THE RESPONSE OF ALGERIAN BANKS TO THE BANK OF ALGERIA'S PRECAUTIONARY MEASURES UNDER BASEL III ACCORDS

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Abstract: .

The interest in financial stability increased after the repercussions of the financial and banking collapses of some American and European bank poles, as well as the consequent global financial crises in 2008, which made the Basel Committee approves a bunch of new laws on September 12th, 2010, known as Basel III Standards, aiming to establish precautionary standards and control and supervisory frameworks preventing banks from being exposed to other crises.

In this study, we will deal with these precautionary standards and then try to project them on the Algerian banking system to know the extent of their application and keeping pace with the legal and regulatory texts that frame the banking work in Algeria.

Key Words: Ball III Accords, the Algerian banking system, the Bank of Algeria.
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1. INTRODUCTION:

The Bank of Algeria seeks to ensure the safety and stability of the financial system in general, the banking system is special, like other central banks in various countries of the world. For that, it depends on a set of precautionary measures inspired by the BaseLl Accords, besides supervisory procedures through which it can detect imbalance locations in the banking system, in order to undertake corrective measures right on time.

The Bank of Algeria has sought to keep pace with international standards, which have become a necessity imposed by the global banking environment, in order to reinforce the competitive capabilities of local banks and improve risk management and financial solvency.

Among the latest of these international standards is the Basel III Accords, which emerged after 2008 financial crisis, which proved the shortcomings of the second agreement and its inability to guarantee the financial and banking system's safety and stability.

Based on the above, the study problematic can be set forth and formulated as follows:

To what extent do Algerian banks respond to the precautionary standards of the Bank of Algeria under the Basel III Accords?

In order to answer this problematic, we address the following main themes:

1. Most important developments in the Basel III Accords.
2. Compliance of the Bank of Algeria with the Basel III Accords.
3. Response of Algerian banks to the recommendations of the Bank of Algeria
4. Comparison between Algerian banking legislation and the decisions of Basel III

2. Latest Developments in Ball III Accords

The Basel III Accords emerged from the danger of the American mortgage crisis that led to a global financial crisis in the second half of 2008; this crisis that revealed deficiencies in the second agreement of Basel Committee, although it was in the beginning of its implementation, but this did not prevent it from being the reason for more rigorous and safer precautionary measures.

2.1. Basel III Resolutions:
The Basel Committee made amendments to the three pillars of the second agreement:

2.1.1. First Pillar Amendments Related to Own funds Requirements:

A. Improving and Strengthening Private Funds' Quality:

The Basel III Accords focused on improving and strengthening the quality of private funds, as it raised the minimum shareholder's rights from 2 to 4.5% of the first category requirements of capital and raised the percentage of the first category, i.e., own funds from 4% to 6%. In addition, precautionary funds were added at a rate of 2.5% of ordinary shares to ensure that the bank maintains a protective capital that can be used to absorb losses during periods of crisis, thus, the new first category capital became 8.5%

after it was 4.5% in Basel II, while the capital requirements imposed by Basel III became 10.5% instead of 8%.

To increase reserves, Basel III added a hedge capital to meet the crises of fluctuating economic cycles in the range of 0% to 2.5%, provided that this is done according to the local conditions of each country(MOKHTAR, 2017, p. 34).

Accordingly, the capital adequacy equation becomes as follows: (or small p113)

Capital Adequacy Ratio = Tier 1 (net private funds) + Tier 2 (hedge capital) / risk weighted assets ≥ 10.5%

B. Controlling Financial Leverage:

The great expansion in granting credit before the financial crisis has an impact on banks bankruptcy due to the insufficiency of own funds to absorb losses. The banks that follow the method of internal risk assessment gave small weights to be used in order to increase the impact of financial leverage, for this reason, Basel worked to introduce the so said Financial Leverage to restrain the expansion of bank loans(NADJAR, 2013, p. 283).

An optional percentage of 3% of the first tier of capital has been imposed, provided that it is calculated from the balance assets and off-balance without relative weights.

1- The introduction of financial leverage ratio indicator is considered a supportive measure for risk measurement methods, and it also helps to form the process of building excess solvency in the banking system (Tarek, 2019 University of El Oued, p. 83) leverage ratio is calculated by the following equation:

Financial leverage ratio $=\frac{\text{first tier}}{\text{assets3}} \geq 3\%$

C. Best Liquidity Risk Management:

The 2008 financial crisis showed how liquidity risks couldquickly crystallize and last for a long period. Facing this situation, the Basel Committee has developed new **quantitative** and **qualitative** standards for better management of liquidity risks, as traditional standards do not meet the banking needs facingthe big challenges that resulted from the financial crisis.

The **qualitative control requirements for liquidity risk management** were represented in several points approved by Basel III, including (BOUCHERMA, p. 81):

- Basic requirements for liquidity risk management and supervision: Each bank is responsible for establishing a strong framework for managing liquidity risk, and ensures that it maintains an adequate level of liquidity risk.

- Liquidity risk governance: Every bank must disclose the permissible level of liquidity risk; it must constantly review data related to it and report it to the board of directors on a periodic basis.

- Providing tools and methods for measuring liquidity risk: The bank must use early warning system to determine the weakness in the level of liquidity, in addition to managing liquidity by the bank in normal times, it must be prepared for that in stressful conditions. In this regard, called stress or endurance tests must be conducted and analyze scenarios on a regular basis.

- Public disclosure: The bank must undertake the process of information publicly disclosure and dissemination on a regular basis, in order to allow market participants to make sound decisions.

- Supervisors' role: Supervisors must periodically submit a comprehensive report to the general frame for managing liquidity risks in the bank. They must also intervene effectively when necessary and request remedial measures in a timely manner with banks that notice a deficit or deficiency in liquidity risks' management.

As for the **quantitative control requirements for managing liquidity risk**, they consist in two ratios approved by Basel III to cover this risk in the short and long term.

- LCR Short-Term Liquidity Ratio:
  This ratio aims to make the bank self-meet its liquidity needs in the event of a crisis, by imposing a ratio to meet the short-term liquidity needs(HANI, 2017., p. 311) and it is calculated as follows:

Short-Term Liquidity Ratio $= \frac{\text{High quality liquid assets}}{\text{Net cash flows foreseen in 30 days}} \geq 100\%$

The bank being required to be aware of the availability of liquid assets to cover any shortage of liquidity within at least a month, Basel III has approved the gradual application of this ratio until 2019.

- NSFR Long-Term Liquidity Ratio:

This ratio aims to provide independent resources that ensure that any bank continues its activity properly for a period of one year in stress periods (NADJAR, 2013, p. 234)and is formulated as follows (Basel Committee on Banking Supervision).

NSFR Net Stable Funding Ratio $= \frac{\text{stable resources available for a year}}{\text{stable funding needed for a year}} > 100\%$

D. Risk coverage:

In continuation to the reforms mentioned in the first pillar, after we discussed the requirements of private funds, the financial leverage control and a better liquidity risk management, we now turn to risk coverage.

Basel III maintained the three main risks found in Basel III: credit risks, operational risks and market risks. It also maintained the methods of measuring operational risks. As for credit risks and market risks, some modifications were incorporated. Concerning the securitization framework on the side of credit risks, it has set higher weights on rebond risks, with the unification of these weights, as well as moving away from total reliance on rating agencies (BOUCHERMA, p. 85)

As for the modifications affecting the market risks, they are based on calculating the capital requirements to meet the general and specific market (Union of Arab Banks Research Department, Lebanon 2010, pp. 40-42)

2.1.2. Modifications to the Second Pillar of Risk Management and Control

Seen the weaknesses in risk management processes during the financial crisis, the committee has improved this aspect through(Tarek, 2019 University of El Oued, p. 84):

- Issuing recommendations entitled Guidelines for Managing Liquidity Risk According to Best Practices in September 2008 (*Arabic reference*), which included 17 principles for managing liquidity risk in the Bank.

- Issuing recommendations entitled “Supervisory Guidelines to Manage to Practice Fair-Value Financial Institutions to Improve the PrecautionaryAssessment of Institutional Valuation Practices” (*Arabic reference*) in April 2009.

- Publishing a set of principles aiming at strengthening governance in banks within the document entitled “Principles for Strengthening Corporate Governance”(*Arabic reference*) in October 2010.

2.1.3. Amendments to Market Discipline Third Pillar

The crisis revealed the extent of inconsistency in financial information disclosed by banks with regard to exposure to risk and regulatory capital.

In order to correct the shortcomings in this domain, the Basel Committee decided the following:

a- Re-assessing the market discipline third pillar requirements in July 2009 to address the deficiencies that appeared in the practice of disclosure and transparency during the crisis.

b- The Committee obligated the banks to disclose all the components of the legal own funds and the applicable discounts; it also published on its websites on Internet all the contractual characteristics of the tools that are included in the formation of legal private funds.

c- It suggested obligating banks to disclose compensation and rewards.

d- The Basel Committee issued several documents to enhance market discipline, including: Capital Disclosure Requirements in June 2012, Disclosure Standards for Liquidity Coverage Ratio and Leverage Ratio Disclosure Requirements under Basel III in January 2014 as well as reviewing the Disclosure Requirements Standards for the Third Pillar in June 2014 (*Arabic reference*).

2.1.4. Basel III Assessment:

The assessment of Basel III varied between the following advantages and disadvantages (Meriem, 2016-2017, p. 190):

Advantages of the agreement:

- It strengthens the banks' financial position and contributes directly to supporting the entire economy.
- It reduces risks and enhance discipline in the banking field.
- It reduces incidence of crises, increases banks' reserves, raises capital, and establishes greater transparency in the financial world.

While its disadvantages are:

- It imposes pressure on weak companies, reduces profits and increases the lending cost (Danielp109).
- It puts growth in a critical situation by forcing it to raise capital.
- It leads to limit development projects' financing by imposing restrictions on cash flow.
- Commitment to financial leverage leads to a decline in the lending percentage in banks, which negatively affects their profitability and deprives economic activity of financing (pp3-4 Dominique).

3. The Bank of Algeria's compliance with Basel III Accords

Algeria, like other countries of the world, sought to adopt the reforms brought by Basel III Accords, taking a set of measures and issuing a bunch of regulations represented as follows:

3.1.Minimum Capital Requirements:

The capital of banks and financial institutions represents the first guarantee towards customers, which made it of great importance in financial reform.

The following table shows the various minimum capital developments in Algeria:

Table 1. The minimum capital development in Algeria

Regulation n°	Its date	Capital of banks	capital of financial institutions
01-90	199008/04th/	DZD 500 millions	DZD 100 millions
01-04	200403/04th/	DZD 2.5 billions	DZD 50 millions
08-08	200812/23rd/	DZD 10 billions	DZD 3.5 billions
03-18	11/04th/2018	DZD 20 billions	DZD 6.5 billions

Source: was prepared by the student based on the Bank of Algeria's reports

The last amendment to the minimum capital was in 2018, as we saw in the table, a period of two years was set for compliance with this regulatory requirement, as stated by the Governor of the Bank of Algeria in his intervention before the People's National Assembly in December 2018.

3.2.Compulsory Reserves:

The Compulsory Reserves System includes obligating commercial banks to maintain in current accounts a certain percentage in the form of legal money; this rate is used to influence the volume of credit (Majid, 2001)In this regard, several instructions have been issued and that we present in the following table:

Table 2. The evolution of the compulsory reserve ratio in Algeria

Instruction Number	Its Date	Compulsory Reserve Ratio
74-93	199411/28th/	2.5%
01-01	200102/11th/	4%
04-02	200405/13th/	6.5%
16-03	201604/25th/	8%
17-04	201707/31st/	4%
18-01	201801/10th/	8%
18-03	201805/31st/	12%
19-02	201912/06th/	10%
20-02	202003/10th/	8%
20-06	202004/29th/	6%

Source: was prepared by the student based on the reports of the Bank of Algeria

From the table, we notice that the mandatory reserve percentage was increasing until 2019, except for 2017, it reached4%, due to the liquidity crisis at that time as a result of the oil crisis and then returned to decrease in 2020, as a result of the crisis and the covid19 pandemic and its impact on the world economy and on all sectors in local economy.

3.3.Risk Distribution Ratio:

In order to better manage the risk and avoid concentrating the risks on one or few debtors, which would threaten the solvency of the bank, the Bank of Algeria imposed on banks and financial institutions the necessity to respond to the Risk Distribution Ratios according to the regulation 02-14 dated on 02/16th/2014 related to major risks and contributions, these ratios are as follows:

$$\text{Individual Ratio} = \frac{\text{Total net risks for each beneficiary}}{\text{Own legal funds}} \leq 25\%$$

$$\text{Total Ratio} = \frac{\text{Major Risks to which the bank has been exposed}}{\text{Legal private funds}} \leq 8$$

Whereas the total risks to which the bank has been exposed are the beneficiaries whose each risk exceeded 10% of the bank's legal own funds in order to avoid the bank being directly linked to their financial situation.

As for the major risks, they are meant in this system as the total of risks to which the bank or financial institution is exposed to in relation to the same beneficiary.

3.4. The measures of Bank of Algeria related to managing liquidity risk and the response of Algerian banks:

In an attempt by the Bank of Algeria to keep pace with the liquidity standards set forth in the Basel III Accords, the Bank of Algeria, through the Monetary and Loan Council, issued the regulation n°11-04 dated on 05/24th/2011, bearing definition, measurement, management and control of liquidity risk, which committed Algerian banks to respect a minimum liquidity coefficient represented by the following ratio:

Liquidity Ratio = $\frac{\text{Short-termliquid assets}}{\text{Short-term receivable liabilities}} \geq 100\%$. This ratio is also called the Minimum Liquidity Coefficient.

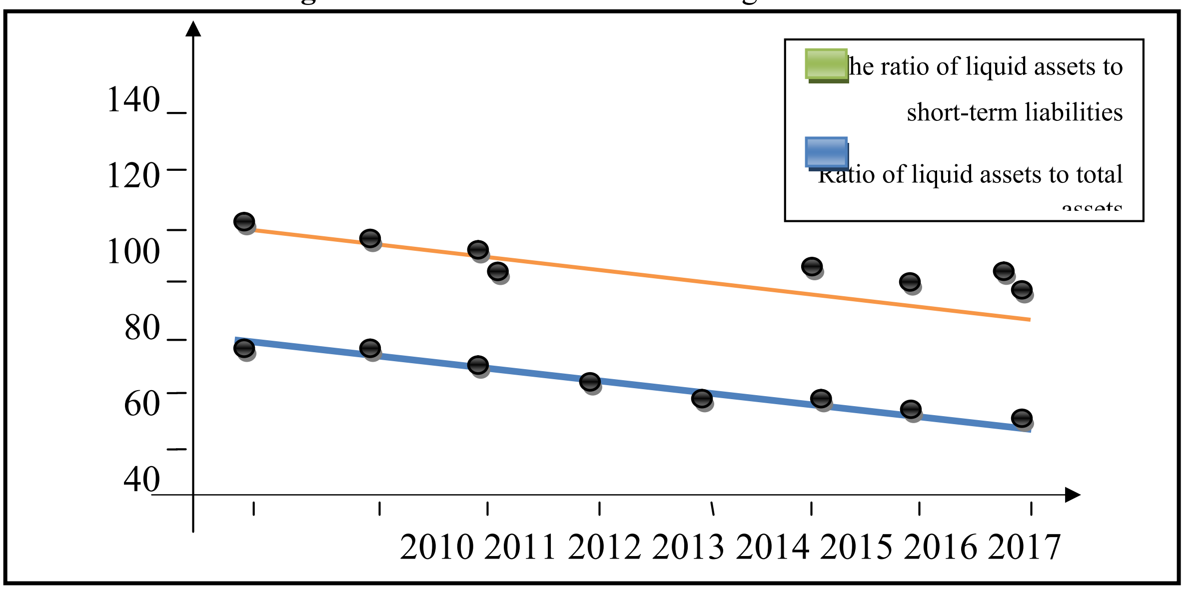
This ratio is informed to the Bank of Algeria at the end of each quarter, starting from 12/31st/2012, and the following table represents the extent to which Algerian commercial banks have committed to this ratio from 2010 to 2017.

Table 3. The evolution of the liquidity ratio in Algerian banks from 2010 to 2017

	2010	2011	2012	2013	2014	2015	2016	2017
Liquid assets to total assets	52.98	50.16	45.87	40.46	37.96	27.17	23.50	23.74
Ratio of liquid assets to short-term liabilities %	114.29	103.73	107.51	93.52	82.06	61.64	58.39	53.86

Source: was prepared by the student based on the economic and monetary reports of the Bank of Algeria for the years under study

Fig.1. shows the values of the ratios given in the table.



Source: Prepared by the student based on Table 3

From the previous figure, we notice that both ratios have been decreasing continuously from 2010 to 2017, and the reason for this decrease is the increase or growth in the size of short-term liabilities compared to the increase in liquid assets.

This decrease is due to the deficit in the total balance of the payments' balance due to the continuing decline in the average oil price despite the liquidity derived from financing the balance deficit and the return of the Bank of Algeria to refinancing starting from August 2016.

3.5.Solvency Ratio and Response of Algerian Banks:

Since the issuance of the regulation (01-14) on 02/16th/2014, the Bank of Algeria has modified the solvency ratio to become 9.5% after it was 8% in the previous regulation and made it measured by the following equation:

$$\text{Solvency ratio} = \frac{\text{legal private funds}}{\text{3 weighted exposures (loan risk + market risk + operating risk)}} \geq 9.5\%$$

Loan risk includes balance risk and off-balance risk

- Weighted operational risk is calculated by multiplying the provisions from own funds under these risks by 12.5%
- The weighted market risk is calculated by multiplying the provisions from own funds under these risks by 12.5%
- Article 03 also obligated banks and financial institutions to respect the coverage ratio of the basic own fund provisions at the 7% level of the total risks (loan risk - market risk and operational risk).

3.5.1. Safety Cushion:

In addition to the previously mentioned minimum solvency ratio that must be maintained to cover banking risks, banks and financial institutions must also form a cushion called a Safety Cushion consisting of basic own funds that cover 2.5% of their weighted risks, aiming at increasing the ability of Banks to absorb losses in the event of banking crises, which is the same percentage set by Basel III, except that Basel III has added a precautionary capital ratio in the range of 0 to 2.5% to face crises and the vicissitudes of the economic cycle. Whereas the Algerian legislator has only indicated the possibility of the banking commission to impose higher solvency standards for institutions of great importance.

3.5.2. Response of Algerian banks to the solvency ratio set by the Bank of Algeria:

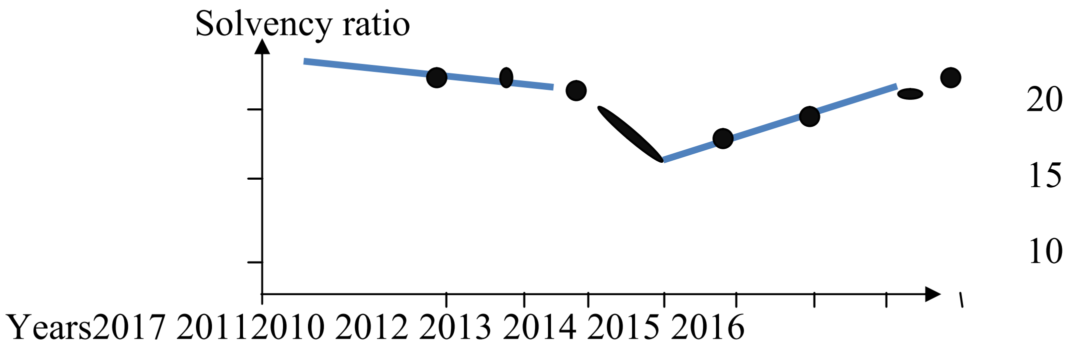
The Algerian legislator defined it as the total solvency ratio and the following table shows the evolution of this ratio from 2010 to 2017.

Table 4. Evolution of the solvency ratio in Algerian banks from 2010 to 2017

Years	2010	2011	2012	2013	2014	2015	2016	2017
Total Solvency Ratio %	23.64	23.77	23.62	21.50	15.98	18.39	18.86	19.56

Source: prepared by the student based on the annual economic and monetary report issued by the Bank of Algeria for the years under study

From the above table, we can create the following figure:



Source: prepared by the student based on the previous table

From the previous figure, we notice that the solvency ratio is characterized by high levels, except for the relative decline in 2014 compared to other years, the year in which the Bank of Algeria included the calculation of the capital adequacy ratio for operational and market risks.

In general, the solvency ratio of the Algerian banking sector is much higher than the rates recommended in the Basel III framework, which are estimated at 10.5%.

The Basic Capital in Algerian Banks

Also known as the first tier of capital; it is in the Bank of Algeria's indicators, issued in the annual reports, called the solvency ratio onthird parties. It was set in the Ball Committee at 6%, while the Algerian legislator set it at 7%. The following is a table showing the evolution of the basic own funds ratio in Algerian banks from 2010 to 2017

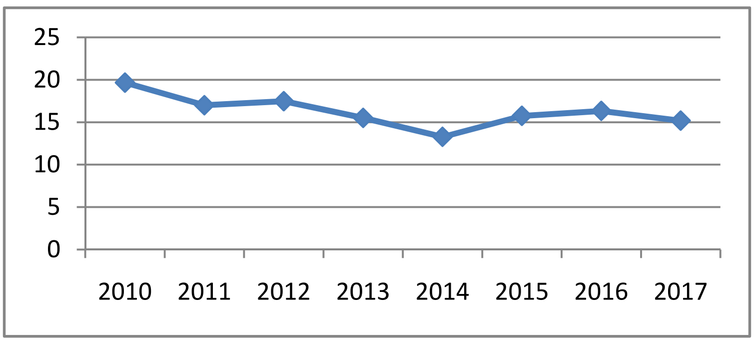
Table 5. The evolution of the basic capital ratio in Algerian banks from 2010 to 2017

Years	2010	2011	2012	2013	2014	2015	2016	2017
Solvency Ratio on Third parties %	19.67	17.00	17.48	15.51	13.27	15.75	16.33	15.18

Source: prepared by the student based on the monetary and economic reports issued by the Bank of Algeria for the years under study

The following figure represents a translation of the previous table:

The evolution of the basic capital ratio in Algerian banks from 2010 to 2017



Source: prepared by the student based on the previous table

From the figure, we notice that the percentage of basic own funds in Algerian banks was decreasing until 2014, then returned to rise again due to the initiation of the implementation of the regulation n° 01/14 related to solvency in 2014, and also increased afterwards due to the Algerian state's mobilization of three public banks.

The ratio of the basic capital in Algerian banks exceeds the values recommended by the Basel Committee 7% and what the Bank of Algeria called for 6% by a large margin.

3.6.Financial Leverage:

The Financial Leverage is one of the axes developed in the Basel III Accords. However, the precautionary rules in Algeria did not include the percentage of financial leverage brought by Basel III, which aims to put a maximum limit for the increase in the percentage of debts in the banking system so that it is not inferior to 3% (Tarek, 2019 University of El Oued, p. 91)The financial leverage ratio referred to in the report of the Bank of Algeria is calculated by the following equation (www.bank-of-algeria, p. 83).

$$\text{Financial Leverage} = \frac{\text{Asset average}}{\text{Own capital average}}$$

The following is a table of the financial leverage value from 2015 to 2017, according to the report of the Bank of Algeria.

Table 6. Financial leverage from 2015 to 2017, according to the Bank of Algeria's report

	2015	2016	2017
Public banks	13	11	10
Private banks	38	36	37
Banking sector	11	10	9
Average	20.66	19	18.66

Source: prepared by the student based on the Bank of Algeria's report 2017, p83

From the previous table, we notice that the value of financial leverage in public banks is less than the value in private banks, and in general, the average is compatible with the rate issued by Basel III is less than 33.33. The following table shows the value of financial leverage in Algerian banks according to the equation contained in the Basel III Accords, which is:

$$\text{Financial Leverage} = \frac{\text{Basic capital}}{\text{Total assets inside and outside the budget}}$$

Table 7. The evolution of the financial leverage multiplier for Algerian banks from 2009 to 2016 according to the Basel III equation.

	2009	2011	2011	2012	2013	2014	2015	2016
Ball III leverage multiplier	12.97	12.16	12.64	12.04	12.09	12.91	11.02	10.17

Source:(KEDDI Abdelmadjid, 2009-2016, p. 14)

The previous table represents the evolution of the financial leverage levels in accordance with the Basel III Accords and according to the results obtained, there is a decline in the leverage multiplier in 2015 and 2016 to 11.02 times and 10.17 times, respectively, compared to the rates recorded from 2009 to 2014 from 12.91 to 12.97 times, respectively and it is inferior to the international standard of Basel III 33.33 times. These results are explained by the organizational capital increase, especially the high-quality core capital, in light of the application of the regulation 01.14, compared to the total assets. Also, one of the reasons for the low leverage ratio is the decline in banking resources with the decline in oil prices at the end of 2014, in light of the lack of diversity in funding sources and in the activities of active banks in Algeria as well as in the absence of an active stock exchange.

3.7. Deposit Insurance System

It was first referred to in regulation 04-97 dated on 12/31st/1997, and it was embodied on the field with full features under regulation04-03 dated on 03/04th/2004. Its function is to cover depositors' compensation following banking crises. The maximum amount of compensation is estimated at DZD 2 million under regulation 18-01 dated on April 30th, 2018, amended and completed by regulation N° 04-03 previously mentioned.

The bank deposit system represents a backbone in the banking system, by virtue of which the role of the bank in economic life is activated in terms of creating financial trust between the public and the bank, according to which the bank can attract the largest amount of financial resources in order to finance its activities and support the national economy (AZOUA, p. 212) and on the other hand, it contributes to keeping pace with the banking system with the Basel Accords.

3.8. The Bank of Algeria's compliance with the Basel III Accords in terms of supervision:

The role of banking supervision comes, and its importance is evident in reducing risks and managing them in a professional manner that works to minimize their effects, as defining precautionary standards without control and supervision over their application is considered an incomplete work and exposes banks to financial risks which consequences would be serious.

Algeria has made great efforts in this field in line with the recommendations of the Basel III Committee, and made most important measures like:

3.8.1. Control Bodies

Algeria has established several Control Bodies whose mission is to ensure the proper implementation of precautionary standards, including:

1. **Centralization of Risks**: Algeria has made considerable efforts to modernize this body, as it established on 09/15th/2015 a new centrality whose name became the Central Risks Center for Institutions and Families. It made banks and financial institutions commit themselves to contribute to this centralization and provide it with information on the loans offered and the guarantees acquired for each loan or commitment to sign. The following table shows the statistics of the centralization of risks from 2015 to 2017(DJELLABLA Abdeldjalil, p. 180).

Table 8. Centralization statistics of risks for 2015, 2016, 2017

<table>
<tr><th></th><th colspan="2">2015</th><th colspan="2">2016</th><th>2017</th></tr>
<tr><td>Number of files of families and institutions benefiting from loans (file)</td><td colspan="2">541832</td><td colspan="2">719722</td><td>854807</td></tr>
<tr><td rowspan="2">The value of the prohibited loans (DZD billion)</td><td>8886.755</td><td>Companies</td><td>8314.534</td><td>Companies</td><td>9459</td></tr>
<tr><td>412.147</td><td>Individuals</td><td>420.393</td><td>Individuals</td><td></td></tr>
<tr><td>Non-performing loans (DZD billion)</td><td colspan="2"></td><td colspan="2">521.8</td><td>720.8</td></tr>
</table>

Source: prepared by the student based on monetary and economic reports 2015-2016-2017

From the table, we notice that the number of statements is constantly increasing and this is a positive indicator because this centralization targets the participation of all banks and financial institutions in putting the information they hold about their debtors, and through the exchange of this information, loan risk management will improve.

Thus, this common database contributes to optimum decision-making in the field of granting loan and good banking practices in the field of following up on clients consuming loans.

2. **Centralization of unpaid receivables:**

It is a commitment for all financial intermediaries to join this centralization and supplyit with all necessary information.

The new risk centralization was established in 2008; it includes loans granted to non-financial economic agents and distributed loans, and has not been redeemed at the maturity date and is in line with international standards in this field.

The following table represents the evolution of centralization statements of unpaid receivables for the years 2015, 2016, 2017.

Table 7.statistics of Centralization of unpaid receivables for 2015, 2016, 2017

	2014	2016	2017
Recorded payment incidents (check) Recorded payment accidents (DZD billion)	62267 68.7	65263 101	50713 84.5
Number of declarations related to settling situations	11672	10569	9289
Number of persons prohibited from issuing checks authorized by the Bank of Algeria	8455	7437	9958
Applications to cancel prohibition on issuing checks	470	385	323
Electronic clearing system data for public payments - rejected checks (Check)	64699	62621	68364
Authorized data contained in the card of centralization unpaid receivables	510.32	51041	39921

Source: prepared by the student based on the reports of the Bank of Algeria

The unpaid checks are limited to (DZD 10001 and one million), which explains the difference between the data of the electronic clearing system and the data declared in the card OF centralization of unpaid receivables.

The banking control authorities aim to create a database with this centralization that helps avoid credit risks by improving this centralization and committing all banks and financial institutions to declare it.

2.8.2. ControlActivity:

It is based on the follow-up and analysis of the precautionary and accounting situation of banks and financial institutions through a combination of continuous control called document-based control and on-the-spot control.

A. <u>Documentation-based Control:</u>

The observers at the Bank of Algeria have analyzed various data and reports sent by banks and financial institutions. The results have resulted in several breakthroughs, summarized in the following table:

Table 9. Non-compliance with the precautionary regulations for the years 2015, 2016, 2017

	2015		**2016**		**2017**	
Nature of cases of non-compliance with applicable regulations	Number of institutions	Total violations	Number of institutions	Total violations	Number of institutions	Total violations
Solvency coefficient	2	4	0	0	0	0
Basic own money coefficient	2	4	0	0	0	0
Safety cushion	3	7	2	1 bank	1 bank	2
Risk split factor	5	17	6	2	2	8
Foreign trade factories	3	16	4	1	1	10
Permanent resource factor	2	2	2	2	3	13
Exchange position	0	0	1	6	0	0
short-term liquidity coefficient	6	10	1	18	3	13
net insufficient assets	2	14	1	12	1 financial institution	12
Total		73		77		48

Source: prepared by the student based on the economic and monetary reports for the years 2015, 2016, 2017, pages 121, 114, 108, respectively.

From the previous table, in 2015, the number of violations was 73, the most important of which was the concentration of risk division coefficients. In 2016, the number of violations reached 77, the most important of which were liquidity violations, and in 2017, the number of violations reached 48, where the largest value of violations was in the permanent resources and liquidity coefficients.

The Control Directorate, on the basis of documents, after discovering irregularities and weaknesses of the financial or precautionary aspect, in the situation of banks and financial institutions subject, immediately refers these reports to the Banking Committee, as it is the only one entitled to take a decision on the appropriate measures in order to correct the situation (Economic and Monetary Report 2017 p107).

In general, 2017 witnessed a decrease in the total number of deficiencies recorded by banks and financial institutions in accordance with the standards related to the precautionary quantitative limits regulating the profession, and this is a positive indicator.

B. In-Spot Control:

These are tasks entrusted by the Directorate in charge of on-spotcontrol, where each year appoints a work plan covering a number of topics according to the needs of the banking domain; the following table shows the development of on-site control operations from 2008 to 2017.

Table 10. The evolution of on-spot control operations from 2008 to 2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Overall control	5	6	3	10	5	5	6	10	3	6
Foreign trade operations control	16	17	2	7	12	4	4	9	4	19
Money laundering and terrorism financing	1		23	2					20	21
Payment systems	5									
Subject-specific control	1	1	5	4	1	5	3			
Special investigation mission	3	6	19	15	15	10	19	26	6	3
Special missions									3	1
Total	31	30	52	38	33	24	32	25	36	54

Source: prepared by the student based on the reports of the Bank of Algeria 2008-2017

We note from the table that on-spot inspection interventions have known a development in recent years, but they witnessed a noticeable decrease in 2013 compared to other years: it was estimated at 24, in view of the decline in the tasks of controlling foreign trade operations, estimated at 4 tasks, as well as the comprehensive control tasks estimated at 5 tasks. This is mainly explained by the assignment of a significant number of employees of the Directorate of on-spotcontrol to the pilot task on the banking rating system (SNB) at the level of two banks, in order to familiarize and train inspectors with regard to the new approach to risk-based control (Tarek, 2019 University of El Oued, p. 185) while in 2017, there was a noticeable improvement with 54 control missions.

It is noteworthy that the results of these operations are considered confidential, and the data associated with them is not disclosed except to the bank's administration, which is, in turn, concerned about providing this information, and the assessment given to the bank is not allowed to be declared.

C. Modernizing control activity to conform to recommendations of the Basel III Resolutions

Within the framework of its new mission in the field of ensuring financial stability stipulated in ordinance 10-04 dated on 08/26th/2010, the Bank of Algeria developed new risk-based control tools, adopted, and strengthened its capabilities in terms of discovering and analyzing systemic weaknesses on risks.

- **<u>Control approach by focusing on CAMELS system risks</u>**

The CAMELS system is a risk-based control method about a system that allows the assessment of the financial and precautionary situation of banks and financial institutions on the basis of on-spot documents.

It is a global standard applied by major countries of the world, including the United States of America, to ensure a proper and compliant application of Basel III standards.

Since 2011, the Bank of Algeria, with technical assistance from the US Treasury and the International Monetary Fund, has developed a risk-focused control approach by adopting the CAMELS system.

This new control approach has been comprehensively applied, starting from 2012, by virtue of the 2013 control program.

This program includes an assessment that includes 6 basic elements: capital - assets - management - profitability - liquidity and sensitivity to market risk(YAHIAOUI, 2013-2014, p. 197). On the basis of these elements, a unified digital classification is made for the bank; the classification process ranges from 1 to 5, whereas the classification 1 is considered the best and indicates the strength of the bank's performance and financial soundness, while classification 5 is the worst classification and indicates the presence of significantissues facing the bank and unsatisfactory financial performance and the high probability of bank failure. Usually, the procedures followed here by the control authorities are to liquidate the bank and cancel its share or reorganize it.

- **<u>Stress Tolerance Scenarios</u>**

Within the framework of the mission entrusted to the Bank of Algeria in the field of financial stability in accordance with ordinance 10-04 dated on 08/26th/2010 about money and credit, the Bank of Algeria has carried out modernization works aimed at reinforcing its capacities in the analysis and detection of banking sector systemic weaknesses.

The acquisition of the tolerance program tests comes within the framework of compliance with banking control mechanisms and their conformity with the recommendations of the second axis of Basel III resolutions, as assessing the solvency level of own funds and the liquidity of banks and financial institutions in normal circumstances is no longer sufficient to assess the strength and ability of the banking institution to resist shocks(Arab Monetary Fund, Report in the Arab Countries 2019, p. 25)

In September 2012, a technical assistance contract was concluded with the International Bank, which included the acquisition and creation of an integrated and dynamic information template for managing stress tolerance tests called the Financial Forecast Template.

During 2015, the process of adapting the application of stress-tolerance tests to the accounting and precautionary standards and practices in force in Algeria was completed, and the temporary receipt of the system was made during the same year.

The year 2016 was devoted to achieving the first stress-tolerance tests exercises in order to assess the liquidity and solvency of banks, where stress-tolerance tests were conducted at the level of two banks over a period of 3 years. These tests were carried out according to an individual pattern and using scenarios inspired by the historical developments of data chains for each of the two banks, while its entry into production remains entirely dependent on the design of macroeconomic scenarios for stress-tolerance tests (Economic and Monetary Report 2016).

In 2017, forecasts and stress-tolerance tests were carried out for 20 banks, which resulted in complementary results to the analysis conducted by the supervision services on the basis of the periodic financial and precautionary report of banks and financial institutions (Economic and Monetary Report 2017).

SYNOBA Information Project

On the other hand, in order to develop the application related to the CAMELS method, an information project called SYNOBA was developed. This project comes within the framework of establishing an Algerian banking scoring system that aims to load all the accounting and precautionary reports received from banks and financial institutions into a magnetic support and automate their control to ensure the consistency of the various reports and circulate the data issued in accordance with the supervisory authority requirements.

The implementation of this project was entrusted to the Computer Information Cell of the General Inspectorate General Directorate, which cooperated closely with the project team formed by the Directorate of Control on the basis of documents.

3. Comparison Between the Algerian Banking Legislation and Basel III Resolutions

The commitment of Algerian banks and the discipline of the banking system as a whole with the Basel Committee resolutions supports better stability of the Algerian banking market and raises the competitiveness of its units in its regional and global surroundings. The Algerian banking system sought to achieve the conditions recommended by Basel Committee, but it did not implement aspects of them, the application of some of them was different from the recommendations of this committee. The following are the points of convergence and difference.

3.1.Similarities

- The rules of caution applied in Algerian banks with regard to credit risks are mostly inspired by the Basel Committee recommendations,especially with regard to calculating solvency according to Basel I and II in the components of the basic own funds and the elements to be subtracted from them, the ratio of own funds and permanent resources, classification of in-balance and off-balance items according to the degree of risk and the method of transferring obligations outside the budget.
- Giving more importance to the basic capital in addition to not introducing the third tier in line with the Basel III Accords' recommendations.
- Dividing the legal own funds[21]of the regulation 14-01 into two tiers, the first is basic own funds and the second is supplementary own funds, determines the elements that are allowed to be for both tiers and exclude some other elements in accordance with the Ball Committee requirements.
- The inclusion of both market and operational risks, along with credit risks, in calculation of solvency ratio denominator, starting from 2014 pursuant toregulation 14-01, in accordance with Basel III.
- Imposing a capital margin for protection purposes, which was called the Safety Cushion, which covers 2.5% of the weighted risks, so that the total solvency ratio becomes 12%, and it covers the total solvency ratio in
 Ball III estimated at 10.5% by adding this margin.
- Compliance of banking legislation in Algeria with the recommendations presented by the Ball Committee regarding internal and external precautionary control and banking risk management.
- The Bank of Algeria, through a series of legislation regulating banking activity in Algeria, defines the framework for banks' work and conditions for their establishment, and obliges them at the same time to send periodic statements to the regulatory authorities and publish quantitative and qualitative information in line with the Basel Committee.
- Imposing a minimum factor of short-term liquidity equal to at least 100% pursuant to regulation 11-04 and instruction 11-07 that explain it, and its dependence on information that is directly proportional to the degree of the asset's liquidity, which is in accordance with the content of Basel III Accords, which calls on banks to set a ratio for short-term liquidity.
- Imposing a reserve ratio to preserve the capital, which is in line with
 Basel III.
- Establishment of a deposit insurance system and control bodies in line with Basel III requirements.

Differences: Before the issuance of the regulations 01-14 and 14-02, there were many differences between the Algerian system and the Basel III resolutions, but with the issuance of these two systems this difference has diminished, but is still in the following points:

- The solvency ratio specified in Basel III is estimated at 8%, while in Algeria it is set at 9.5%
- A difference in the basic capital ratio, which was set in Algeria at 7% of risk-weighted assets, and set by Basel III at 6%, after it was 4% according to Basel II.
- The banking legislation in Algeria (regulation 14-01) did not include the minimum basic capital for common shares or the so-called the Hard Core according to Basel III to improve the capital base quality.
- A difference in the percentage of the second tier set at 2.5%, according to what was included in the precautionary rules in Algeria in 2014 with what was stated in the Basel IIIAccords. 2% of the risk-weighted assets, after it was 4% according to Basel II.
- The banking legislation in Algeria did not include the criterion of the net stable financing ratio that came with the Basel III Accords, although it imposed a short-term liquidity ratio, the components of this ratio do not match with what was stated in the Basel III Accords.
- Contrary to the Basel III Accords, when enacting the precautionary rules in Algeria for 2014, it did not take into account the establishment and determination of a protection margin against cyclical fluctuations, and no special margin to face the risks of the system, which major institutions must form within the range of 1 to 2.5% of risk-weighted assets, but it is rather sufficient only to refer to the possibility of the Banking Committee imposing higher solvency standards for these institutions.
- Contrary to the Basel III Accords, the Algerian banking legislation did not include the financial leverage ratio, through which Basel III aims to put a maximum limit on the increase in the percentage of debts in the banking system.

4. CONCLUSION:

As part of the wide campaign of reforms recommended by the Basel Committee after the global financial crisis repercussions on the global financial system, the most important of which is the issuance of Basel III standards to remedy the shortcomings in its second agreement and the strengthening of precautionary rules in banking within the framework of adopting various precautionary approaches to inculcate the resilience of institutions Banking and the banking system as a whole in front of crises. The banking supervision authorities in Algeria continued the process of adapting and reformulating the precautionary measures for the rules of banking control and supervision in order to keep pace with developments in the international banking community and to comply with the new Basel Committee requirements.

Through our study, we believe that the Bank of Algeria has succeeded greatly in adjusting the precautionary standards with the new standards, notably those related to improving own funds quality and strengthening them, including in the solvency ratio operational risks and market risks.

Despite the path that has been taken, the road is still long and fraught with obstacles for Algerian banks to fully keep pace with the developments in the banking domain, this is due, on the one hand, to the structure in which banking institutions are active and the nature of national economy, and, on the other hand, to the lack of a clear strategy by those in charge of this sector, especially with the intervention of political decision-makers to direct its course to serve the credit objectives. We also do not forget the absence of a financial market in Algeria, which is considered one of the obstacles to keep pace with the Algerian banking system with global developments.

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