from 14.53% in 2018 to 18.81% in 2021, before falling to 15.37% in 2023, despite the increase in the value of private funds, which explains that the growth of deposits was relatively faster than the growth of private funds.

Based on this, it can be said that the National Bank of Algeria maintained a positive level of consolidation of its own resources during the study period, but the decline recorded at the end of the period calls for the need to achieve a balance between the growth of deposits and the development of private funds, in order to ensure strengthening its financial solvency.

2.2. Asset quality index analysis (A)

Asset quality is one of the key indicators in assessing banking performance, as assets, especially loans, are an important source of revenue generation, but at the same time they are a major source of credit risk. In the study, the ratio of total loans to total assets was used to measure the extent to which the bank's assets are directed towards credit activity.

Table No. (9): asset quality index of the National Bank of Algeria during the period (2018-2023)

Statement	2018	2019	2020	2021	2022	2023
Total loans	2227977041	2478064362	2655002008	3562149270	4076962125	4283565396
Total assets	3082299350	3491982968	3440270872	4481253482	5641638620	6106310493
Total loans/ total assets	% 72.28	%70.96	%77,17	%79,49	%72,26	%70,14

Source: prepared by the two researchers based on (annual reports of the National Bank of Algeria for the period 2018-2023)

The ratio of loans to total assets ranged from 70.14% to 79.49%, reaching the highest level in 2021, and then fell to 70.14% in 2023. This indicates the importance of credit activity in the employment of bank assets, with the need to monitor the risks of loans, because this ratio measures the volume of credit employment and is not enough alone to judge the quality of loans.

2.3. Management Indicator Analysis (M):

Management efficiency is one of the essential elements in evaluating bank performance, because it is related to the management's ability to use available resources, achieve returns and control costs, ensuring a balance between revenues and expenses. Three sub-indicators have been adopted for the analysis of this element(M1 ,M2,M3)

Table No. (10): Management index (M) of the National Bank of Algeria during the period (2018-2023)

M_1 efficiency of Management in generating profits from loans						
Statement	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Interest payable	138968599	139568406	134401409	146275080	168235218	212358029

Total loans	2227977041	2478064362	2655002008	3562149270	4076962125	4283565396
Interest payable/ total loans %	%6.23	%5.63	%5.06	%4.10	%4.12	%4.95
M_2 efficient management of deposit costs						
Statement	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Debit interest	46126936	48691575	53050438	55882189	88714746	114370794
total deposits	1982925888	2103524686	1901513860	2022287511	2456667304	2940934639
Debit interest/total deposits %	%2.32	%2.31	%2.79	%2.76	%3.61	%3.88
M_3 available funds lending rate						
Statement	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Total deposits	1982925888	2103524686	1901513860	2022287511	2456667304	2940934639
Special funds	288240277	299418787	320742573	380489682	417209873	452178226
Total loans	2227977041	2478064362	2655002008	3562149270	4076962125	4283565396
(Total deposits+ Special funds)/ total loans %	%101.93	%96.96	%83.70	%67.45	%70.49	%79.21

Source: prepared by the two researchers based on (annual reports of the National Bank of Algeria for the period 2018-2023)

The ratio of interest payable to loans decreased from 6.23% in 2018 to 4.95% in 2023, while the cost of deposits increased from 2.32% to 3.88%. The percentage of coverage of loans with deposits and private funds also decreased from 101.93% to 67.45% in 2021, before improving to 79.21% in 2023. This reveals pressures associated with the cost of resources and the profitability of loans, with a relative improvement in financing coverage at the end of the period. As an indicator to measure the bank's ability to generate profits from its total assets.

2.4.Profitability index (E):

Profitability is one of the key indicators that reflect the bank's ability to use its resources and assets to achieve positive financial results, and also represents an

important source of strengthening own funds and supporting financial stability. The ratio of return to total assets (ROA)has been relied upon.

Table No. (11): profitability index (E) of the National Bank of Algeria during the period (2018-2023)

Statement	2018	2019	2020	2021	2022	2023
Net Profit after tax	35832184	19064194	23047665	46690479	59206466	50377632
Total assets	3082299350	3491982968	3440270872	4481253482	5641638620	6106310493
Net Profit after tax/ total assets% (ROA)	%1.16	%0.54	%0.67	%1.04	%1.05	%0.82

Source: prepared by the two researchers based on (annual reports of the National Bank of Algeria for the period 2018-2023)

The return on assets declined from 1.16% in 2018 to 0.54% in 2019, then gradually improved to 1.05% in 2022, before falling to 0.82% in 2023. This development reflects the fluctuation in the bank's ability to generate profits from its assets, with a temporary improvement in 2021 and 2022.

2.5.Liquidity indicator analysis (L):

Liquidity is one of the most important elements of banking stability, as it reflects the bank's ability to meet its financial obligations, respond to withdrawal requests and meet financing needs without resorting to selling its assets at losses or incurring high financing costs. The ratio of liquid assets to total assets was used to assess the bank's liquidity position. The liquidity indicator is calculated by the following ratio:

Liquidity Index = (liquid assets / Total Assets) × 100

Statement	2018	2019	2020	2021	2022	2023
Liquid assets	716860319	837370700	617634677	745481887	1092318862	1380241149
Total assets	3082299350	3491982968	3440270872	4481253482	5641638620	6106310493
Liquid assets/ total assets %	%23.25	%23.97	%17.95	%16.63	%19.36	%22.60

Source: prepared by the two researchers based on (annual reports of the National Bank of Algeria for the period 2018-2023)

The ratio of liquid assets to total assets decreased from 23.25% in 2018 to 16.63% in 2021, and then increased to 22.60% in 2023. This indicates a relative decrease in the level of liquidity during the middle of the study period, followed by a noticeable improvement at the end of it. Since the Liquidity Index ratio is less than 32%, the liquidity rating of this bank according to the camels criterion is critical and the bank's position requires constant monitoring and strong supervision.

2.6. Market risk trend sensitivity index analysis (S):

Sensitivity to market risks is one of the key components of the CAMELS model, and is related to the extent to which the bank's financial position is affected by changes in interest rates, exchange rates and prices of financial instruments. The market risk sensitivity index is calculated by the ratio of ready cash to total deposits as an indicator of the bank's ability to provide immediate cash resources to meet the obligations associated with deposits.

Table No. 13: ratio of ready cash to total deposits

Statement	2018	2019	2020	2021	2022	2023
Ready cash	337316817	431208241	204207936	331762148	383040980	262300332
Total deposits	1982925888	2103524686	1901513860	2022287511	2456666304	2940934639
Ready cash/total deposits %	17.01%	%20.49	%10.73	%16.40	%15.59	%8.92

Source: prepared by the two researchers based on (annual reports of the National Bank of Algeria for the period 2018-2023)

According to the results of the market risk sensitivity index for liquidity risks, we find that the ratio has increased from 17.01% in 2018 to 20.49 in 2019, and then it has trended downward, reaching 8.92% in 2023, the lowest value during the period. This results in a decrease in the ability of ready-made cash to cover deposits, which requires strengthening liquidity management.

Conclusion

This study focused on how to evaluate the performance of the National Bank of Algeria during the period 2018-2023 using the CAMELS model.The objective was to answer the problem posed, which revolves around how to evaluate the performance of the bank using this model, which is an effective tool for evaluating the performance of Algerian banks, and helps to

identify the risks and challenges facing banks, and through which it is possible to improve banking performance in enhancing confidence in the financial system.

The study has reached a set of results, the most important of which are:

- The results showed that the bank maintained a significant level of own funds, while the management and profitability indicators were characterized by volatility, as a result of the different development of loan yields and deposit costs. Liquidity indicators also registered a relative improvement at the end of the period, against a clear decrease in the ratio of ready cash to total deposits in 2023.
- The financial performance of the bank was not homogeneous across its various components, but rather combined positive and other aspects that require improvement, especially with regard to controlling resource costs, improving asset profitability, and enhancing liquidity and risk management.
- The CAMELS model emerges as an important tool for financial and banking diagnostics, as it provides a multidimensional vision that helps identify strengths and weaknesses and guide decisions aimed at improving performance and enhancing banking stability.

Recommendations:

- Study recommendations: - The actual use of the performance evaluation process in commercial banks, for the purpose of discovering strengths and weaknesses, in order to build a strong and contributing banking sector and increase the productivity of banks.
- Evaluating the financial performance of commercial banks requires disclosure and transparency of financial information.
- Banks are working on setting standard ratios that enable them to compare their actual and planned performance on the one hand and compare with each other on the other.
- Taking appropriate actions based on the results obtained after evaluating and analyzing the indicators for each model.

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