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Diagnosing and financial evaluation of the Algerian banking sector

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Abstract. This study aims at shedding some light uponat the financial situation of the Algerian banks through the use of a set of traditional criteria in order to diagnose and evaluate their financial performance. This study relied on the descriptive analytical method through collecting, organizing, and analyzing information in accordance with the research requirements. This study has improved. that the financial position of the Algerian banking system is still comfortable despite all the structural and organizational imbalances that the latter suffers from. The study has also revealed some weaknesses that must be overcome in order to develop this sector. If these imbalances are overcome as soon as possible, this will be positively reflected on all the financial criteria adopted in the evaluation process .

Keywords. financial diagnosis, financial evaluation, Algerian banks

Introduction

Enter The banking sector is considered one of the vital sectors in the countries' economies because of its positive impact on their development. That is through its important role in collecting and mobilizing domestic and foreign savings, its contribution in financing investments and its effectiveness in facilitating various transactions between individuals and community institutions. Evaluating the banks' financial position of these economies is a crucial process. This process would enable the measurement of the bank's ability to achieve the established goals, determine the possibility of optimal utilization of the available resources and figuring out the strengths and weaknesses of their activities in order to overcome them. In addition, it judges the achieved results and formulates the future policies of these banks.

The banking sector in Algeria has significantly developed after the monetary and loan law as well as the subsequent regulatory and procedural instructions and the amended laws. Those laws, regulations and procedures have increased the number of banks and paved the way for the emergence of the private banks in Algeria. They have also doubled the volume of deposits and raised the profitability of this sector. In addition, they led to the expansion of competition in the Algerian banking arena and supported the banks' race to achieve high levels of banking performance. This has greatly widened the importance of identifying the banks' financial position and evaluating their performance.

Since assessing the financial situation of the Algerian banking sector is considered one of the basic and necessary guarantees for its growth, continuity and development of its performance; the financial situation of the banking sector in Algeria will be revealed through diagnosing and evaluating its financial position.

Study importance: The process of diagnosing and evaluating the situation of the banking sector in Algeria is an inevitable necessity imposed by the recent developments in the Algerian and international banking arena. It aims at determining the extent of the measurement and safety of the banking performance and developing it to ensure the continuity of banks and raise their competitiveness. It helps to figure out the financial defects in the banking institutions activity at an early stage preventing its exposure to financial problems that may lead to their collapse or bankruptcy.

Search problem: In light of the developments in the banking arena that has significantly changed the structure of the banks' activity that has led to their growth, the possibility of their continuity and the degree of their exposure to the risks of collapse; the research problem is revolving around the following question: How does the process of diagnosing and evaluating the financial situation of the Algerian banks contribute to identify the elements of strength and weakness and rely on them for the development of the Algerian banking system as a whole?

Study Objectives: This research aims at identifying the structure and composition of the banking sector in Algeria and its various basic features by tracking its activity during the period 2010 – 2018. This depends on the study of many performance indicators development; therefore; the financial position of the Algerian banks will be diagnosed and evaluated during the same previous period.

Previous studies: there are Many previous studies which was related of diagnosing, evaluation and financial performance of the banks. Among these studies we mention:

Kerrouche. A, Fodili. S, Azzeddine. A, (2021): study which is an article that aims at evaluate the financial performance of commercial banks based on financial ratios (profitability, liquidity, risk, efficiency and adequacy ratios), through a case study of 05 Algerian commercial banks, and the descriptive analytical approach was adopted by analyzing the financial statements of these banks during the period 2015 -2019. The study concluded that the use of financial ratios revealed the strengths and weaknesses of the banks under study, and also contributed to the evaluation of their financial performance. These ratios showed varying levels of financial performance from one bank to another

Laarfa. Z, Mostapha. G, (2020): study which aims at the balance between liquidity and profitability in an Algerian commercial bank by applying to the Algerian Agricultural and Rural Development Bank (BADR). The study concluded that a decrease in some liquidity ratios. This reflects the difficulty of the bank's ability to meet its financial obligations towards depositors, as the bank is witnessing a significant decline in returns and profitability in addition to the lack of efficiency of the bank to achieve the most effective investment decisions and his money to increase the liquidity ratios did not always lead to higher profitability ratios, but has led to a decline in most cases.

Abuzarqa. R, (2019): study which is entitled "Evaluating Banks Financial Performance Using Financial Ratios: A Case Study of Kuwait Local Commercial Banks". study which is an article that aims at investigates the effect of Leverage, Total deposit to total assets, Total loans to total assets, Retained earnings to total assets, and Tangible book value per share ratios on banks' financial performance for Return on Assets (ROA) as the dependent variable. The authors used MANOVA and ANOVA analysis were used to show the difference between banks in their financial situation and performance, and then the panel regression model used to study

relationships among variables. The Hausman test was applied to compare fixed and random effect models which were shown that the random effect model gives the better result. Our findings show that the independent variables “Total deposit” to “total assets” and “Retained earnings” to “total assets” have a strong significant impact on our dependent variable ROA. “Leverage” and “Total loans” to “total assets” have a less significant effect on the banks’ financial performance (ROA) while Tangible book value per share does not affect the ROA.

Srinivasan. P, Britto. J, (2017): It is an article which was published in an international journal It aimed to evaluate the financial performance of selected Indian commercial banks for the period from 2012/13 to 2016/17. The study comprises 16 commercial banks, 11 representing public sector and 5 from private sector, and the financial performance of these banks are analysed using the financial ratios. the study examines the impact of liquidity, solvency and efficiency on the profitability of the selected Indian commercial banks by employing the panel data estimations, *viz.* the Fixed Effect and Random Effect models. The empirical results from the panel data estimations revealed that the liquidity ratio and solvency ratio, and the turnover ratio and solvency ratio are found to have positive and significant impact on the profitability of selected public sector and private sector banks, respectively, bearing testimony to the fact that profitability is a function of those ratios

Mustafa. H. M, (2014): study which is an article that aims at Evaluating the Financial Performance of Banks Using Financial Ratios- A Case Study of Erbil Bank for Investment and Finance. The findings of the study show the positive behaviour of the financial position for Erbil Bank and some of their financial factors variables influence the financial performance for the bank. Then, it is found that the overall financial performance of Erbil Bank is improving in terms of liquidity ratios, assets quality ratios or credit performance, profitability ratios. This study suggests a set of recommendations regarding the development and enhancing of some banking operations which will boost the bank's profitability and improve the financial performance for the bank.

This study is different from the earlier ones in two ways because the data used are recent. Moreover, however, there were a considerable number of empirical studies on bank performance around the world especially commercial banks but very little on Algerian banks performance.

Study Methodology and Tools: In this study, we relied on the descriptive analytical method and the case study method, by collecting, organizing, and analyzing information in accordance to the requirements of the research, using many tools, including:

- The use of previous studies and articles that discussed the topics related to this study.
- The website of the Algerian Central Bank by reviewing a set of annual reports issued by it.

In order to discuss the topic and be familiar with all its aspects, the study has been divided into this axes:

- The Structure and Composition of the Algerian Banking Sector and the Importance of Diagnosing and Evaluating its Performance.
- The Main Features of the Banks Activity in Algeria.
- The Financial Evaluation of the Algerian Banks Using the Traditional Criteria
- The Financial Evaluation of the Algerian Banks Performance.

1. The structure and composition of the Algerian banking sector and the importance of diagnosing and evaluating its performance:

The Algerian banking sector is characterized by the public sector's acquisition of the largest share of banking transactions. Its banks are characterized by their disparity in terms of banking intermediation indicators. This is mainly due to the methods adopted by the Central Bank in particular and the government in general in the organization and management of banks and financial institutions.

Currently, the Algerian banking sector, headed by the Central Bank, includes a network of banks representing 20 commercial and specialized banks, foreign and national banks, public and private, in addition to 8 financial institutions. Public banks dominate this sector through the number of their agencies and the value of their offered loans, which reach 85%, as well as their pooled deposits, which reached 90% of the total offered (Nasser Dadi Adoun, Abirat Moghadam, 2018). The total number of internal branches of the Algerian banks has reached 16193 (The annual report of the Algerian bank 2013).

The process of financial diagnosis of economic institutions in general and banks in particular is considered through: "analyzing their financial situation, using indicators and ratios with financial meanings to determine the strengths and weaknesses in their structure on the one hand. From the other hand, identifying their causes in order to reach what keeps the strengths and strengthens them, and addresses the weakness by providing solutions that fit the activity and the status of the diagnosed bank (The annual report of the Algerian bank 2013) Therefore, this process of analysis has a clear importance and a great role in diagnosing the financial situation and determining the net financial position of any banking institution (Nasser Dadi Adoun, Abirat Moghadam, 2018). The most important of them can be summarized in the following points (Wakal Noureddine, Khalifa Al-Hajj, 2016):

- * The possibility of predicting the future of the bank after reviewing its activities in the past and describing its present.

- * Emphasis on the competitive advantages of the bank, detection of defects and imbalances and clarifying their causes, as well as reducing the risks that may interfere with its activity.

- * Analyzing the financial and material capabilities of the bank through an accurate diagnosis of its assets;

- *Formulating an appropriate strategy for the bank development after determining its position in the market among its competitors;

- * Knowing the bank's financial position, managing its cash flows, and setting up an information system that allows for controlling liquidity and profitability problems.

With regard to the financial evaluation, this method is also considered as an organized method which is used to identify the extent of the benefit that will be achieved through the expected investment decision. In other words, evaluation is a reliable approach when there is a desire to measure the success of an institution in order to achieve the planned goals. The evaluation processes often seek to achieve efficiency, effectiveness, impact, sustainability and the established goals. The evaluation should also include reliable information so that reached results will help all the benefited parties to take decision (Bouchikhi Aisha, Ziyoush Rahma, 2013). The evaluation provides the institution with many advantages, which are mentioned as follows (Abdelkarim Bouhadra, 2012):

- An important source of information for managers
- Developing activity and facilitating the financing process
- Contribute to rationalizing the organization's leadership

1- The structure and composition of the Algerian banking sector and the importance of diagnosing and evaluating its performance:

The main features of the banks activity in Algeria:

2-1- The development of banking sector activity in Algeria in terms of deposit:

In order to diagnose the development of deposits in the Algerian banks, two criteria must be taken:

- Deposit maturity period: The process of attracting deposits is related to the extent to which banks are able to spread savings awareness among members of society and the various services they provide. The following figure shows the evolution of the volume of deposits in the Algerian banks during 2010 - 2018:

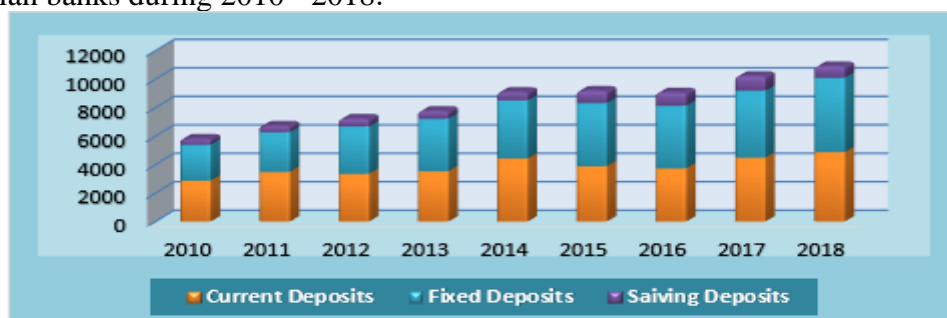


Fig. 1. Structure of bank deposits in accordance to the maturity period during 2010-2018 (Amount: 1 billion dinars at the end of the period).

According to the previous figure, the activity of the Algerian banks in terms of deposits maturity period was characterized as follows:

- The volume of deposits in the banking sector in Algeria has witnessed a remarkable development, as its growth rate reached 87.70% during 2010-2018, with an increase in current deposits that amounted to almost 70% during the same period. For term deposits, the rate did not exceed 107.29%, while the volume of collateral deposits increased during the same period by 90.90%.

-The growth rate of deposits in the Algerian Banks has witnessed a noticeable fluctuation during the study period:

- An estimated growth rate of 15.70% was recorded in 2011, which is the second highest recorded rate during the study period. However, the year 2012 witnessed a significant decline in which the growth rate was estimated as 07.50%. In 2013, it was relatively stable with 07.59%.

- In 2014, an estimated growth rate was recorded at 17.08%, which is the highest rate during the studied period compared to 2013. However, this percentage has quickly declined during 2015 to record 0.91% compared to 2014. As for 2016, it has recorded a negative growth rate of 1.31%. After that, the growth rate of the total deposits of the Algerian banks increased to reach 12.69% in 2017.

- According to the nature of the bank's ownership: The presence of private banks in the banking arena has created an atmosphere of competition with the public banks, especially with regard to attracting the largest possible share of deposits.

The following figure shows the share of both public and private banks in the total pooled deposits.

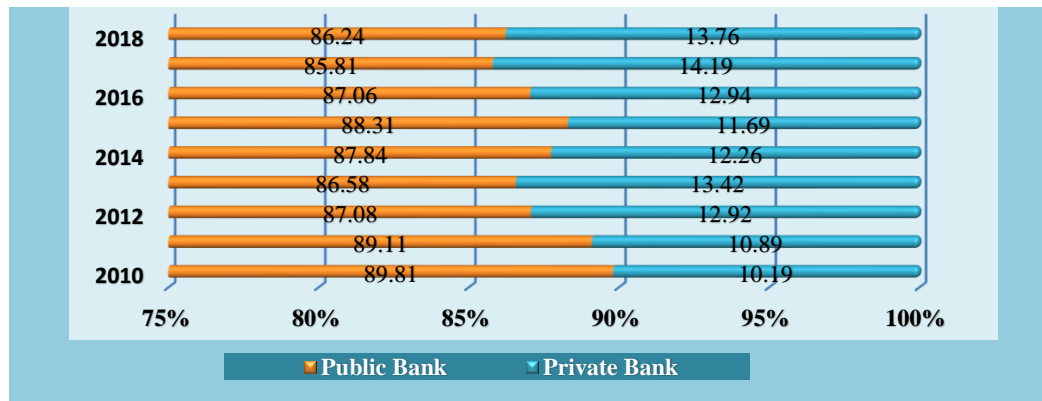


Fig. 2. Comparison between the public and the private banks share in total deposits during the period 2010-2018 (amount: one billion dinars at the end of the period).

It is evident from the above figure that the public banks control the deposit structure within the Algerian banking sector. Their share during the period 2010-2018 exceeded 85%. It is noted that the share of public banks in the resource market has witnessed a successive decline, to reach the lowest in 2013 by 86.58%. Then, it witnessed a slight increase during 2014 and 2015 to reach 87.74% and 88.31%, respectively. It is clear that the decline in the share of public banks was in favour of private banks whose activity witnessed a boom in terms of attracting deposits. They achieved the highest percentage in 2017 with 14.19% of total pooled deposits compared to 10.19% in 2010. This percentage decreased to reach 13.76% in 2018. The public banks dominate the resource market owing to the domination of the hydrocarbons sector over the Algerian economy, which is mainly represented by many public institutions that deposit their funds in public banks in addition to the trust placed by depositors in public banks compared to their private counterparts (Abdel Razzaq Habar, 2011).

- Assessment of banking performance in mobilizing savings: Measuring the relationship between bank deposits and GDP; which is known as the average tendency of bank deposits, determine to what extent the size of bank deposits is positive. This indicator reflects the ability and effectiveness of banks to attract deposits according to their share of GDP. Tybout argued that the strength of the financial markets in any economy is measured by the ratio of time deposits to the GDP and it also depends on the marginal slope of bank deposit resulting from the change in GDP. Through this indicator banks can determine the extent of their ability to change the tendency trends towards bank deposit or towards tendency weaknesses. The concept of internal flexibility of bank deposits is one of the most important analytical criteria for evaluating bank performance in mobilizing savings by attracting deposits. This concept determines the degree of response of bank deposits to the change in the real GDP and whether this response is regular or irregular (Msitfa abdellatif, 2016).

Table 1. The average and marginal slope and the income elasticity of bank deposits (2010-2018).

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total deposits	5819.1	6733	7238	7787.4	9117.5	9200.7	9079.9	10232.2	10922.7
Term deposits	2524.3	2787.5	3333.6	3691.7	4083.7	4443.3	4409.3	4708.5	5232.6
Gross domestic P	11991.6	14588.5	16208.7	16650.2	17228.6	16712.7	17514.6	18575.8	20259.1
Average slope of total deposits (%)*	48.53	46.15	44.65	46.77	52.92	55.05	51.84	55.08	53.91
Average slope of time deposits (%)**	21.05	19.11	20.57	22.17	23.70	26.59	25.17	25.35	25.83
Marginal slope of deposit***	-	0.35	0.31	1.24	2.30	-0.16	-0.15	1.08	0.41
Income Flexibility of Deposits****	-	0.76	0.70	2.66	4.34	0.29 -	0.29 -	1.97	0.76

* the average slope of total deposits = total deposits / gross domestic product.
 ** average slope of time deposits = time deposits / GDP.
 *** Marginal Deposit slope = Change in Deposits/Change in Gross Domestic Product.
 **** Internal elasticity of deposits = (change in deposits / deposits) / (change in GDP / GDP).

Source: Prepared by the researcher based on data extracted from the annual reports of the Algerian Bank.

From the previous table it can be concluded that:

- The results of the average slope of total deposits recorded a decline during the period 2010 - 2012 in which it reached its lowest percentage with 44.65%. Then, the percentages of this average tendency began to rise to reach 55.08 % in 2017. It reflects the return of the banks effectiveness in stimulating the demand for bank deposits which was neglected during the decline of the total deposits average slope value. This demand has declined again to reach 53.91% in 2018.

- The average propensity for time deposits decreased from 21.05 % in 2010 to 19.11% in 2011. It increased in 2009 to reach 22.36 % recording its best value in 2015 as it reached 26.59 %, to record a decline in 2016. However, during the years 2017 and 2018, it witnessed a kind of stability. In order to avoid this fluctuation, banks should improve interest rates and the well-known forms of saving vessels.

- The results of the marginal slope of bank deposits were irregular, as the degree of their response to the change in GDP was weak until 2012. However, it was gradually improved during the years 2013 and 2014. Then, in 2015 and 2016 it witnessed a decline recording negative values, but in 2017 it was improved to decline again in 2018. Thus, the fluctuating results of the marginal tendency of bank deposits need an increase in the effectiveness of the adopted policies so that the banks can change the tendency trends towards bank deposits and stimulate the demand for them. In order to fulfil this, there should be: a clear saving policy, flexible policies commensurate with the development of economic activity, stimulating bank deposits through interest rates and the presence of multiple services to motivate individuals to deposit (Msitfa abdellatif, 2016).

- The results of the internal flexibility of deposits were divided into three categories. It was found to be less than one during the years 2011, 2012 and 2018, which means a weak response to the change in deposits in proportion to the change in GDP. It was found to be greater

than one during the years 2013, 2014 until 2017, which reflects the response of deposits to the change in GDP. The degree of response in 2015 and 2016 was negative.

In general, it is concluded that the flexibility of bank deposits, savings deposits in particular, is weak. Also, there is no general trend of deposit movement, which explains the weak correlation of bank deposits with income changes and the weakness of commercial banks in attracting more local deposits. It also reflects the weak effectiveness of the proposed saving vessels from the banking system in general and the commercial banks in particular. The lack of banking services in general hides the weakness and limitations of banks in attracting deposits and mobilizing savings.

2-2- The development of the Algerian banking sector activity in terms of lending:

It is possible to study the loans granted by the Algerian banks on the basis of the maturity period and the nature of the financing sector.

- **According to the maturity:** Based on the maturity date, the Algerian banks offer short, medium and long-term loans. In order to figure out the loans distributed by banks operating in the national banking market according to the loan period 2010 – 2018, the following figure is presented. It represents the cash evolution of medium and long-term loans compared to short-term loans.

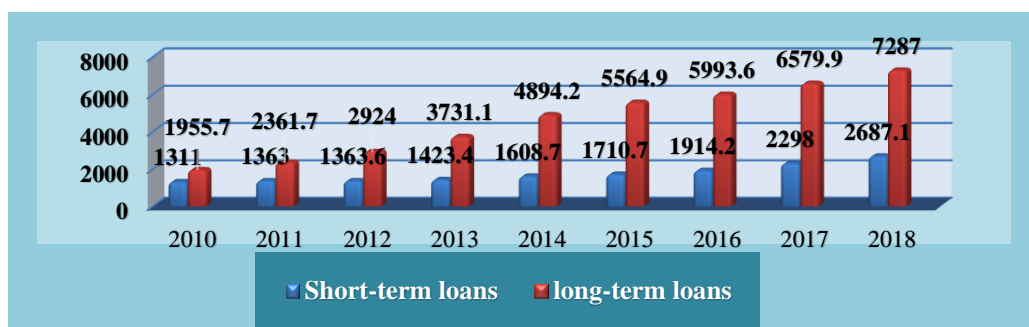


Fig. 3. The structure of loans provided to the economy by banks according to the maturity period (2010-2018) (amount: one billion dinars).

By analyzing the structure of loans according to the previous figure, it was found that:

- The growth rate of the total loans witnessed a continuous development during the period 2011 to 2014. In 2014 it reached the highest rate of 26.16%; whereas; it witnessed a decline in 2015 to reach 11.88. However, it has increased again during the years 2017 and 2018, where the loan growth rate reached 12.27% and 12.35% respectively.

- There was an upward trend of medium and long-term loans until 2015 in which they reached 76.49% of the total distributed loans compared to 75.26% in 2014. This increasing upward trend of the medium and long term loans was at the expense of the short term loans. The short term loans witnessed a decreasing share which was estimated in 2015 by 23.51% compared to 24.74% in 2014. Although its funds in line with the comparison years increased from 1608.7 billion dinars to 1710.7 billion dinars; however; starting from 2016 the growth rates of medium and long-term loans began to decline in favour of the short term loans share.

- The upward trend of medium and long-term loans is due to the rise in mortgage loans and loans directed towards financing durable goods for the families benefit. It was found that the value of mortgage loans was estimated at 259.1 billion dinars at the end of 2012. Then, it reached 307.4 billion dinars in 2013, and its value reached 359.5 billion dinars at the end of

2014. The value of the mortgage loans achieved high rates of increase which was estimated by 17% in 2014, 18.6% in 2013, and 19.4% at the end of 2012. In 2015, it reached 390.7 billion dinars with a slight growth of 8.7% compared to the previous years.

- **According to the ownership of the sector destined for financing:** All kinds of the Algerian Banks finance both the public sector and the private sector. The following figure shows the share of the public and the private banks in the volume of the granted loans.

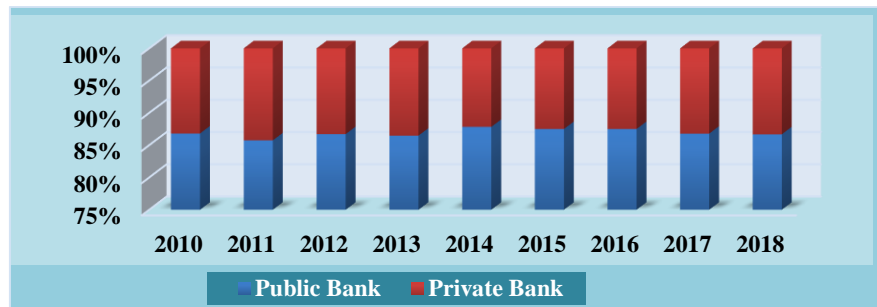


Fig. 4. Share of public and private banks in the percentage of distributed loans. (Amount: one billion dinars).

Through the annual reports of the Algerian Bank and based on the above figure, the following notes are extracted:

* The public banks controlled the total granted loans because they have the most deposits. Their share of the total distributed loans did not fall below 85% during the period 2010 - 2018. In 2014, it reached 87.84% which was considered the highest recorded percentage during the relevant period. Then, it decreased after that, but at very small levels

With regard to the share of loans distributed by private banks, it was found that it did not exceed 15% of the total distributed loans, reaching 14.25% in 2011, which was the highest percentage, and then began to decline until 2017 and 2018. In 2017 and 2018, the share began to rise again at the expense of the public banks` share, which recorded 13.21% and 13.32%, respectively. The loans distributed by the private banks are directed to finance private institutions and families which is a sector knowing a significant increase in the financial savings.

* The share of loans directed to the private sector of the total distributed loans decreased to reach 47.98% in 2014. Then, increased to reach 51.43% in 2017; whereas; it increased by 50.43% in 2018. Its shares during the years 2010 to 2013 did not exceed 50%, though. For the loans directed to the public sector, their share recorded an increase in 2014 and reached 52.92%, which was the highest percentage during the study period. However, it has quickly declined to reach 48.57% of the total loans distributed during 2017 and reached 49.57% in 2018.

* Public banks contribute in financing the private sector. Their share in financing this sector witnessed an increase from 74.63% in 2012 to 75.74% in 2016. Although the share of public banks in financing the private sector declined in favour of the share of private banks, which reached 74.50% and 73. 59% during 2017 and 2018 respectively, it still dominant.

- The efficiency indicators of the credit policy of the Algerian banking sector: The indicator (the volume of term deposits / the volume of loans) reflects the extent to which banks rely on deposits, especially medium and long-term ones, to finance their credit activity (Abdel Razzaq Habbar, 2011) .

During the period 2010-2018, this ratio recorded fluctuation and values less than one, indicating banks resort to current deposits in granting credit. The following table shows that the banks' contribution to the GDP witnessed a significant increase starting from 2013 with 30.96% and 49.23% in 2018. However, it did not exceed the threshold of 28% in recent years. This reflects the modest financial intermediation carried out by banks in the economy.

Table 2. Indicators of the credit policy efficiency of the Algerian banking sector.

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Term deposits	2524.3	2787.5	3333.6	3691.7	4083.7	4443.3	4409.3	4708.5	5232.6
Volume of loans	3266.7	3724.4	4285.6	5154.5	6502.9	7275.6	7907.8	8877.9	9974.0
Gross domestic product	11991.6	14588.5	16208.7	16650.2	17228.6	16712.7	17514.6	18575.8	20259.1
Amount of Term Deposits/Loans	0.77	0.75	0.78	0.72	0.63	0.61	0.56	0.53	0.52
Average slope of loans(%)	27.24	25.53	26.44	30.96	37.74	43.53	45.15	47.79	49.23

Source: Prepared by researchers based on previously used data.

3- Financial evaluation of the Algerian banks performance using traditional criteria:

Assessing the position of the Algerian banking system is not complete without identifying the extent of its financial solidity, or diagnosing its financial position, through the study and analysis of a number of important financial indicators. According to the available statistics, those indicators are summarized in the capital adequacy ratio, profitability of private funds and assets, profit margin, liquidity and the percentage of non-performing loans.

3-1- The first period (2010-2013): It can be summarized in the following table:

Table 3. The most important indicators of the financial resilience of the banking sector in Algeria during the period 2010-2013

	2010	2011	2012	2013
Solvency ratio of regular private funds (%)	21.50	23.62	23.77	23.64
Solvency Ratio of Base Private Funds (%)	15.51	17.48	17.00	17.67
Profitability of private funds	19.00	22.67	24.58	26.70
Profitability of assets (%)	1.67	1.93	2.1	2.16
Profit margin (%)	69.45	64.23	54.89	63.76
Bank charges outside interest (%)	33.53	35.64	35.07	31.43
Liquid Assets/Total Assets (%)	40.46	45.87	50.16	52.98
Liquid Assets/Short Term Liabilities	93.52	107.51	103.73	114.29
Ratio of non-performing loans to total loans	10.56	11.73	14.45	18.31
Ratio of provisions devoted for loans to total non-performing loans	68.19	69.79	72.15	73.48

Source: <https://www.bank-of-algeria.dz/pdf/rapport2013arabe.pdf>

From the table, it can be said:

- Solvency ratios continued to record high levels in 2013 despite of their decline compared to the previous years. The ratio of basic private funds reached 15.51%; whereas; the ratio related to regular private funds amounted to 21.50%. Therefore, it is much higher than the standards recommended in the Basel 3 framework.

- The profitability of the public and private banks is satisfactory despite of its decline during the period 2010-2013. The profitability of private funds was estimated at 19% in 2013, compared to 22.67% in 2012 and 24.58% in 2011. However, the assets profitability reached 1.67% in 2013 and 1.93% in 2012, and 2.1% in 2011. The profit margin witnessed a clear increase, as it rose from 54.89% in 2011 to 69.45% in 2013.

- The bank charges outside interest was slightly improved after it decreased from 35.64% in 2012 to 33.35% in 2013.

-The upward trend of medium and long-term loans led to a decrease in the ratio of liquid assets out of the total assets from 52.18% in 2010 to 40.46% in 2013. It led also to a decrease in the ratio of liquid assets to short-term liabilities from 114.29% in 2010 to 93.52% in 2013.

- The development of loan management by banks contributed to a decrease in the total volume of non-performing loans from 18.31% in 2010 to 10.56% in 2013.

3-2- Second period: 2014-2018: It can be studied through the following:

A- Capital adequacy ratio (bank solvency): All active banks in the Algerian banking arena sought to comply with the standards of the Basel III Committee by adhering to the capital adequacy ratio stipulated within the Algerian banking legislation and regulation. The following table shows the development of solvency ratios for regular and basic private funds in Algeria during the period 2014 - 2018.

Table 4. Solvency ratios of banks operating in Algeria during the period: 2014-2018.

		2014	2015	2016	2017	2018
Solvency ratio of regular private funds (%)	Total Banks	15.79	18.40	18.75	19.38	19.06
	Public banks	14.71	17.75	18.37	19.58	19.26
	Private banks	20.40	20.99	20.32	18.51	18.20
Solvency Ratio of Base Private Funds (%)	Total banks	13.18	15.76	16.25	14.97	14.99
	Public banks	11.65	14.64	15.42	14.33	14.44
	Private banks	19.68	20.26	19.64	17.75	17.43

Source: Annual Report of the Bank of Algeria 2018, <https://www.bank-of-algeria.dz/pdf/rapport2018arabe.pdf>

From the previous table, the following points can be extracted:

- At the end of 2018, the solvency ratio of the banking sector in Algeria for statutory and basic private funds exceeded the requirements of the minimum precautionary rules recommended in Basel III framework, reaching 19.06% and 14.99%, respectively. These levels remained relatively stable with the values recorded in 2017.

- By the end of 2016, the solvency rate of banks operating in Algeria for the basic private funds was 16.25%. The solvency ratio for regular private funds was 18.75%. This indicates that these ratios improved compared to those recorded in 2014 in which the solvency ratio for basic private funds reached 13.18% and the solvency ratio for regular private funds reached 15.79%. However, these rates remained much higher than those recommended in the Basel III Convention.

The solvency ratio of private banks to the regular private funds over the period 2014 - 2016 was higher than that of the public banks, where it amounted to reach 20.32% in 2016; whereas; the public banks recorded 18.37%.

-In contrast, starting from 2017, the solvency ratios of public banks increased compared to the private banks. The private banks are superior to their public counterparts in recording higher solvency ratios because they are able to control their activities. Therefore; the private banks are less exposed to risks unlike the public banks that seek to finance all sorts of public institutions. Although the solvency ratios of banks did not exceed the regulatory minimum edge, the increase in the assets of banks and financial institutions had an impact on the ratios of private funds of almost banks and financial institutions, including the private ones. In this sense, the Monetary and Loan Board issued a new regulation No. 18-03 of November 4th, 2018 which was related to raising the minimum capital of banks to 20 billion dinars and financial institutions to 6.5 billion dinars (The annual Report of the Bank of Algeria, 2018).

b- Profitability of private funds and assets: the profitability of private funds measures the extent of the bank's ability to generate returns from investing shareholders' funds aiming at maximizing their wealth. The higher ratio explains the ability of the bank's management to take investment and operational decisions with high efficiency. As for the profitability of assets, it measures the extent of the bank's success in investing its assets and its ability to direct them towards profitable investment opportunities (Abderrazak Salam, 2011), The following table shows the development of the private funds and assets profitability of the Algerian banks during the study period.

Table 5. profitability of private funds and assets of the Algeria banks operating during the period 2014-2018.

		2014	2015	2016	2017	2018
Profitability of private funds	Public banks	25.22	23.37	18.69	19.99	22.68
	Private banks	19.97	16.10	15.28	14.69	21.21
	Total banks	23.75	21.48	17.89	18.84	22.38
Profitability of assets	Public banks	1.77	1.76	1.68	1.97	2.27
	Private banks	3.38	3.11	2.84	2.59	3.38
	Total banks	1.99	1.92	1.83	2.05	2.42

Source: Annual Report of the Algeria Bank for 2018, p. 91.

From the table, the following can be extracted:

- The profitability of funds belonging to the banking sector in Algeria decreased from 23.75% in 2014 to 17.89% in 2016. Then, it started to rise from 18.84% in 2017 to 22.83% in 2018. It was the same pace recorded by the profitability the public banks funds which rose in 2018 to 22.68%. It recorded better percentages than those recorded in the private banks, where the profitability of the funds belonging to the latter declined during the period 2014 -2016, and its rate increased in 2018 to 21.21%. The positive development in the profitability of funds belonging to public banks is due to the compliance of the latter to the new regulation calling for the necessity of raising the minimum capital for banks, the expansion of their branch network and diversification of their services.

- The asset profitability of the banking sector in Algeria also decreased from 1.99% in 2014 to 1.83% in 2016 and then increased to 2.05% and 2.42% during 2017 and 2018, respectively. As for the development of this indicator in public banks, it decreased from 1.77 in

2014 to 1.68% in 2016, after that it increased to reach 2.27%. Those values are lower than those recorded by the private banks which also recorded a decline during the period 2014 to 2017, then increased in 2018 to reach 3.38%.

- The profitability of public and private banks remains good despite of the recorded declines. This decline in the profitability of the private funds and the relative stability in the return on assets pertained to both public and private banks alike. Despite the different reasons behind this, the decline in the profitability of private funds of public banks was associated with a strong rise in private funds compared to the results. Meanwhile, the decline in private banks was due to the decline in their results. As for the relative stability of asset returns, it was caused by the increase in assets in public banks and their decline in private banks.

C- Profit Margin: The profit margin indicator measures the bank's ability to control its burdens. Therefore, when the profit margin is higher, it indicates the bank's efficiency in reducing its costs. The following table shows the development of the profit margin and burdens in the banking sector in Algeria from 2014 to 2018.

Table 6. Evolution of the profit margin and burdens in banks operating in Algeria during the period 2014-2016.

		2014	2015	2016	2017	2018
Profit margin	Total banks	34.63	33.10	32.91	35.31	41.33
	Public banks	31.88	44.03	34.63	32.29	36.32
	Private banks	44.03	36.32	34.69	28.55	34.63
Bank charges outside interest	Total banks	40.73	40.01	34.08	35.99	29.34
	Total banks	40.58	39.24	31.43	33.75	26.39
	Private banks	41.29	43.43	46.27	46.16	40.49

Source: Annual Report of the Bank of Algeria, 2018, p. 94

According to the table, the profit margin index declined from 34.63% in 2014 to 33% in 2015. Then, it increased again in 2016 to reach 32.91%, and continued to rise from 35.31% in 2017 to 41.33% in 2018. After, this indicator recorded a rise from 32.29% to 36.32% in public banks and from 28.55% to 34.63% in the private banks during the same period. This is explained by the improvement witnessed by the public banks in the field of loan risk assessment, management and follow-up. Thanks to the intensification and tightened supervision over their portfolios by the Bank of Algeria and the Banking Committee. During this period, the bank charges outside interest witnessed a decrease reaching 29.34% in 2018.

D- Bank liquidity: Liquid assets to total assets decreased during the period 2014 - 2018 reaching their lowest level of 18.43% in 2018. The ratio of liquid assets to short-term liabilities increased from 38.41% in 2014 to 46.30% in 2018. It is the same pace witnessed by the development of the two indicators during the same period in both public and private banks. This is what the following table shows:

Table 7. Banks Liquidity Ratio in Algeria

		2014	2015	2016	2017	2018
Liquid Assets/Total Assets	Public banks	18.43	21.88	22.66	25.85	37.04
	Private banks	28.52	33.11	29.11	35.87	43.95
	Total banks	19.84	23.51	23.05	27.14	37.96
Liquid Assets/Short Term Liabilities	Public banks	46.30	52.17	58.84	60.20	83.41
	Private banks	52.61	60.58	56.25	69.79	75.38
	Total banks	47.45	53.70	58.39	61.64	82.06

Source: Annual Report of the Bank of Algeria, 2018, p. 87.

E- The evolution of non-performing loans volume: The ratios of non-performing bank loans in Algeria witnessed a remarkable increase during the period 2014-2018. After, this percentage had known some kind of stability during 2014 and 2015. It started to increase in 2016 reaching 12.06% and in 2017 reaching 12.96%. The rate of the non-performing bank loans has reached 13% of the total loans during 2018. These percentages are considered among the highest ratios recorded in the Arab countries. The following table shows the evolution of the non-performing loans ratios and the provisions allocated to them at the level of active banks in Algeria.

Table 8. The evolution of the ratio of non-performing loans to the total loans and provisions allocated to Algerian banks 2014-2018.

	2014	2015	2016	2017	2018
Ratio of non-performing loans to total loans	12.96	12.09	9.77	9.88	13.13
Ratio of provisions devoted for loans to total non-performing loans	52.28	54.62	59.93	62.13	49.96
Ratio of non-performing loans to total loans in public banks	13.71	12.58	9.91	10.06	49.43
Ratio of provisions devoted for loans to total non-performing loans in public banks (%)	52.43	55.40	61.54	64.04	49.9
Ratio of non-performing loans to total loans in private banks	7.79	8.55	8.63	8.53	7.11
Ratio of provisions devoted for loans to total non-performing loans in private banks (%)	50.52	46.26	45.34	44.96	57.27

Source: Annual Report of the Bank of Algeria, 2018, p. 89.

This rise is mainly due to the classification of public banks for 56% of their granted loans within the framework of youth support programs; which reached maturity, within non-refundable loans. This contributed in increasing the volume of non-performing loans in public banks by 60%. For this reason; public banks recorded a significant increase in the rate of non-performing loans which reached 13.98% in 2018, compared to 13.71% in 2017 and 12.58% in

2016. Meanwhile, the percentage of non-performing loans to total loans is decreasing in private banks, as it moved from 8.55% in 2016 to 7.11% in 2018.

It is also clear from the table that the non-performing loans were covered by 49.9% in 2018 through provisions devoted to loans, compared to 52.43% in 2017. This decrease in the allocation of provisions is due to the decline in this rate in public banks. The latter has partially covered the uncollected loans granted in the framework of youth support because it benefits from guarantees that may reach 85% of the allocated public guarantee funds. In contrast, the provisions of private banks devoted to non-performing loans increased from 46.26% in 2016 to 57.27% in 2018 (The annual Report of the Bank of Algeria, 2018).

Analysing the indicators of the financial resilience of the banking sector in Algeria highlights that the financial position of this sector is still comfortable despite the economic stagnation that the national economy has been suffering from since 2014 following the oil prices collapse. This has revealed the weak role of banks in recovering the sums of the withdrawn money back to the official department and leaving them in circulation within the parallel market which contributed to decreasing the rates of bank liquidity in this sector. The analysis of the previous financial indicators showed that loans are highly exposed to default in the Algerian banking sector.

Conclusion

It is clear from the study that the financial position of the Algerian banking system is still comfortable despite all the structural and organizational imbalances that the latter suffers from.

If these imbalances are overcome as soon as possible, this will be positively reflected on all the financial criteria adopted in the evaluation process, including the improvement of the national banking system status and its main role in financing economic development in the country.

From the above analysis, the strengths of the Algerian banking system can be summarized in the following:

- The transformation of the Algerian banks from specialization to comprehensive banking through: diversifying the range of retail banking services in the Algerian banks and the expansion activity of the financial leasing and working as intermediaries in the field of investment in the Algerian Stock Exchange.

- Diversity of the market and the increase in the pooled resources due to the increase in the number of clients, which allows for the development of a diversified lending policy.

- Taking into consideration and adopting the international standards regulating banking activity, such as Basel III standards and financial reporting standards for international accounting.

- The authorities' realization that purifying the public banks' portfolio would ensure continuity and allow them to rectify the situation in order to achieve greater profitability.

As for the weaknesses, they can be listed as:

- The dominance of public banks over the Algerian banking activity, as they dominate the majority of the market share, which negatively affected competition in the Algerian banking market.

- Poor coverage, spread and distribution of the banks' network and their branches across the national territory.

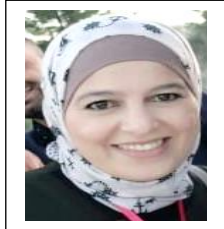
- The ineffectiveness of the banking system in performing its developmental role, which is represented in distributing the available funds on the various terms of use and in a manner that ensures matching the needs of liquidity and achieving profitability.
- The ineffectiveness of the banking system in Algeria due to the absence of competition in the banking market caused by the weak variety of the provided services.
- The high rates of non-performing loans in public banks despite of the procedures for purifying their portfolios by the state treasury.

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