

Basel III and Algerian Banks
Field study a sample of Algerian Banks
Bâle III et les banques algériennes
Etude sur le terrain d'un échantillon de banques algériennes
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Abstract:

The objective of this study is to highlight the role of Bank of Algeria in establishing the basic pillars of **Basel III** and to identify the most important challenges facing the Algerian banking under this agreement by highlighting the content of **Basel III**, and to try of to identify actions taken the bank of Algeria in the context of the implementation of Basel.

Key words: Basel III Committee, Algerian Banking, Minimum Capital requirement.
(JEL) Classification : G21 ∙G32.

Résumé:

L'objectif de cette étude est de mettre en évidence le rôle de la Banque d'Algérie dans l'établissement des piliers de base de Bâle III et d'identifier les défis les plus importants auxquels le secteur bancaire algérien est confronté dans le cadre de cet accord en mettant en avant le contenu de Bâle III, et d'essayer d'identifier mesures prises par la banque d'Algérie dans le cadre de la mise en œuvre de Bâle.

Mots clés: Comité Bâle III, Secteur Bancaire Algérien, Capital Minimum Requis.
(JEL) Classification : G21 ∙G32.

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1.Introduction:

- After the recent global financial crisis the international supervisory laws governing the work of banks had to be reviewed this led the basel committee to submit proposals and amendment to the second agreement in order to address many shortcoming of the global financial crisis , this study make how is to highlight the role of the Bank of Algeria in establishing the basic pillars of **BASEL III** and to identify the most important challenges facing the Algerian banking system under this agreements by highlighting the content of **BASEL I, II, III** agreements and to try to identify actions taken by thr Bank of Algeria in the contex of the implementation of **BASEL III**.

- The year 2016 witnessed a prudent banking performance under the impact of difficult economic conditions on the budgets of banks and financial institutions by providing close monitoring including liquidity .

2. Research Problem & Methodology:

In this sense, this paper targets to study the problem of research as follows:

How well can Algerian Banks implement Basel 3 Standars?

The aim of this study is to achieve a number of objectives, the most important of which are:

- A. knowledge of the Basel III committee and this important measures.
- B. the role of the Bank of Algeria in establishing the basic pillars of **BASEL III**.
- C. Published information of banks and application of **Basel III** and Constraining bank leverage in Algeria.

3 Emergence of Basel III:

There were challenges (**Nepal Rastra Bank, 2013, page 03**) towards managing risk within the banking system as well as reducing the spillover risk from the financial sector to the real economy. To improve the banking sector’s ability to absorb shocks arising from financial and economic stress, Basel Committee on Banking Supervision (BCBS) issued “**Basel III: A global regulatory framework for more resilient banks and banking systems**” in December 2010. Basel III has set its objectives to improve the shock absorbing capacity of each and every individual bank as the first order of defense. In addition to the measures, the efforts were directed to ensure that banking system as a whole does not weaken and its spillover impact on the real economy is minimized.

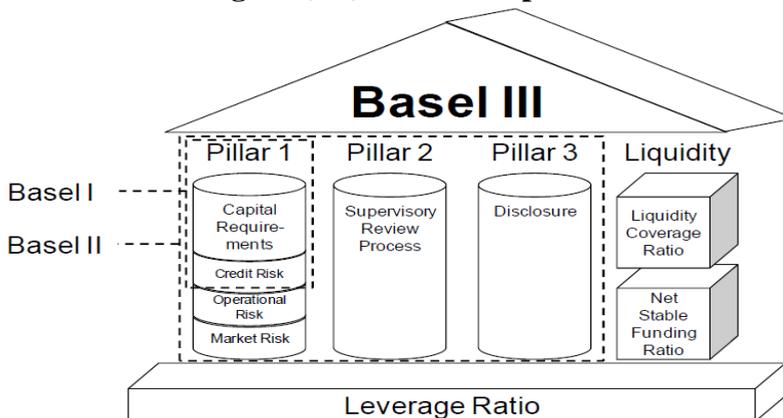
3.1 Main elements of Basel III :

- A revised definition of capital (*David Jurčik, Euboš Briatka, , 2013, p 05*) to ensure a stronger and more transparent capital base
- A framework stronger for the capital requirements for securitisation exposures and for trading book market risk and counterparty risk, particularly under the model based approaches used by large banks and a leverage ratio to prevent the build up of excessive leverage in the banking system .
- A capital framework which promotes the build up of capital buffers in good times that can be drawn down in periods of stress and Two quantitative liquidity standards, one aimed at the short- term horizon and one focused on the longer-term.

3.2 The Basel III capital requirements :

The Basel framework (continues to) consists of three pillars:

Figure (3.1): The three pillars of Basel



Source: Hans- Martin Beyer, Tobias Meyer, The impact of Basel 3 on the fair pricing of bank guarantee facilities, Reutlingen working papers on finance and accounting, 2012, page 05

3.2.1 Pillar 1:

• Capital ratios requirement:

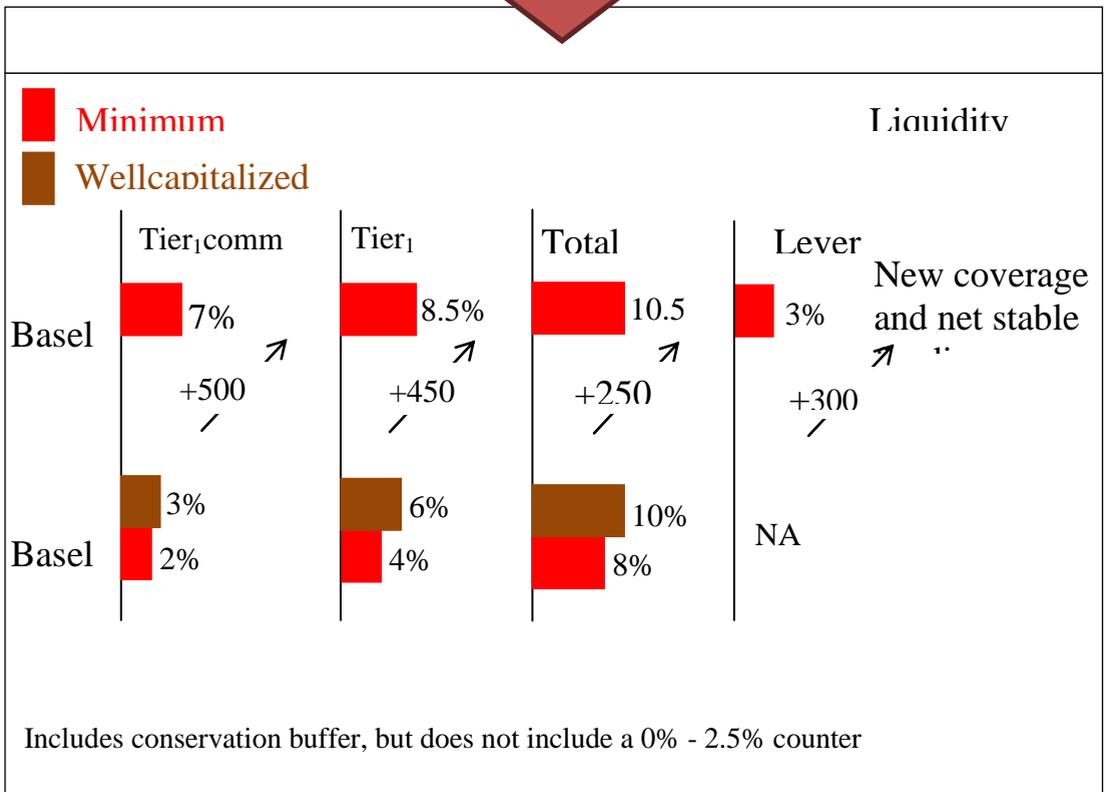
The Basel Capital Accords require (*Reserve Bank of New Zealand, 2015, p 07-08*) a bank to maintain a minimum amount of capital in relation to its risk-weighted exposures , Under the **Basel III** framework, capital is divided into three classes, in descending order of the quality of the capital

- Common Equity **Tier 1** (CET1): qualifying ordinary shares and reserves;
- Additional **Tier 1** (AT1): qualifying perpetual debt or preferred equity instruments;
- **Tier 2**: qualifying debt instruments with an initial time to repayment of at least five years.

A bank's capital ratio is calculated as Different capital ratios are defined for each tier of capital (*Meryem bendehina, Iman Hamoudi, 2018, p 06*):

$$\text{Required capital Ratio} = \frac{\text{capital (according to new definition)}}{\text{RWA (credit – market Operation Risk)}}$$

RWA (credit – market Operation Risk)
Figure (3.2) : Basel 3 capital requirements



Source : Meryem bendehina, Iman Hamoudi, *The reality of the application of the Basel 3 in the Algerian banking system* "A analytique study of a sample of public banks", Research paper presented to the events of the international forum on the implication of financial institutions adaptations with indicators of financial stability in Algeria university of Medea, October 2018, p 07

- The Common Equity Tier 1 (CET1) capital ratio is the ratio of CET1 capital to risk-weighted exposures.
- The Tier 1 capital ratio is the ratio of Tier 1 capital to risk-weighted exposures;
- The total capital ratio is the ratio of total capital (Tier 1 plus Tier 2 capital) to risk-weighted exposures (*Reserve Bank of New Zealand, 2015, p 08*) .

Table (3.1): Capital ratios

Ratio	Common equity	Tier1 Capital	Total Capital
Previous minimum ratios (Basel 2)	2.0%	4.0%	8.0%
New minimum ratio (Basel 3)	4.5%	6.0%	8.0%
New minimum + conversation buffer	7%	8.5%	10.5%

Source: Reserve Bank of New Zealand *Bulletin BULLETIN*, VOL. 78, NO. 5, JUNE 2015, p 9.

One of the key pillars of the Basel III (*M.J morgan, 2014, page03*) framework was to rectify the perceived shortcoming in capital adequacy and lack of uniformity in the application of capital standards across jurisdictions. The Basel Committee mandated an increase in common equity Tier 1 capital from 2% to 7%, with further buffers added to bring target common equity Tier 1 capital ratios to ~10% for so-called Systemically Important Financial Institutions (SIFIs). Certain countries have adopted additional buffers to these new capital standards

- **The risk weighted in Basel 3 consist :**

✓ **CREDIT RISK**

In pillar one (*CENTRAL BANK OF THE BAHAMAS, 2013, p 03*) Basel provides details of how banks must calculate their minimum capital requirements. It suggests various approaches for calculating capital for credit, market, and operational risk. The Central Bank has determined that the Standardized Approach for Credit Risk capital measurement will be more appropriate for banks within this jurisdiction, notwithstanding that some banks may be subsidiaries of large international banks that are subject to the more advanced approaches in their home countries

✓ **MARKET RISK**

The Central Bank has completed its implementation of the 1996 Market Risk Amendment to Basel I, with the release of the Guidelines for the Management of Market Risk in December 2012. It is not envisaged that any changes will be made to the framework for Basel II, given the limited trading book activity and number of banks that are subject to a market risk capital charge.

✓ **OPERATIONAL RISK**

The Basic Indicator Approach is the most likely approach; however the Standardized Approach or the Alternative Standardized Approach (ASA) may be considered for some banks. Banks using the Basic Indicator Approach must hold capital for operational risk equal to the average over the previous three years of a fixed percentage (denoted alpha) of positive annual gross income.

3.2.2. Pillar 2 – SUPERVISORY REVIEW PROCESS

The Central Bank has already established some of the preconditions for Basel II (*CENTRAL BANK OF THE BAHAMAS, 2013, p 04*) implementation in particular for Pillar 2 requirements, through its Risk Based Supervisory Framework. Notably, Pillar 2 concerns the supervisory approach to banks' capital management. Importantly, it calls for banks to have a process for assessing their overall capital adequacy and a strategy to maintain their capital levels. Pillar 2 also establishes an expectation on supervisors to impose higher capital requirements in excess of Pillar 1 capital requirements where warranted. Pillar 2 reinforces Pillar 1 by addressing key risks and factors not covered under Pillar 1. Central to Pillar 2, is the requirement that banks make an assessment of capital required to support all their material risks which is referred to as the Internal Capital Adequacy Assessment Process (ICAAP). The purpose of the ICAAP is to ensure that banks have sufficient available capital to meet the minimum capital requirements, even under stressed scenarios. Banks are expected to address weaknesses and gaps in their risk management framework, and use better risk management techniques in the monitoring and management of risks.

3.2.3. Pillar 3 – MARKET DISCIPLINE

Pillar 3 introduces requirements for banks to disclose their risk information to the financial markets, to allow market participants to gauge the capital adequacy of banks, to better enable them to exert discipline on banks' behavior. Banks will be

required to make core and supplementary disclosures on the scope of application, capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution. Pillar 3 reinforces Pillars 1 and 2 through the use of increased disclosure requirements, to impose market discipline on financial institutions.

3.3 Liquidity metrics

The difficulties experienced (*Basel Committee on Banking Supervision, 2010 (rev June 2011) , p 08*) by some banks were due to lapses in basic principles of liquidity risk management. In response, as the foundation of its liquidity framework, the Committee in 2008 published Principles for Sound Liquidity Risk Management and Supervision. The Sound Principles provide detailed guidance on the risk management and supervision of funding liquidity risk and should help promote better risk management , but only if there is full implementation by banks and supervisors. As such, the Committee will coordinate rigorous follow up by supervisors to ensure that banks adhere to these fundamental principles.

3.3.1 liquidity coverage ratio :

The LCR identifies the amount of unencumbered (*Michael R. King, 2013, p 4146*) high-quality, liquid assets that banks need to survive 1 month without access to wholesale funding while still being able to offset cash outflows. The focus is reducing liquidity risk by increasing the quantity of assets that banks can convert to cash during a stressful period. The January 2013 revision expanded the definition of high-quality liquid assets and modified the assumptions about cash inflows and outflows

The principles are the same as computing LCR for the bank but (*iCreate Software, page 14*)

it is done by currency. It is important to note that the outflows must be net of any foreign exchange hedges. Ideally, this ratio must be more than 100 percent but if it is less than 100 percent, it is fine if a bank has additional reserves in other currency which can be converted into the currency where there is a liquidity mismatch, such as lending (*Andrea Resti, 2011, page 16*).

Stock of High Quality Liquid Assets in each significant currency

$$\text{LCR} = \frac{\text{Stock of High Quality Liquid Assets in each significant currency}}{\text{Total net cash outflows over a 30 day time period in each significant currency}} \geq 100\%$$

✓ **3.3.2 Net stable funding ratio**

The net stable funding ratio is designed to ensure that a bank holds an amount of long-term funding at least equal to its long-term assets, (Bendehina, Tlemcani, zeddoun, 2018,page 60)

$$\text{NSFR} = \frac{\text{Available Stable Funding}}{\text{Required Stable funding}} \geq 100\%$$

This measure depends on the ability of firms and supervisors to model investor behaviour, which is “stable” or “unstable” in a crisis situation.

3.4 leverage Ratio

Basel III also introduced a leverage ratio requirement. As discussed, under the Basel framework capital is required to be held against risk-weighted exposures. A leverage ratio is a measure of a bank’s capitalisation that does not take the riskiness of its asset base into

account. The Basel III leverage ratio is defined as Tier 1 capital as a percentage of total assets and off balance sheet exposures. The initial minimum requirement is set at 3 percent Before the GFC some large international banks were operating with very high leverage, despite the fact that they were meeting risk-based capital requirements.

This could occur if a bank held assets that received very low risk weights, or used various risk-mitigation techniques (such as guarantees) to reduce capital charges. In some cases this arose because assets genuinely were low-risk or risk mitigation effective, but in other cases it reflected deficient risk capture.¹² The leverage ratio requirement was included in the Basel III package to address concerns about deficient risk capture in risk-based capital calculations. It is intended to operate as a back-stop to risk-based requirements, that is, to ensure that banks hold a minimum amount of capital in relation to total assets.

The Reserve Bank(**Reserve Bank of New Zealand, 2013, page 16**) has not implemented a leverage ratio. The main reason for this is that the Reserve Bank prefers measures of capital adequacy that differentiate between the riskiness of different banks' exposures.

The newly introduced leverage ratio is intended to serve as a simple non-risk based metric to supplement risk-based requirements.

- This leverage ratio(**Elisa Achterberg, Hans Heintz, 2012, page 07**) is calculated as :

$$\text{Tier 1 capital leverage ratio} = \frac{\text{Tier 1 capital}}{\text{Exposure measure}} \geq 3\%$$

The occurrence of financial crisis of 2008 (**Akshay, Yatin Balkrishna, Charan Singh, 2014, page 22**) highlighted the failure of Basel II norms to contain the widespread shock. This led to more stringent definition of capital and capital requirements. Besides, liquidity standards were introduced to ensure stable source of short term (30 days) and medium term funding (one year) of the bank of its assets. Thus, the liquidity coverage ratio and net stable funding ratio made its way into the refined Basel III accord

4.The extent of application of Basel III in Algeria:

The bank of Algeria has taken several steps to create the right platform for the implementation of the Basel 3 accor since its publication in 2010:

4.1 Internal control of Banks:

System 14_01 issued by the Monetary and Loan council of 16 ferbruary 2014 to determine the proportion of solvency aims:

Table (4.1): Evolution of the caoital requirement in the Algerian banks during the period (2006-2013)

	2006	2007	2008	2009	2010	2011	2012	2013
Capital requirement %	15.15	12.94	16.54	21.18	23.31	23.77	23.62	21.5

Source: Bank of Algeria, Economic and Monetary Development 2011-2015

We note that table (4.1) the Algerian banks recorded higher solvency rates than be average, **(Bank of Algeria, September 2009)** we note the improvement in the ratio from year to year and I determined by the bank of Algeria and from the rates set by basel committee, the bank of Algeria in terms of internal control, which led to good risk control especially the loan risk, in addition to strengthening its own funds starting in 2008 in accordance with the instructions of the banks of Algeria issued in 2008, including the minimum capital of banks and financial institutions operating in Algeria

4.2 Apply the basel 3 pillars in Algeria :

We will try to find out the extent to which the Algerian banks apply basel 3 pillars and liquidity ratios until 2016.

4.2.1 Appy the first pillar:

Table (4.2) Appy the pillar 1

Pillar 1	Bank of Algeria	Year
Solvency	Not applicable	2013
Capital	Not applicable	/
Market risk review	Not applicable	2012
Credit risk review	Not applicable	2012
Additional reserve	Being applied	2016
Reserve against cyclical fluctuations	Not applicable	/
Leverage ratio	Not applicable	2015

Source: Financial stability institute FSI survey; Basel 2 and 3 implementation, bank for international settlements, july 2015

-The bank of Algeria did not implement the improvements made by the basel 3 agrrement on pillar 1, including how to calculate the adequacy of capital, the components of private funds review market risk, credit risk, reserve against cyclical and leverage ratio.

Table (4.3) : The capital adequacy ratio and capital principal in the banks of Algeria during 2014-2016

	2014	2015	2016
The capital adequacy	15.98%	18.69%	18.90%
capital principal	13.27%	15.86%	16.4%

Source: Bank of Algeria annual report 2016 economic and monetary development in Algeria .

-We not that the Algerian banks collectivety recorded a ratio the minimum set by the banks of Algeria which is **9.5%** for the capital adequacy ratio and **7%** for the capital principal the banks registered the limit rate of **18.90 %** and **16.4%** in 2016.

-In analyzing percentages by banks, we find that there are four banks that did not achieve this in 2014 and two banks in 2015, it should be noted that banks are subject to strict control by the bank of Algeria

-In this table, we will present the evolution of capital adequacy of some public and private banks in Algeria during the period (2014-2016).

Table(4.4): The development of the capital of some public and private Algerian banks during 2014-2016

	2014	2015	2016
BADR	11.34%	12.29%	12.29%
BDL	7.35%	11.83%	11.83%
BEA	27.06%	23.67%	23.87%
BNA	11.59%	15.03%	15.03%
CNEP	8.13%	7.77%	7.77%
CPA	12.60%	11.20%	11.20%
ABC	35.55%	23.76%	23.76%
AL SALAM	40.98%	39.87%	39.87%
AL BARRAKA	20.41%	14.99%	14.99%
CT Bank	26.92%	31.70%	31.70%
TRUST Bank	33.35%	34.56%	34.56%

Source: Banque d'Algerie, direction générale, direction du contrôle, décembre 2016.

4.2.2 Appy the pillar 2 and 3 in Algeria :

The bank of Algeria has attempted to comply with the amendments adopted by basel 3 as shown in the table the excent to which these amendments have been applied.

Table (4.5) Appy the pillar 2 and 3 in Algeria

Pillar 2 and 3 of basel 3	Bank of Algeria
Pillar2 : SUPERVISORY REVIEW PROCESS	Not applicable
Pillar 3: MARKET DISCIPLINE	Not applicable

Source: Financial stability institute FSI survey; Basel 2 and 3 implementation, bank for international settlements, july 2015

The bank of Algeria has not applied the improvements in pillar 2 and 3 of basel rules in the form of a draft that has not yet been final published.

Conclusion:

The Bank of Algeria was not isolated from the developments in the field of international control standards, It has taken several steps most notably the issuance of the internal control system for banks and financial institutions in order to create the appropriate for applying the solvency ratio applied in Algerian Banks, they require significant changes in the dtatus of their monetary and financial systems to comply with Basel 3 Committee, despite the development of many legislative laws and the presence of some indicators that suggest the beginning of awareness of the importance of application of Basel 3 and this application did not live up to the required level.

Results:

- Although the texts of the agreement are not final until the end of 2018, they have a lot of complexity in how they are applied, so the banks will find it difficult to appreciate.
- The Banks commitment to new liquidity standards will keep banks holding stocks of high liquidity assets.
- Commitment to the financial leverage will lead to a decline in the lending rate in Algerian Banks wich negatively affects their profitability.

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