

The Repercussions of The COVID-19 Scourge on The CAMLES Rating and Execution of Islamic Banks -Case study Algerian Bank Al Salam-

ATAMNIA Amina ^{1♦}, ATAMNIA Fouad ²

¹ Badji Mokhtar University (Algeria), atamnia.amina41@gmail.com

² Echahid Cheikh Larbi Tebessi University (Algeria), fouad.atamnia@univ-tebessa.dz

Received: 15/03/2025

Accepted: 26/04/2025

Published: 25/05/2025

Abstract:

This research attempts to analyze the CAMELS early warning system and its many components, as well as its centrality in analyzing the rating and execution of Islamic banks within the repercussions of the COVID-19 scourge, by anticipating this to the circumstance of Algerian Bank Al Salam from 2018 to 2022.

The investigation discovered that the Algeria Al Salam was not affected by the Covid-19 crisis that the world and Algeria in particular witnessed, as it was given the first one rating during that period, thus showing that the bank is strong, has a sound position in all respects, and does not have to take any action, as it is a solid and stable bank, with strong rating and performance.

Keywords: COVID-19, Rating, Performance, CAMELS, Peace Bank.

JEL Classification: G21, G32, C2.

♦ Corresponding author

1. Introduction:

In 2019, the world was exposed to an epidemiological crisis that spread at a terrible speed among countries, including Algeria, which made it turn into a pandemic in 2020 known as the Covid-19 crisis, the latter of which had serious repercussions on the global economy, including the financial and banking sector. As a result, it became essential for banks to exercise caution by monitoring their performance throughout that period, identifying their strengths and weaknesses, and taking steps to address them. One of the key tools employed in this process is the CAMELS early warning system.

Thus, the following fundamental query may be posed:

How has the COVID-19 epidemic affected Bank Al Salam Algeria's Islamic bank rating and performance in terms of the CAMELS system?

The following follow as sub-questions based on the preceding question:

- What is the CAMELS early warning system?
- What are its components, and can they be projected to Algerian Bank Al Salam?
- Has the COVID-19 crisis affected Al Salam Bank's: Capital adequacy, Asset quality, Management Efficiency, Profitability, liquidity and the Market risk sensitivity according to the CAMELS system?

To address the previous questions, these two hypotheses are displayed:

1. COVID-19 pandemic has influenced the rating and performance of Islamic banks, specifically in the case of Algerian Bank Al Salam, as assessed by the CAMELS system.
2. COVID-19 pandemic has not had an impact on the classification and performance of Islamic banks, specifically in the case of Algerian Bank Al Salam, according to the CAMELS system.

This researcher utilized a descriptive approach to outline the theoretical framework of the CAMELS system, an analytical approach to examine and interpret the results, and a case study approach focusing on Algerian Bank Al Salam. The study was split into two parts:

- The conceptual basis of the CAMELS early warning model.
- Assessment of the CAMELS Rating and Performance of Bank Al Salam Algeria During the COVID-19 Crisis.

2. The conceptual basis of the CAMELS early warning model:

The CAMELS early warning system is a crucial tool for evaluating a bank's performance by assigning a rating, which helps identify its strengths and weaknesses. This, in turn, allows for an assessment of the bank's stability and overall performance. In this section, we will present The conceptual foundation of the CAMELS system is presented as follows:

2.1 The history and evolution of the CAMELS system:

have been viewed differently by various scholars and economists. The system was initially introduced in the United States during the early 1980s by three regulatory agencies: the Federal Deposit Insurance Corporation, the U.S. Currency Control, and the U.S. Federal Reserve Bank. At the outset, the Federal Reserve Bank classified banks and kept the results confidential, sharing them only internally. This approach allowed regulatory bodies to

identify risks and potential failures in advance. By 1998, the results from the CAMELS assessments indicated an improvement in the performance of U.S. banks compared to the 1988 evaluations, with all local banks receiving ratings of (1) or (2), and 40% of them attaining the highest rating of (1) (Djadi, 2013-2014, p. 119).

The CAMELS system went through several stages of development until it reached its current form, starting with a mini standard called CAEL, which is considered a tool for bank supervision and relies on an annual profitability analysis based on four elements, namely: capital adequacy, product quality, profitability and liquidity: Capital Adequacy, Product Quality, Profitability and Liquidity (Qwal Zawia, 2017, p. 86). In order to keep abreast of the developments and field developments brought about by the applied reality of this standard to accommodate all influential factors, it was developed by adding another element to those elements and indicators that constitute it, namely management efficiency, so that the standard became CAMEL, and then another element was added to it, namely the sensitivity index to market risk, thus becoming this system in its current form under the name CAMELS, which consists of six indicators that made it a comprehensive and integrated system to assess and analyse the situation of banks and predict potential risks (Abad & Barani, 2012, pp. 900-901).

2.2 The concept of CAMELS:

The camels index is defined as "a set of indicators through which the financial situation of any bank is analysed and the degree of its classification is known, and this method is considered one of the direct supervisory methods that are carried out through field inspection As regulatory authorities in the United States have implemented the CAMELS standard and used its results to guide their decision-making" (Kettaf, 2018, p. 200).

The Basel Committee established a set of key indicators, referred to as the CAMEL indicators, to evaluate banking operations. These indicators include five components: (C) Capital adequacy, (A) Asset quality, (M) Management effectiveness, (E) Earnings and profitability, and (L) Liquidity (Seyed & Ebrahim, 2017, p. 422). Later, a sixth element, (S), was added to represent sensitivity to market risk, creating the CAMELS framework (Angela & Alina, p. 704). After assessing these six factors, bank regulators can assign an overall score, called a composite rating, which ranges from 1 to 5. This rating reflects the bank's condition, with ratings of 1 indicating a strong position, 2 satisfactory, 3 fair, 4 marginal, and 5 unsatisfactory (Waymond, 2007, p. 15).

Table 1. Supervisory actions taken based on the CAMELS rating of banks

Rating Score	Bank Position	Regulatory Action
1 strong	The position is sound in all respects	Take no action
2 satisfactory	Relatively sound with some deficiencies	Address the negatives
3 reasonable	Shows strengths and weaknesses	Close monitoring and follow-up
4 marginal	A risk that may lead to failure	Reform programme and field follow-up
5 unsatisfactory	Very dangerous	Permanent monitoring and supervision

Source: (Djadi, 2013-2014, p. 121).

2.3 CAMLES features:

The CAMLES system is characterised by many characteristics and features that distinguish it from other evaluation systems, the most important of which are the following (Amari & Ben Thabet, 2018, pp. 74-75):

- Categorising banks according to a unified standard and standardising the method of writing various reports.
- Shortening the evaluation time by focusing on six key indicators and not scattering efforts.
- Focusing on digital assessment instead of structural evaluation when preparing reports helps reduce their length while enhancing credibility and transparency.
- Conducting a comprehensive classification of the entire banking system using a standardized approach, while examining the results both horizontally for each individual bank and comparable groups of banks, and vertically for each of the six performance components across the system as a whole.
- relies on the CAMLES system in making supervisory decisions as well as corrective actions following the inspection process.
- It evaluates the transparency of banks in reporting data to the Central Bank, along with the trustworthiness of the auditor.
- it lowers the chances of classification errors that could arise from relying on other evaluation systems that may not fully adhere to the principles of disclosure and transparency.

Based on the above, it is evident that CAMELS helps identify the banking risks a bank may face, as well as uncover weaknesses in its various operations. This, in turn, necessitates the implementation of supervisory decisions and corrective actions within the bank, or intervention by the monetary authority.

3. Assessment of the CAMELS Rating and Performance of Bank Al Salam Algeria During the COVID-19 Crisis:

In this section, we will evaluate the performance of Algerian Bank Al Salam using the CAMELS early warning system, by calculating all six of its components for the period 2018-2022. It is important to note that Algeria experienced the COVID-19 crisis in 2020, with quarantine measures being lifted in 2021, we will examine the impact of the COVID-19 crisis on the bank's performance as outlined below:

3.1 Introducing Algerian Bank Al Salam:

Algerian Bank Al Salam is a multi-purpose financial institution that adheres to Algerian regulations and provides services in line with Islamic Sharia principles. It received approval from the Bank of Algeria in September 2008 and currently operates 25 branches across various states in the country and plans to open additional branches in order to provide a wide range of Islamic financial services to its customers with the highest quality (Bank of Al Salam,

2024). The following table illustrates Financial Intermediation Indicators of Al Salam Bank Algeria during the period (2018-2022):

Table 2. Financial Intermediation Indicators of Al Salam Bank Algeria during the period (2018-2022)

Years Manifesto (W: B A D)	2018	2019	2020	2021	2022
Funds	75	94	99	150	171
Deposits	85	102	129	195	216
Total assets	110	131	163	238	262
Equity	17	19	18,9	27	27
Net income	2,4	3,88	3,55	3,39	4,4
Net revenue	7,02	9,33	7,7	9,3	11
Credit outputs	7,3	10,16	8,79	10,64	12,96
Receivables	0,6	1,28	1,46	1,77	2,45
Provision for impairment of financings	2,49	3	3,7	4,48	5,66
Provisions	0,2	0,2	0,2	0,23	0,22
Funds to cover general banking risks	0,94	1,32	1,52	1,99	2,14

Source: The data was collected by the researchers from the annual reports of Algerian Peace Bank covering the period from 2018 to 2022.

Based on the table above, we observe that during the period (2018-2022), Al Salam Bank Algeria experienced notable development and growth in areas such as deposits, financing, total assets, equity, as well as net income. Therefore, it can be said that Al Salam Bank Algeria enjoys strong performance.

3.2 CAMELS components and their application to Algerian Bank Al Salam during 2018-2022:

This system works to conduct a comprehensive analysis of banking conditions, by ensuring the safety of banking assets and operations during field inspection tours, through which the management's ability to identify and manage risks is revealed, and this system consists of six (06) criteria (Elifi & Sarir, 2020, pp. 37-38):

❖ **Capital Adequacy:** This criterion assesses The quality of capital, the ratio of non-performing assets to total capital, and the bank's overall financial standing. It demonstrates the bank's capacity and stability in managing different types of risks. Bank capital is classified according to the classification system established by the American institution Examiner Orientation, as shown in the table below:

Table 3. Capital classifications by Examiner Orientation

Percentages	Good capital	favourable capital	poor capital	very poor capital
Core Capital / Average Assets	5%above and	4%and above	less than 4%	Less than 3%
Core Capital / Risk-Weighted Assets	5%and above	4%and above	less than 4%	Less than 3%

Total Capital / Risk Weighted Assets	10%and above	8%and above	less than 8%	Less than 6%
---	-----------------	-------------	--------------	--------------

Source: (Kettaf, 2018, p. 202).

According to the data available for Algerian Bank Al Salam, capital adequacy is assessed through the following relationship: $C = \text{Core Capital} / \text{Assets}$ and the results are shown in the following table:

Table 4. Capital adequacy rating for Algerian Bank Al Salam for the period (2018-2022)

Years Manifesto	2018	2019	2020	2021	2022
Capital Adequacy	0,15	0,15	0,12	0,11	0,10
	1	1	1	1	1
	1				

Source: Compiled by the researchers using Tables 2 and 3.

The bank also follows the regulations established by the Central Bank of Algeria concerning capital adequacy ratios, which were set at 10% in 2022. This compliance contributed to maintaining Algeria Bank Al Salam top rating, indicating that it is well-capitalized according to the classification system established by the American institution Examiner Orientation. Additionally, the bank was not significantly impacted by the COVID-19 crisis.

❖ **Asset quality:** This is a qualitative measure used to assess the quality of a bank's assets as presented in its balance sheet, along with the risks involved and the bank's ability to evaluate, monitor, and manage those risks. In the United States, one of the financial ratios used to evaluate asset quality is the loan impairment provision ratio, calculated by dividing the loan impairment provision by total loans, with a recommended value of $\geq 1.5\%$ (Shenati & Orzig, 2020, p. 190) . Another relevant ratio is the weighted rating ratio (WCR), which is determined by dividing provisions by equity plus provisions. The table below presents its classification:

Table 5. Analysing WCR ratios

Rating	WCR weighted rating ratios
1	5 % > WCR
2	15 % > WCR > 5 %
3	35 % > WCR > 15 %
4	60 % > WCR > 35 %
5	60 % < WCR

Source: (Ben Omar & Nasir, 2017, p. 38).

According to the information available on Algerian Bank Al Salam, asset quality is assessed through the following two ratios: A1 impairment provision ratio (loans) and A2 weighted rating ratio (WCR), the results of which are shown in the following table:

Table 6. Asset quality rating for Algerian Bank Al Salam for the period (2018-2022)

Years Manifesto		2018	2019	2020	2021	2022
Asset quality	A1	0,3	0,3	0,3	0,3	0,3
	A2	0,1	0,1	0,1	0,1	0,1
	rating	1	1	1	1	1
	Final rating	1				

Source: compiled by the researchers based on tables 2 and 5.

In the light of table No 6, it is clear that the impairment provision ratio is very low and is less than the standard ratio of 1.5 per cent, and the WCR is less than 05 per cent, during the period 2018-2022. Therefore, the rating No. 1 was given to Algerian Bank Al Salam, which means that it has good asset quality and was not affected by the Covid crisis¹⁹.

❖ **Management Efficiency:** Management efficiency plays a crucial role in determining a bank's performance. Effective management practices contribute to improved profits and enhanced stability. However, evaluating management performance is challenging as it is a qualitative criterion. Nonetheless, certain financial ratios have been adopted to evaluate the effectiveness of bank management, as demonstrated in the table below:

Table 7. Bank Ranking according to Management Efficiency Ratios

Categories	Credit interest / total loans	Debit interest / total deposits
1	More than 7%	Less than 7%
2	] %7 - 6%]	[%8 - 7%[
3	] % 6 - 5%]	[%9 - 8%[
4	] % 5 - 4%]	[%10 - 9%[
5	Less than 4%	More than 10%

Source: (Nasri, 2020-2021, p. 248).

According to the information available on Algerian Bank Al Salam in, management efficiency is assessed by the following two ratios: M1 Credit Interest / Total Funds (Loans) and M2 Debit Interest/Total Deposits, the results are shown in the following table:

Table 8. Management Efficiency Rating for Algerian Bank Al Salam for the period of (2018-2022)

Years Manifesto		2018	2019	2020	2021	2022
Management efficiency	M1	0,10	0,11	0,09	0,07	0,08
	M2	0,01	0,01	0,01	0,01	0,01
	Rating	1	1	1	1	1
	Final rating	1				

Source: compiled by the researchers based on Tables 2 and 7.

Based on the table 8, It is evident that the ratio of M1 (interest on receivable to total financing loans) exceeds 7%, while the ratio of M2 (interest receivable to total deposits) is less than 7% during the period 2018-2022, therefore, a rating of 1 can be given to Algerian

Bank Al Salam in which means that it has good management efficiency and has not been affected by the Covid crisis¹⁹.

❖ **Profitability:** The bank's profitability is evaluated using several financial ratios, such as Return on Assets (ROA), Return on Equity (ROE), Expense-to-Income ratios, among others. The table below displays the profitability ratios and their respective classifications:

Table 9. Bank classification according to profitability ratios

Rating	Net income / equity	Net income / total assets
1	$\geq 0,4$	$\geq 1\%$
2	$< 0,2$	$0,75\% < ROA < 1\%$
3	$< 0,1$	$0,5\% < ROA < 0,75\%$
4	$< 0,05$	$0,25\% < ROA < 0,5\%$
5	$< 0,01$	$< 0,25\%$

Source: (Ben Omar & Nasir, 2017, p. 40).

Based on the available information about Algerian Bank Al Salam, management efficiency is Assessed through two main ratios: Return on Equity (ROE) E1 and Return on Assets (ROA) E2. The outcomes are presented in the following table:

Table 10. Profitability rating for Algerian Bank Al Salam for the period (2018-2022)

Years manifesto		2018	2019	2020	2021	2022
Profitability Index	E1	0,14	0,20	0,19	0,13	0,16
	E2	0,02	0,03	0,02	0,02	0,02
	Rating	1	1	1	1	1
	Final rating	1				

Source: compiled by the researchers based on Tables 2 and 9.

The Return on Assets (ROA) ratio E2 exceeds 1% for the period 2018-2022, leading to a rating of 1 for Algerian Bank Al Salam. This indicates that the bank has generated strong profits and was not significantly impacted by the COVID-19 crisis.

❖ **Liquidity:** This criterion involves analyzing the size and sources of liquid funds that allow the bank to meet its daily obligations, including the volume of deposits and loans, the alignment of maturity dates for liabilities and assets, Including several factors, as illustrated in the table below:

Table 11. Classification of the bank based on liquidity ratios

Rating	Funding / deposits	Net funding / assets	Internal Liquidity Ratios
1	$< 55\%$	$< 50\%$	$< 15\%$
2	$< 60\%$	$< 60\%$	$< 12\%$
3	$< 65\%$	$< 65\%$	$< 10\%$
4	$< 70\%$	$< 70\%$	$< 5\%$
5	$< 71\%$	$< 71\%$	$< 5\%$

Source: (Zitouni, 2009).

According to the information available on Algerian Bank Al Salam, liquidity is assessed through the following two ratios: Funding / Deposits (L1) and Net Funding / Assets (L2), the results are shown in the following table:

Table 12. Liquidity classification for Algerian Bank Al Salam for the period (2018-2022)

Years / manifesto		2018	2019	2020	2021	2022
Liquidity Index	L1	0,88	0,92	0,77	0,77	0,79
	rating	5	5	5	5	5
	L2	0,68	0,72	0,61	0,63	0,65
	rating	4	5	3	3	3
	Final rating	4				

Source: compiled by the researchers based on tables 2 and 11.

On grounds of Table (12), it is evident that the L1 ratio exceeds 71% during the period 2018-2022, resulting in a rating of 5 according to this ratio, indicating ample liquidity. The (L2) net funding/assets ratio fluctuated between 2018 and 2022 but stabilized over the last three years, not exceeding 65%, which resulted in a rating of 3. Based on the liquidity index, the final rating is 4, suggesting that there is an excess of liquidity available for new investment opportunities, unaffected by the COVID-19 crisis.

❖ **Sensitivity to Market Risk:** This criterion includes market-specific indicators. As global financial and banking trends have increased banks' vulnerability to crises, it is crucial to evaluate how sensitive the bank's projected net profits are to variations in interest rates, exchange rates, and security prices. Additionally, it is important to assess and track risks such as loan risk, liquidity risk, and price risk (Al-Mashharawi, 2008, p. 26). This can be measured using the ratio: $S = \text{general banking risk coverage funds} / \text{total equity}$, which indicate how well the bank is hedging against various market fluctuations (Nasri, 2020-2021). The following table presents its classification:

Table 13. Classification of the bank based on sensitivity to market risk

Rating	1	2	3	4	5
S	$\%5 <$	$] \%4 - \%5]$	$] \%3 - \%4]$	$] \%2 - \%3]$	$\%2 >$

Source: Prepared by the researchers based on (Nasri, 2020-2021, p. 251).

According to the information available for Algerian Bank Al Salam, market risk sensitivity is assessed through the ratio $S = \text{general banking risk coverage funds} / \text{total equity}$. The results are shown in the following table:

Table 14. Market risk sensitivity rating for Algerian Bank Al Salam for the period (2018-2022)

Years		2018	2019	2020	2021	2022
Market sensitivity	Manifesto					
	S	0,06	0,07	0,08	0,07	0,08
	Rating	1	1	1	1	1
	Final rating	1				

Source: compiled by the researchers based on Tables 2 and 13.

On account of Table 14, it is evident that the market risk sensitivity ratio ($S = \text{general banking risk coverage funds} / \text{total equity}$) exceeded 5% during the period 2018-2022. As a result, Algerian Bank Al Salam received a rating of 1, indicating its ability to hedge against various market changes and that it remained unaffected by the COVID-19 crisis.

4. Results analysis:

Based on the analysis above and after evaluating the various components of the CAMELS system for Algerian Bank Al Salam from 2018 to 2022, we can assess the bank's performance using the CAMELS framework and determine its final classification in the context of the COVID-19 crisis. The results are shown in the table below:

Table 15. CAMELS evaluation of Algerian Bank Al Salam for the period 2018-2022

CAMELS	C	A	M	L	R	S
Rating	1	1	1	4	1	1
Final rating	$(1 + 1 + 1 + 4 + 1 + 1) / 6 = 1,5$ 1					

Source: compiled by researchers

The final CAMELS rating for Algerian Bank Al Salam was assigned a score of 1 for the period from 2018 to 2022, meaning that the bank is strong, enjoys a sound position in all respects, and takes no action, i.e. Algerian Bank Al Salam enjoys solidity and stability, as well as strong performance for the period 2018-2022 despite the COVID-19 crisis that the world and Algeria in particular witnessed, However, it did not impact the performance of the bank being analyzed. Therefore, The first hypothesis, which proposed that the pandemic affected the bank's performance, is rejected, whereas the second hypothesis, stating that the COVID-19 pandemic had no impact on Al Salam's classification and performance, is supported.

5. Conclusion:

The main findings can be summarised in the following points:

✓ US CAMELS system serves as an early warning tool for banking crises, enabling the evaluation and rating of a bank through its six components, ultimately determining its overall rating. This process helps identify the bank's strengths and weaknesses, assess its financial position, and evaluate its stability and resilience.

✓ Six key components are considered to be the foundation of The CAMELS system: Capital Adequacy (C), Asset Quality (A), Management Efficiency (M), Profitability (E), Liquidity (L), and Market Risk Sensitivity (S). These components offer a comprehensive view of the bank's performance and help pinpoint any issues.

✓ CAMELS functions as a supervisory tool relied upon by authorities and decision-makers to assess a bank's performance, identify imbalances, address them, and make timely decisions.

✓ The assessment of the six CAMELS components showed no significant impact from the COVID-19 crisis. Bank Al Salam maintained a No. 1 rating in Capital Adequacy (C), Asset Quality (A), Management Efficiency (M), Profitability (E), and Market Risk Sensitivity (S), while Liquidity (L) received a rating of 4 for the period 2018-2022.

✓ According to the CAMELS Early Warning System, Algerian Bank Al Salam achieved an overall rating of 1 for the period 2018-2022, signifying that the bank is strong, stable, and well-positioned across all aspects. No corrective actions were deemed necessary, as the bank remained solid and resilient.

✓ Based on the CAMELS system, Algerian bank Al Salam performed well throughout 2018-2022, with the COVID-19 crisis not affecting its performance. Therefore, The first hypothesis, which proposed that the pandemic affected the bank's performance, is rejected, whereas the second hypothesis, stating that the COVID-19 pandemic had no impact on Al Salam's classification and performance, is supported.

This study suggests the ongoing monitoring and evaluation of Al Salam Bank's rating, along with the entire banking sector, through the CAMELS system. This approach will help anticipate potential crises, highlight strengths and weaknesses, and enable appropriate corrective measures.

6. References:

- Abad, I., & Barani, A. (2012). **The effectiveness of the American banking evaluation system (CAMELS) in assessing the financial performance of Islamic banks: An applied study on Bank Al Baraka Algeria.** *Al-Miyyar Journal*, 25(07).
- Al-Mashharawi, A. (2008). **The impact of applying the American banking evaluation system (CAMEL).** *Journal of Finance and Economics*, 59(22-26). Récupéré sur <https://doi.org/https://search.emarefa.net/detail/BIM-407561>.
- Amari, S., & Ben Thabet, A. (2018). **The American banking evaluation system CAMELS as an entry point for assessing banks: A case study of Gulf Bank Kuwait.** *Humanities and Social Sciences Journal*, 19(01).
- Angela, R., & Alina, C. (s.d.). **Analysing the financial soundness of commercial banks in Romania: An approach based on the CAMELS framework.** *International Economic Conference of Sibiu 2013 Post Crisis Economy: Challenges and Opportunities*, (p. 2013). Sibiu. Récupéré sur <https://www.sciencedirect.com/journal/procedia-economics-and-finance/vol/6/suppl/C>.
- Bank of Al Salam, A. (2024, 02 01). Récupéré sur Bank of Al Salam Algeria: <https://www.alsalamalgeria.com/ar/page/list-10-0-186.html>.
- Ben Omar, M., & Nasir, A. (2017). **Evaluation of bank performance using the CAMELS model: The case of the National Bank of Algeria for the period (2014-2015).** *Journal of Economic Additions*, 01(02).
- Djadi, C. (2013-2014). **Measuring operational efficiency in banking institutions: A case study of a sample of banks operating in Algeria during the period (2006-2012).** *Doctoral dissertation.* Faculty of Economic Sciences, Commercial Sciences, and Manage, Algeria: University of Ouargla. Récupéré sur https://dspace.univ-ouargla.dz/jspui/bitstream/123456789/8114/1/Djadi-Cherifa_Doctorat.pdf.
- Elifi, M., & Sarir, A. (2020). **Determinants of banking security using the American CAMELS classification system: A case study of the Algerian banking system for the period (2009-2017).** *Journal of Strategy and Development*, 10(03).
- Kettaf, S. (2018). **Evaluating the financial stability of the National Bank of Algeria using the American CAMELS banking evaluation system.** *Economic Studies Journal*, 9(1).
- Nasri, A. (2020-2021). **The impact of systemic risk management on the financial performance of Algerian commercial banks.** *Doctoral dissertation.* Faculty of Economic and Commercial Sciences, and Management Sciences, Algeria: Mohamed Chérif Messaadia University Souk Ahras. Récupéré sur <https://www.pnst.cerist.dz/recherche.php?ti=&mc=&au=&dr=&ct=&eb=411&dm=0&ln=&tp=8&nb=10&dp=0&an>.
- Qwal Zawia, I. (2017). **Analyzing the components of the American CAMELS evaluation standard.** *Journal of Economics and Management*, 16(02).

- Seyed , K., & Ebrahim, a. (2017). **The impact of CAMEL indexes on profit management in banks listed on the Tehran Stock Exchange**. *International Review of Management and Marketing*, 7(2).
Récupéré sur <https://doi.org/https://www.econjournals.com/index.php/irmm/article/view/4694/pdf> .
- Shenati, S., & Orzig, E. (2020). **The compatibility of financial performance evaluation models with Islamic banks: A review of the CAMELS model**. *Al-Bashayer Economic Journal*, 6(1).
- Waymond, A. (2007). *Credit analysis of financial institutions*. United Kingdom: Euromoney Institutional Investor PLC.
- Zitouni, A. (2009, 12 06). *Encyclopedia of Islamic finance*. Récupéré sur <https://iefpedia.com/arab/?p=8927> .