

An Analysis of Basel I, Basel II and Basel III and Its Impact on Profitability of Banks in Kingdom of Bahrain

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Abstract: The purpose of this study is to attempt and understanding the critical analysis of Basel-I, Basel-II and Basel-III. After the financial crisis in 2007 / 2008 Basel III has introduced Basel III which has a lot of changes in the regulation including higher capital ratio limits, higher capital standard and also introducing the new ratios of liquidity and leverage. This has pushed the banks toward structuring their exposures based on the riskiness of the assets and counterparty, as it was founded that the effect will harsh the exposures with high risk and a moderate effect will be exposures with low risk. The main objective of the research is to discuss the improvement on Basel requirements from Basel I through Basel II to Basel III and to find if Basel III will impact the profitability of the banks based on bankers' opinion in Bahrain. The data of this study was collected from secondary and primary sources from selected Islamic and non-Islamic banks of Kingdom of Bahrain. Some findings and suggestions are addressed in the study that may be the prerequisite for banking organizational growth and development.

Index Terms: Basel-I, Basel-II, Basel-III

I. INTRODUCTION

Banks has a major responsibility toward the economic growth and economic failure. As bank play an intermediary between the borrowers and lenders liken heart to the body where cash represent the blood, when the body is healthy and the heart is working fine and blood cycle is reaching all body parts, therefore, Body parts will grow which will lead to total growth of the body "economic growth". And to keep this cycle running we should have some cushions and to have some kind of risk control, although bank have their own Risk, audit and internal departments and external auditor, and taking in consideration that banks are usually high leverage, this mean that stakeholder participate more than shareholder in the total assets of the bank. In this sense banks needs to have regulator to regulate and control the rules of the banking industry to save the interest of all stakeholders.

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Moreover, central banks need to have coordination's between them to avoid the regulation arbitrage. There where Basel committee on Banking Supervision has become a necessity. Basel committee has issues three set of rules requirements Basel I, Basel II and Basel III. Basel I was launched in 1988 and have set the minimum Capital adequacy requirements aimed to control the credit risk and market risk. In 2004 Basel committee was introduced with higher and strengthens regulations and Capital adequacy requirements, where the focus in risk has been wider and other risk has been integrated in the calculations of the Capital adequacy ratio. Furthermore, the three pillars have been introduced. Until the global crisis has shown in 2007 and its shadow has destroyed all Basel committee believes on Basel II and its three Pillars. To come out from the doubts of the public about Basel requirements, Basel has to take a step to restore public confidence about Basel requirements through introducing tougher framework. In 2010 Basel Committee has introduced the Basel III and its new set of capital, leverage and liquidity requirement to assure buildup of the banking system tiers of protection. By introducing Basel III there will be some challenges on the banks to meet Basel III requirements and to satisfy their shareholders.

1. Background of the Study:

In end of 2007 and beginning of 2008 the world financial was in date with the financial crisis 'Subprime mortgage crisis' leading to the great recession. It has started in the early 2000's were financial institutions and investors had an excess of liquidity and they were aiming to invest the excess liquidity in low risk investment with good returns.

This low risk investment was not heavily available in the market. Where financial institutions had directed their investments toward the US mortgages loans as they consider it as low risk loans backed by assets where the assets value will appreciate in future and proper KYC. These loans were sold to investment firms subsequently they structure a vehicle through securitization to create the Mortgage Backed Securities and sell it to investors all around the world as a low risk asset backed by the giving rating by the credit rating agencies (i.e. Moody's, standard and poor's and Fitch's).

In the real returns from these Investments, investors' appetite to such investments has increase and their demand to buy these investments



also increase. In 2003, the criteria of getting mortgages loans become loose "Stated Income/Stated Assets", where the borrowers state their income and their collateral with absences of the lender verifications as they know that the risk of these assets will not stay lender and it will be transfer to the investors. On the other hand, credit rating agencies had based their assessment on the pervious issued Mortgage Backed Securities and the low rate of default in them the agencies and ignoring the new granting loan criteria. This had led to the housing bubble. This had grown and continued to grow until it bust in 2007 and the domino tiles has start to fall starting from the huge numbers of loan default then the decline of the property's value due to huge number of available properties in the market (the defaulted assets were putted in the market to be sold to recover the losses), at these stage investors realize the problem and started to sell the securities they have. This had flooded the market of such securities and the demand for it was very low and at barging prices.

Mr. Strauss Kahn stated that "This crisis is the result of regulatory failure to guard against excessive risk-taking in the financial system" [1] as it clearly noted the high risk taking by the financial institutions and the lousy regulations by allowing them to have risky exposures.

This has led to introduce the new Basel III and its new set of capital, leverage and liquidity requirement to assure buildup of the banking system tiers of protection. As the previous Basel I and Basel II had failed to protect the Banking System from the financial crisis.

1. Problem statement

Basel III aims that it will "improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source", "improve risk management and governance" and "strengthens banks' transparency and disclosures" [2]. The above claims will impact the capital structure and the business structure of the banks. This study aimed to find if banks profitability will be impacted due to implementations of Basel III based on the Bankers opinion in Bahrain.

Beside the above question the following questions are needed to clarify the issues:

- Can Basel III prevent future crisis?
- What are the Limitations of Basel II that could not predict the financial crisis?
- What are the impacts of Basel III on banking industry and the economy over all?

2. Research Objectives:

The main objective of the research is to discuss the improvement on Basel requirements from Basel I through Basel II to Basel III and to find if Basel III will impact the profitability of the banks based on bankers' opinion in Bahrain.

3. Significance of the Study

Understanding the Basel III requirements and to find if it will impact the profitability of the banks. It also finds if it can prevent any future crisis.

4. Limitations of the Study:

Due to that Basel III was implemented in Bahrain in 2015 and due to the lack of real data as they are classified as confidential information, and taking trend of Basel II data will not give us a clear picture of the changes will happen in Basel III in sense that the Basel III capital requirement is different than Basel II (i.e. the type of deductions, eliminating some of capital types from the calculations of Basel the capital which was allowed in Basel II). My research will be base in the Basel III rules and qualitative questionnaires.

II. LITERATURE REVIEW

After the financial crisis in 2007 – 2008 a lot researches blame Basel I and Basel II about their failure to predict and stop the crisis as some research highlights some of the Basel II deficiencies like the heavy dependence on credit rating agencies to calculate the credit risk weighted assets. "It delivers increased rise sensitivity of capital charges only in so far as corporations are actually rated and that these ratings properly reflect risk" [3] the writers highlight the low risk weighted rate given to unrated firms compare to the BB-or below. This will encourage high risk firms to forego rating to enjoy the benefit of the lower credit risk weight (i.e. lower finance cost). Furthermore, the lack of continues full assessment to revise the rating giving as they highly depend on the accounting data when assessing the firms riskiness rather than assessing all type of risk [3]. This issues is still exist under Basel III as new mechanism should be found to calculate the credit risk of banks exposures as depending on rating agencies can lead to another crisis unless the rating agencies are regulated with high standard regulations and requirements. On the other hands, some research finds that Banks will suffer from the implementation costs of Basel III. However, the impact will not take place immediately as there will be phase-in period to gives banks a space to take strategic decisions over 5 years from the date 2015 of implementation. During the phase in stage the regulatory capital will need to be enhanced due to the need for more capital for each tier and to cover the new capital conservation buffer and a countercyclical capital buffer, to satisfy the new establish conservative liquidity environment, through the introduction of net stable funding ratio and the liquidity ratio and the new criteria set on the type of capital as it will prohibited take in some capital which was allowed under Basel II. Furthermore Basel III has putting some pressure on the management of the banks to adhere Basel III requirements or the will have to face their board of directors and their shareholders to explains to them the reasons behind not distributing dividend beside that the managements bonuses will also stop until the banks satisfied Basel III requirement s. Mr. Samuels describe the Banks which could not keep the capital conservation buffer and a countercyclical capital buffer will be phasing some penalties (i.e. distribution of dividend and bonuses). [4]



And he gave solutions for banks who could not raise its capital it has to take some other measurement including to restructure their exposures from high risk assets to lower risk assets. Moreover, they have to reduce their concentration in some area like investing in financial entities as Basel III allowed investing up to 10% of the bank common equity tier 1 for aggregated significant investment in financial institutions and furthermore any non-capital investment will be disqualifying (“owning above 10% of the entities capital). And for the insignificant investment in financial institutions below 10% of the entities capital also 10% cap has been assigned for it [2].

III. BASEL REQUIREMENTS

• Bank for International Settlements

The Bank for International Settlements is located in Switzerland more specifically in Basel city. Bank for international settlements is an international organization which acts like a bank for the central banks to make the achieving the financial and monetary stabilize.

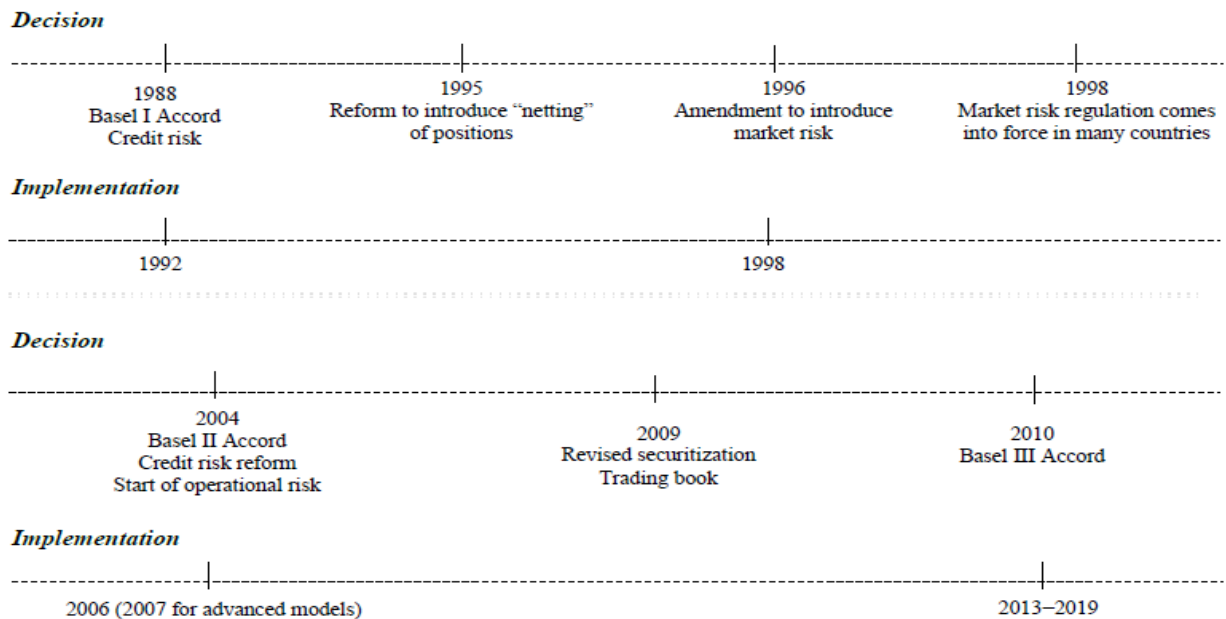
The organization was established by The Hague Conference dated 20th of January 1930, the initial aim of the organization was to facilitate the reparations imposed on Germanys after the First World War. At the end of the Second World War, the organization was hardly escaped from the shutting down due to the purchase of Germanys bonds from Reich bank and receives the largest part of the

interest payment in stolen gold (3.7ton of gold), however, the 3.7 ton of gold had been returned to the Allied Tripartite Commission. The shutdown of BIS has been introduced in United Nations conference in the United States of America, where the American was calling for shutting down the BIS because of the suspicions over the BIS activities and the introduction of the new two organizations “the World Bank and the International Monetary Fund” which has been declined by the European central bankers. These day’s, the BIS is playing a major rule in the research and cooperation in international banking regulation. [2]

• Basel Committee on Banking Supervision

In 1974, The Basel Committee on Banking Supervision was founded as a consequence of the severe volatility in foreign currency and banking markets and especially to the liquidation of Bank Herstatt. Although the Basel Committee on Banking Supervision does not have any supervisory authority beyond the official national regulator or any legal force, the committee set the guidelines for all banking regulators around the world. Furthermore, one of the major rules of the committee is to eliminate any supervisory coverage gap (i.e. to open an overseas branch in a country to escape from the regulatory supervision).

The Committee provides a regular forum for collaboration on banking supervisory issues. It's aiming to enhance and improve the understanding of key supervisory and the quality of banking supervision around the world.



This figure presents the decision and implementation dates of the three Basel Accords.

Figure 1: Evolution of international bank regulation

1. Basel I

Basel, I have introduced in 1988 and Known as “the 1988 Basel Accord”. The new introduced requirements were classified in two type

- Capital Components
- Risk Weighting assets

Regulatory Capital

Capital components was initially introduced to include two type of tiers (Tier 1 and Tier 2) and the third tier “Tier 3”

introduced in the 1996 revision to include the short term unsecured debts as part of the capital at preference of the domestic regulators.

Instruments eligible to be include in Tier 1 “core capital” were:



- a) Shareholders' equity
- b) Published reserves "retained earning".

Instruments eligible to be included in Tier2 "supplementary capital" were:

- a) Undisclosed reserves
- b) Revaluation reserves
- c) General loan-loss reserves
- d) Hybrid debt capital instruments
- e) Subordinated term debt (up to 50% of Tier 1 capital)

Furthermore, Basel I set minimum limits of 50% to the contribution Tier1 to total capital. Moreover, Basel I had some deductions:

- a) Goodwill
- b) Investments in unconsolidated subsidiaries engaged in banking and financial activities.
- c) reciprocal crossholdings

Risk Weighted Assets:

The initial paper which introduced in 1988 was focusing only on credit risk weighted assets as it had classified assets to Five categories and grant them 0%, 10%, 20%, 50% and 100% risk weight which was reduced to four categories by removing the 10% category.

a) The 0% risk weight include

- a. Cash,
- b. Claims on central banks denominated in national currency and funded in that currency
- c. Other claims on OECD central governments and central banks
- d. Claims collateralized by cash of OECD central-government securities or guaranteed by OECD central governments.

b) The 10% risk weight include

- a. Claims on domestic public-sector entities, excluding central government, and loans guaranteed by such entities

c) The 20% risk weight include:

- a. Claims on multilateral development banks and claims guaranteed by, or collateralized by securities issued by such banks
- b. Claims on banks incorporated in the OECD and loans guaranteed by OECD incorporated banks
- c. Claims on banks incorporated in countries outside the OECD with a residual maturity of up to one year and loans with a residual maturity of up to one year guaranteed by banks incorporated in countries outside the OECD
- d. Claims on non-domestic OECD public-sector entities, excluding central government, and loans guaranteed by such entities

- e. Cash items in process of collection

d) The 50% risk weight include

- a. Loans fully secured by mortgage on residential property that is or will be occupied by the borrower or that is rented

e) The 100% risk weight include

- a. Claims on the private sector
- b. Claims on banks incorporated outside the OECD with a residual maturity of over one year
- c. Claims on central governments outside the OECD

- d. Claims on commercial companies owned by the public sector
- e. Premises, plant and equipment and other fixed assets
- f. Real estate and other investments
- g. Capital instruments issued by other banks
- h. all other assets

Introduction of Market Risk

In April, 1996 yet another document was issued explaining how Committee members intended to recognize the effects of multilateral netting. The Committee also started work to refine the framework to address risks other than credit risk, which was the focus of the 1988 Accord.

Following two consultative processes, the Market Risk Amendment to the Capital Accord was released in January, 1996 to be made effective latest by end-1997. It was designed to incorporate within the Accord a capital requirement for the market risks arising from banks' open positions in foreign exchange, traded debt securities, equities, commodities and options. An important aspect of this amendment was that, as an alternative to a standardized measurement method, banks were permitted, subject to strict quantitative and qualitative standards, to use internal value-at-risk (VAR) models as a basis for measuring their market risk capital requirements.

Following the Mexican debt crisis of 1995 and the contagion it caused, the Committee succeeded in finalizing yet another landmark document in 1997 viz., "Core Principles for Effective Banking Supervision. The Core Principles were designed as a model for banking systems in emerging market countries and the same were later adopted by supervisors across the world.

f) Capital Adequacy Ratios

$$\text{Tier1 Capital Ratio} = \frac{\text{Tier1}}{\text{Total Risk Weighted Assets}}$$

should not be less than 4%

$$\text{Capital Adequacy Ratio} = \frac{\text{Total capital}}{\text{Total Risk Weighted Assets}}$$

should not be less than 8%

i) The Weakness of Basel I

j) Although Basel I was the foundation for the capital adequacy ratio and the risk weighted assets there were some weakness in it:

- **Not covering all type of Risk i.e. Liquidity risk, operation risk**

Basel, I did not cover operational risk or corporate risk.

- **Narrow approach for weighting the credit risk**

Four risk weightings (0%, 10% 20%, 50% and 100%), as shown above which will not give the proper weight for each counterparty or type of exposure and the exposure maturity. Furthermore, Basel I give OECD members preference over non-OECD members.



• A fixed measure of default risk

The 8% minimum CAR is not enough to guard the banks from insolvency. In other words the static default risk does not take default risk changing characteristic. [6]

• Simple approach for identifying the risk for each exposure and to each counters party.

Basel I did not differentiate between the low risk and high risk for each type of assets, counterparty (i.e. a claim to a corporate debt which is one of the most profitable assets for the banks is risk weighted at 100% regardless the riskiness of that corporate) and currency (i.e. investing in corporate debt in Sudan in Sudanese pound is the same investing in GM debt in USD). This has led banks to lend or to invest in debt in the high-risk corporate aiming for the higher profit.

k) Our opinion:

1) Basel I was the first spark for the introduction of the capital adequacy ratio which enabled the market users to compare the capital of the banks based on their risk weighted assets “the risk of losses when the counterparty did not accomplish his obligations”. Furthermore, the simplified calculations of credit risk and market risk were not equivalent to the sophisticated banks models and structures as this has led to influence banks management who in favour to take high risk counterparty as it did not distinguish between counterparties (i.e. having a claim to a corporate with low risk will have a risk weighting to a corporate with high risk). This has led to the introduction of Basel II with its advance risk measurement and capital structure.

2. Basel II

Following the weakness of Basel, I to cover all aspect of risk and its narrow approach in categorizing the risks (i.e. counterparty, credit and market risk) that banks faces in its business structure. In 1999, 2001 and 2003 Basel Committee drafted proposal for consultation about the new set of requirements. In 2004 the committee finalizes the second wave of regulatory requirements and they call it “Basel II”. The objectives of Basel II were to continue strengthen the safety of the banking system, to enhance the reserve of the capital compared to the bank risks, to encourage banks to use superior risk management system and to concentrate on the IAB and not to make it suitable also for banks with different complexity [7].

The Basel II has introduced the new concept of regulatory requirements by the introduction of the three Pillars.

A. Pillar 1

When bank capital is diminished by the loss and provisions charges against bad exposures it will be difficult or costly for the bank to raise fresh external capital in bad times and it will be forced to cut back on its lending activity, thereby contributing to a worsening of the initial downturn. [8] There where the first pillar of Basel II is important as it focus in the building stronger regulatory capital to face the enhanced risk weighted assets.

B. Pillar 2

C. Pillar 3

Pillar 1

Pillar 1 enhances the regulatory capital requirements through three main areas. The first one is through increasing the type and sub-type of assets categories; the second one was the introduction of operational risk and finally allowing banks to choice between the different type of credit, market and operational methods. There were three options for the banks to value their credit risk and operational risk banks:

The approaches of credit risk measurement

- The standardized approach
- The foundation IRB approach
- The advanced IRB approaches

The approaches of Market risk measurement

- The standardized measurement method
- The Internal Models approach

The approaches of operational risk measurement

- The basic indicator approaches
- The standardized approach
- The advanced measurement approaches

Credit risk

The calculation of the credit risk under Basel II had improved a lot and it has three approaches to calculate the credit risk. Furthermore, Basel has classified the assets in six core groups, each one of the below has subgroups and each subgroup has its risk weighting reflecting the riskiness of the assets and the counterparties. “The risk weighted assets for each one of them represent the average chance of exposure to default and percentage of loss of that exposure if default occurred.” [9]

1. Claims to Banking Industries.
2. Claims to sovereign.
3. Claims to corporate
4. Claims to retail.
5. Claims to equity
6. And others

Standardize approach

As per the below figures in order to calculate the credit risk in standardized approach, the bank should link the assets with its group and its credit rating as granted by an external rating agency such as Moody’s. For example, if a bank has short-term claim to two banks of US\$1mn each. The first bank is rated by Moody as AAA and the other one rate below B-. The calculation of the credit risk will be like the following:

1. for Bank with AAA rating

The risk weighting $US\$1mn * 20\% = US\$200k$

Minimum capital requirement $US\$ 200k * 12\% = US\$24k$

This means that Bank should have capital of US\$24k assign to the US\$1mn exposure.

2. for Bank with rating below B-

The risk weighting $US\$1mn * 150\% = US\$1.5mn$

Minimum capital requirement $US\$1.5mn * 12\% = US\$180k$



This means that Bank should have capital of US\$180k assign to the US\$1mn exposure.

From the above example we can see that two exposures with two similar type of entities with same amount of exposure but with different external rating categories (different counterparty risk), and it shows that Bank has to bear to hold 720% of capital in order to grant exposures to high risk counter. Under Basel I there was no weighting to the counterparty if you have exposure to a bank then regardless the riskiness of the Bank it will have the same credit risk weightage.

IRB approach is very complicated and difficult to be implemented and to be supervised by the regulator [10]. Dionne stated in his research that the capital formula under the IRB approach involves a detailed calculation of the probability of default (PD), the Loss Given Default (LGD), and the risk exposure at the time of default (EAD). The new method differentiates unanticipated losses from anticipated losses, and the cost of capital is based on unanticipated losses. It specifies separate treatments for different types of debt: government, corporate, bank, individual, and equity. It also considers banks' securitization activities by differentiating traditional securitization (creating asset tranches with different credit risks) and synthetic securitization (credit risk transferred using derivatives) [5].

Pillar 2

Under Basel II the responsibility to control risks associate with bank assets and to have enough capital in accordance to its risk profile is held under the bank itself. On the other side the regulator has to set a proper regulated environment. Under Pillar 2 there are four key principals the regulator should review and assess it for each bank:

- a) Banks should maintain their capital by having process and procedures to assess the capital adequacy in accordance to its risk profile beside its strategies. Under ICAAP banks should identify the typical Credit, market and operational risk beside that business risk, counterparty credit risk, and other type of risk. [11] Furthermore, David stated that "this principle focuses on the Pillar 1 capital requirements" [12]. This will give the local regulator the advantage to measure the adequacy of the bank capital compared to the minimum ratios set by the Basel Committee.
- b) The regulator should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process. [11]
- c) The regulator should require its licensees to operate above the threshold requirements or the ability to maintain additional capital above the minimum requirements [11]. The central Bank of Bahrain had set the minimum consolidated CAR ratio as 12% and the trigger ratio for it was 12.5% and the Consolidated CAR set by Basel was 8% this means that Bahrain has set CAR above Basel requirements by 4% plus 0.5% as trigger.
- d) The regulator should come to the picture in the early stages preventing banks capital to drop below threshold and to ask

the bank for an action plan if it not possible to maintain or increase the capital again. [11]

Pillar 3

The third pillar supplement the first and second pillar by introducing a set of disclosure requirements to the public to have a good view of the bank capital compare to its exposures risk. Pillar 3 is a must in order to let the market to have a better view of the bank by having details information about regulatory capital, the riskiness of the exposures, ICAAP and CAR. After applying Pillar 3 the market user will have the full picture on the banks and they can compare the profitability of each bank with the risk associated to each bank. There where each user can decide if they accept the reward in according to their relationship with each bank and to scale it with level of risk the bank is taken. It is required to be publish Pillar 3 requirements in semiannually basis, apart from qualitative disclosure which should be disclose in annual basis.

Limitations

Although Basel II came with huge changes compared to Basel I but there were some limitations on it:

- The dependency on rating agencies to classified the risk associated to each asset under the standardize approach, which has been stress tested in the financial crisis and it has failed.
- Pillar 2 required the regulator to examine and review the methods of recording, processing and monitoring used by the licensees [10]. This will lead the regulator to trains its supervisors to be in line with the innovated industry in both the capital structure and assets structures.
- Under IRB approach in the time of crisis the market is out of cash and the probability of default will increase which will increase the required capital which will put a higher pressure on the bank and on the banking industry as all causing further damage to the economy.
- Did not set a limit for exposures compare to the capital of the bank based on the actual value not the risk weighted assets of it.
- Liquidity requirements were weak.

Basel II has change and enhances regulatory requirement compare to Basel I, it had incorporate a wide of capital requirement through the improvement of the calculation of the risk weighted assets. However, PhD Victoria founded that the Basel I and Basel II fail to cover risk transaction and instruments exposure taken by the bank like the derivatives and securitization instruments. Furthermore, the introduction Basel III frame work with high quantity and quality capital requirement. Moreover, Basel III will not change the exiting model under Basel II. Furthermore, Victoria was in the opinion that the financial innovation had been neglected and it was it was used for the purpose of avoidance tax and regulatory arbitrage.



The crisis was not due to non-compliance to some regulations, but it was the outcome of utilization of the advantages of gaps, foggy or insufficiency and oversight in the regulatory framework. Therefore, Basel II is aimed to reduce the banks exposures to high risk activates and to increase the ability if banks to handle any future crisis without relying on regulators. PhD Victoria founded that the Basel I and Basel II fail to cover risk transaction and instruments exposure taken by the bank like the derivatives and securitization instruments. Furthermore, the introduction Basel III frame work with high quantity and quality capital requirement. Moreover, Basel III will not change the exiting model under Basel II. Furthermore, Victoria was in the opinion that the financial innovation had been neglected and it was it was used for the purpose of avoidance tax and regulatory arbitrage. The crisis was not due to non-compliance to some regulations, but it was the outcome of utilization of the advantages of gaps, foggy or insufficiency and oversight in the regulatory framework. Therefore, Basel II is aimed to reduce the banks exposures to high risk activates and to increase the ability if banks to handle any future crisis without relying on regulators. [13]

3. Basel III

Basel III has come to enhance Basel II. In other word Basel III did not eliminate Basel II but it has modified it to include further ratios and limits and to set a higher standard for capital and credit risk weighted assets. Basel Committee has squeezed banks by reducing the eligible regulatory capital and increasing weighted risk assets which will reduce the capital adequacy of the bank. Furthermore, the Central Bank of Bahrain has issue the Below Basel III Minimum capital ratio requirement and to compare it with Basel II requirements we can find that it has increase the minimum capital adequacy for the higher tier of capital. This means that banks should have the minimum Common Equity Tier one then it can increase their capital in the other tiers.

Furthermore, Allen, William A.; Chan, Ka Kei; Milne, Alistair; Thomas, Steve 2010 founded that Basel III has squeezed the bank capital through requiring the banks to

allocate additional capital to cover the risk weighted assets as compared to Basel II, nevertheless, Basel III also has set a higher standard for inclusion of capital instruments as part of the regulatory capital. This will lead the banks to either increase their paid up capital which is known as one of the most expensive type of capital otherwise the bank has to decrease their assets. Both tactics will lead to the reductions of the potential earnings and its linkage with equity (return on equity).

Furthermore, Basel Committee has set the minimum common equity tier one at 4.5% of risk weighted assets higher than Basel II requirement which has set the ratio at 2%. Besides that, Basel also require 2.5% of risk-weighted assets from as capital conservation buffer this will boost the minimum requirement in common equity tier one to 7%. Bank which fail to comply to the 7% minimum requirement will be penalize throw restricting them from distributing divined or paying bonuses to the managements and board of director. Also Basel committee require the bank to take 0% to 2.5% as countercyclical buffer in years where banking industry are growing to utilize them in the down turn years. Furthermore, Basel III has allowed the regulator to convert to common equity or write-off any capital instruments have the feature to convert it of writer it off. This will increase the involvement of private sector in resolving any future banking crises and thus decreases moral hazard.

Basel III has required higher quality of capital to be included in the regulatory capital. As in example, Bahrain has set the minimum CET1 ratio to be 9% and the Tier1 (CET1 + additional Tier 1) to be 10.5% and the Capital Adequacy ratio (Tier 1 + Tier 2) to be 12.5%. Besides that, it has set limits to additional tier 1 and tier 2 to be 1.5% and 2% of the total risk assets respectively in case the CET1 fall below the 9%. The criticism is that when the CET1 is above the 9% the bank has no limit to include additional tier1 or tier2 except the leverage ratio which will limit the Tier 1 to go below 3.03% of the total assets.

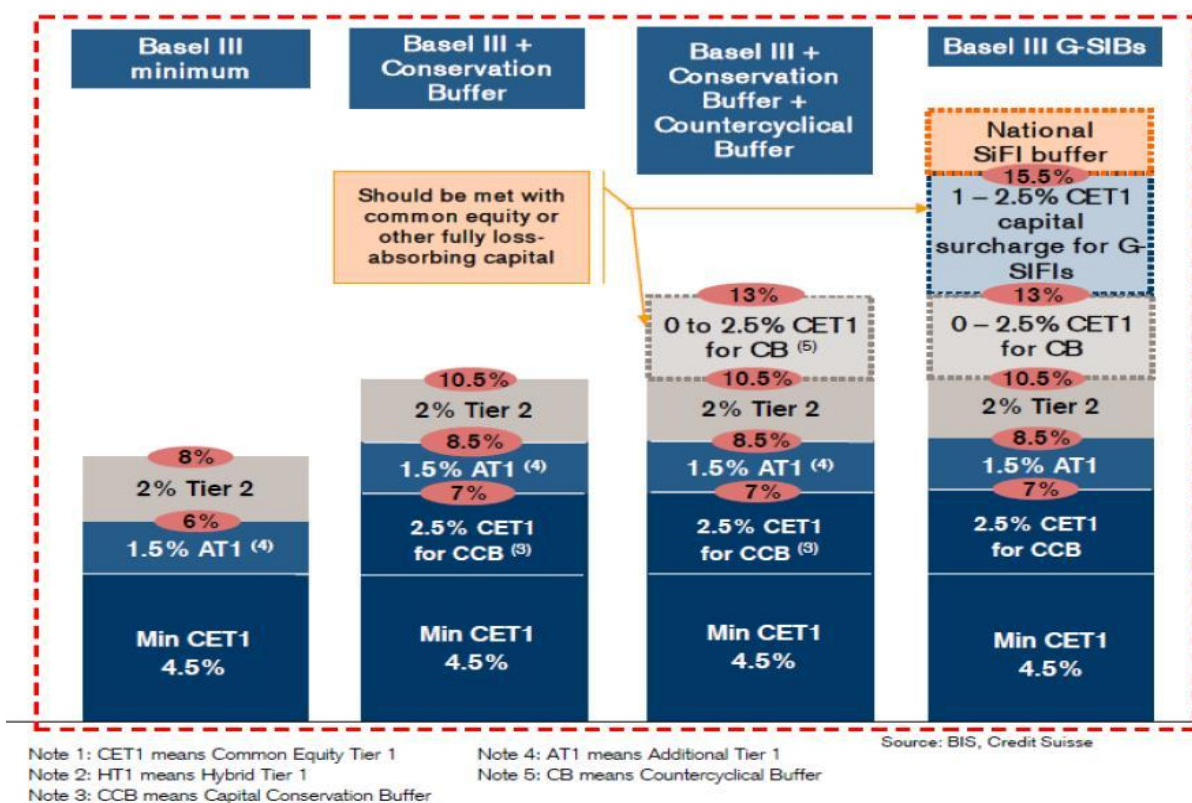


Figure 2: Basel III minimum capital ratio requirements

Table 1: Central Bank of Bahrain Basel III minimum capital ratio requirement

| Basel III Minimum Capital ratio requirement | | |
|---|----------|------------------------|
| Components of Consolidated CARs | | |
| | Optional | Minimum Required Ratio |
| Core Equity Tier 1 (CET 1) | | 6.5% |
| Additional Tier 1 (AT1) | 1.5% | |
| Tier 1 (T1) | | 8% |
| Tier 2 (T2) | 2% | |
| Total Capital | | 10% |
| Capital Conservation Buffer (CCB) | | 2.5% |
| CARs including CCB 2.5% | | |
| CET 1 plus CCB | | 9% |
| Tier 1 plus CCB | | 10.5% |
| Total Capital plus CCB | | 12.5% |
| Components of Solo CARs | | |
| Core Equity Tier 1 (CET 1) | | 4.5% |
| Additional Tier 1 (AT1) | 1.5% | |
| Tier 1 (T1) | | 6.0% |
| Tier 2 (T2) | 2% | |
| Total Capital | | 8.0% |

Under Basel III the regulatory capital has been divided to two type of tiers (tier 1 and tier 2). Also, Tier 1 is divided in to two tiers Common Equity Tier 1 and additional tier 1. Common equity Tier one is the strongest type of capital tiers, it includes the paid up capital, the accumulated retain earning or loss, General Reserve, statutory reserve and Accumulated other comprehensive income and losses and other reserves.

• **Regulatory adjustments:**

The aforementioned components are filtered or adjusted by removing the following:



1) Goodwill and Intangibles other than mortgage servicing rights and deferred tax liabilities.

Basel III requirements mandate the subtracting goodwill and intangible other than mortgage servicing rights. Also, Basel III has instructed the banks to exclude the goodwill raising from unconsolidated significant investment in the capital of financial institutions. There reasons behind the exclusion good and intangibles are it foggy nature of recognition in phases of stress and crisis. Furthermore, these items are mainly founded in investments banks which their structure is based in acquisitions of others and recognizing intangibles on it.

2) Deferred tax assets other than temporary Deferred tax assets

Basel III require the deduction of the Deferred Tax Assets which is relay on the future profitability of the institutions from the common equity tier one and it allows netting it off with deferred tax liabilities if it is associated to the same tax authority, in exception to the temporary differences.

3) Investments in own shares

Investments in own shares should be fully deducted, whether it hold it directly or indirectly or hold it as collateral or contractually obligate to purchase it. This aimed to alimending any double counting of holding own capital.

4) Reciprocal cross holdings in instruments other than Common equity

Any type of capital that are structured to artificially expand the capital should be fully excluded.

5) Cash flow hedge reserve

Cash flow hedge reserve is part of the accounting capital and it is mainly used to include the market price of derivatives which is used for hedging.

Under Basel III it is required to neutralize this item be either adding back the negative value or excluding the positive value. The aim of this treatment is to stabilize bank capital from artificial volatility

6) Defined benefit pension fund assets

The aim of deducting any defined benefit pension fund assets is due to the uncertainty of employing the fund assets in protecting the bank creditors.

7) Gain on sale related to securitization

Any gain associated to a securitization transaction should be deducted from the common equity tier 1.

8) Excess above 10% of the temporary deferred tax assets

9) Excess above 10% of the mortgage service right.

10) Excess above 10% of the aggregated investment in insignificant investments in financial institution.

Basel III allow to investment in the capital of insignificant financial institution have up to 10% of its common equity tier 1. The criteria to differentiate between the significant investment in financial institution and insignificant investments in financial investment is the percentage of ownership in the common equity of the investee entity, if the ownership is more than 10% it will be significant investment in financial institution otherwise it will be insignificant investment in financial institutions.

11) Excess above 10% of the bank common equity tier 1

investment in significant investments in financial institution.

If the bank ownership is more than 10% of the common equity of the investee institution, it will two type of treatment

- Owning above 50 % of the common equity or having a control over

If the ownership is above 50% or it have control over the institutions, it should be consolidated or aggregate it.

- Owning 50 % of the common equity and less the investee.

If the bank owns less than 50% of the common equity of the investee institution then it is not allowed to recognize any non-common equity exposure to those institutions. Also, it is permitted to have common equity up to 10% of its common equity tier one capital.

Example in investing in significant portion in financial institutions

If bank ABC purchase common share (US\$12mn) in Bank XYZ and have also preferential shares (US\$5mn) eligible to be include in Common Equity Tier 1. The Current total capital of Bank XYZ is US\$50mn and the common equity tier 1 Bank ABC is US\$100mn.

The first step:

Do Bank ABC consider Bank XYZ as significant investment in financial entities?

Bank A own 24% of the total capital of Bank XYZ and it is considered significant investment in financial entities.

$$\text{US\$ 12 MN} / \text{US\$ 50 MN} = 24\%$$

The Second step:

Since Bank ABC have significant investment in Bank XYZ then any non common equity should be deducted. Bank ABC have preferential shares in Bank XYZ this should be deducted fully from the common equity tier 1 capital.

Bank ABC Common equity tier 1 – investment in non common equity of bank XYZ

$$\text{The remaining Bank ABC common equity Tier 1} \\ \text{US\$ 100 MN} - \text{US\$ 5 MN} = \text{US\$ 95 MN}$$

The Third step:

Since Bank ABC have significant investment in Bank XYZ then any amount above 10% limit of Bank ABC common equity tier 1 capital will be subject to deduction.

$$10\% \text{ limit of the Bank ABC common equity Tier 1 capital} \\ 10\% * \text{US\$ 95 MN} = \text{US\$9.5 MN}$$

Bank ABC invested US\$ 12 MN in the common equity of Bank XYZ, which is above the 10 % limit.

$$\text{US\$ 12 MN} - \text{US\$ 9.5 MN} = \text{US 2.5 MN}$$

US\$ 2.5 MN. Should be deducted from the common equity tier 1

12) Excess amount above the 15% limit above the aggregated items below:

- Significant investments in financial institutions after deductions
- Temporary deferred tax assets after deductions
- Mortgage service right after deductions

• Counter Cyclical Buffer

Basel Committee has issued a new buffer call it counter cyclical buffer and it aims to reduce the shock from the excess credit growth. In order to comply with Basel regulations banks should build their counter cyclical buffer on from common equity tier one capital. The buffer has been set 0% to 2.5% of the risk weighted assets depending in the local regulatory grounded by the credit growth. Furthermore, banks have one year to build the buffer in case if crisis is expected to happen, on the other hand, the effect of reduction of the buffer will in instantly if the regulators allowed reducing the buffer.

• Transition and phase-in

Due to the huge changes in Basel III which will impact the banks if these requirements have been implemented in spot. Therefore, Central bank of Bahrain has set a transition arrangements based on the Basel III requirements on Basel III phased-in capital requirements over five years. The transition arrangements have begun from January 2015 till January 2019. Besides that, phased-out over ten years has begun from January 2015 till January 2025 for unqualified capital instruments under Basel III to reduce the unqualified capital instruments by 10% each year.

• Liquidity

Liquidity was the one of the major problems in the 2007 / 2008 financial crisis; Basel III has introduced two liquidity ratio to enhance the liquidity of the financial institutions during financial crisis. The first ratio is the liquidity coverage ratio and the second one is net stable and the second one is the net stable funding ratio.

• Liquidity coverage ratio

Liquidity coverage ratio is significant enhancement in Basel III requirements as it requires the financial institutions to keep high quality liquid assets to cover the projected cash out flow of a period of 30 days. This ratio will shield the financial institution against short term liquidity deficiencies and will help the financial industry to stand against the financial shocks.

$$\text{Liquidity coverage ratio} = \frac{\text{High quality liquid assets}}{\text{Projected total net liquidity outflow for 30 days}} \geq 100$$

Net stable funding ratio

The new requirement demanding financial institutions to keep up to one-year stable assets. This founded under the net stable funding ratio which set a minimum of 100% of available net stable funding (equity and non-equity liabilities) compared to the required stable funding (Long term assets) on the banks. This will reduce the refinancing risks through utilizing the stable liability to fund it on &off-balance sheets exposures.

$$\text{Net stable funding ratio} = \frac{\text{Available stable funding}}{\text{Exposures required need stable funding}} \geq 100$$

• Leverage

One of the lessons from the crisis in 2007/2008 was drop in the assets value was unexpected as it was dropping much faster than the historical data shows. This has led Basel to introduce the leverage ratio which concentrating on Tier 1 capital compare to the total assets (including on balance sheets and off balance sheets) rather than taking the risk associated to the assets. This is simpler than other Basel ratios and it put cap or limiting the banks from taking further assets compare to its tier one capital.

$$\text{Leverage ratio} = \frac{\text{Tier one capital}}{\text{On and Off balance sheets exposures}} \geq 3\%$$

Tier one capital will include the common equity tier one, additional tier one and their deductions.

• Weakness of Basel III

Mr. Mathia and Ms. Sandre show that Basel III will harshly affect most of lending sectors. As securitizations, inter-bank loans, corporate loans, long-term lending and commercial real estate will have higher funding costs as a result of implementing Basel III. Furthermore, they are in opinion that banks need a huge mitigation procedure to reduce Basel III impact. Furthermore, they stated that banks have to reduce their investment in the riskier assets or the assets with the high risk weight like securitizations. Furthermore, the writer demonstrated that Basel III is not the solo factor that bank consider while putting the route for allocation and the pricing of the bank's assets as other factor will have significant influence like the market condition i.e. the economy cycle as the demand for lend is not always high and allocation of assets for certain customers even if it will reduce the capital adequacy ratios. However, Basel II capital and liquidity requirement put allot of pressure on banks to reallocate their assets to avoid the failure to comply with Basel III minimum requirement. [15]

On the January 6th 2013 Basel Committee has loosened its requirements by shifting the deadline from 2015 to adhere to Basel requirements to 2019 through the transition arrangements. Furthermore, the liquidity requirements also had been relaxed through counting more type of assets "i.e. including securities backed by mortgages, for example, instead of simply sovereign debt." [16]

• Islamic financial institutions and Basel regulations.

Islamic financial institutions credit risks can be matched with the conventional financial institutions risk. Furthermore, Central Bank of Bahrain has separate capital adequacy regulation for Islamic financial institutions. However, these regulations are similar to the conventional regulations. On the other hand, some regulator does not differentiate between them like Saudi Arabian Monetary Agency which they have the same regulation for both of them.



Furthermore, IFSB founded in the 3rd of November 2002 formed by regulators and Islamic financial institutions and “it serves as an international standard-setting body” [18] used by the regulatory to ensure the reliability and solidity of the Islamic financing industry. IFSB issued guideline in 2005 to remove the gaps on the implementations of Basel II on the Islamic financial institutions and it has solved the treatment of the profit sharing investment accounts by classifying it to type of accounts the first one is Restricted Investment Accounts these type of account will be not be included in the calculation of the capital in sense the bank does not have the right to utilize these account outside their scope, the other one is the unrestricted investments accounts and the banks have to take 30% of the it's in the risk weighted assets.

IFSB again in 2013 has issued it guidelines regarding the changes done on Basel requirements

- **Basel III and it shadow in Banks Profitability**

Basel III objective were to control and curb the bank from building high risk exposures in their on and off balance sheets this will stabilize the banking industry leading to the stabilization of the economy as whole. Although Basel requirement has a noble goal, it has but the banks under stress through the high-quality capital requirement, higher risk weighted assets, setting now liquidity ratios and the introduce leverage ratio. Beside that the higher capital requirements Basel III has increase minimum capital ratio for the higher tiers (i.e. common equity Tier 1 has increased from 2% to 4.5% and the total capital adequacy ratio increased from 8% to 10.5%). This has made paid up capital as a limited capital for many banks and they have to be rational in utilizing it. Otherwise they have to either inject more capital (commonly management don't like to ask their shareholder to inject more capital due to its costly type of capital and not to fright the shareholders of their investments in entity, or the bank has to restructure its assets by either changing the high risk exposures to low risk or by reducing quantity of their exposures. By implementing any of the above solutions it will affect the potential income as a quantity or compare it to the equity. Furthermore, the new liquidity and leverage requirement will require banks to hold more liquid assets with low return and by reduce the using of cheaper type financing (i.e. debt) as it is allowed to have leverage ratio of 3% or more.

A research has been conducted to find the estimated capital injection needed for European banking industry as of 2019 based in the second quarter of 2010 data will need Additional Tier 1 of €1.1 trillion, Liquid assets of €1.3 trillion and long term funding of €2.3 trillion. Filling the need of capital injection will have a considerable effect on the profitability of the banks and the estimated decline on the return on equity will be 4% [14]. Furthermore, Banks have started taking some step to improve return on equity by reducing the cost of the banks [14]; however there are other actions banks can take to improve their return on equity by restructure their balance sheets by reducing the Basel III deductions through reducing the large exposures to financial and commercial entities. Although, commercial entities does

not have any deduction limits, but they have a high risk weight rate for investment above 15% of the total regulatory capital of the bank as it will be risk weight at 1250%, the effective implementation of the requirements of the Basel III through centralizing the capital at head office level, choosing the most efficient modeling approaches in credit, market and operational risk and restructure of the business model and to make a feasibility study on the banks product. The writer assess that the impact of Basel III on return in equity could be mitigated through the implementation of the first two approaches up to 40 % [14]. However the impact Basel III on the profitability of the banks will not be mitigated. Although Basel committee gives long transition time frame banks need to set their strategies on Basel III frame work, capital and risk and Basel III implementation [14].

IV. RESEARCH METHODOLOGY

- **Study Population**

The research papulation will be selected based in their knowledge and proficiency on Basel III and the bank industry and they will be from both side of Basel III equations (the regulators and bankers in Bahrain).

- **Data Collection Procedures**

The data for our research will be gathered through questionnaire to be giving to Bankers (Banks CFO and individual's expertise in Basel III) and regulator (staff working in the central Bank of Bahrain with knowledge on Basel III). The questionnaire is presented in Appendix 1.

- **Scale Reliabilities**

In this research we have used in the literature review the Basel Frame works (Basel I, Basel II and Basel III) has been used beside some journals and reports written in Basel requirements. Furthermore, the questionnaire has been giving to a selected Professional on Basel requirements from both the regulator and banks. Likert scale has been chosen as the scale of the answers. This will reduce the wrong result from the answers to the questions that the participants are uncertain about them.

- **Data Analysis**

The gathered data will be analyzing and redesign to be understandable and comparable with the other finding. Besides that, a descriptive information will be generated by analyzing the questionnaire and compare it with other finding to reach to a conclusion.

- **Future Research**

In the sense that Basel III has been implemented in Bahrain since 2015 and banks still did not publish their Pillar 3 requirements to the public, further research is needed to find the impact of Basel III in the banking industry in Bahrain and to find banks behavior toward Basel III requirement, whether they inject capital to meet the Basel III requirements or the have restructure their balance sheets to reduce risk associated with their exposures and the effect of those behavior in the bank's profitability and the economic growth.

Data Analysis and Discussion

Following the financial crisis Basel Committee has rectified a lot of issues where in Basel II targeting the stabilization of the banks industry. Beside that Basel committee introduce new measurements like the liquidity and leverage requirements. These changes in the Basel requirements will have some impact on the profitability of the banks wither negative or positive. However, these effects cannot be recognizing by looking to the old data in sense that the new requirements set a lot of elimination of the capital side, beside that the risk weighted assets have been changed for certain items. Therefore, I have eliminated the quantitative approach from my research and I will depend on a qualitative approach by studying the changes done on Basel II to reach Basel III.

This research is objective is to find the Bahraini banker's opinion in Basel III and it effect on the profitability of banks. Furthermore, the research attempts to find the answers to the following problem:

- **Can Basel III prevent future crisis?**

It has been founded that Basel III can reduce the impact of the future financial crisis but it cannot prevent them due to different type of risk. Basel III had but in a lot of strong requirements which might affect some banks for the short term but it aims to stabilize the financial system.

- **What are the Limitations of Basel II that could not predict the financial crisis?**

This question has been discussing in detail in the literature review and it has been founded that Basel II has some limitation mainly depending the rating agencies and not having enough liquidity nor leverage requirements.

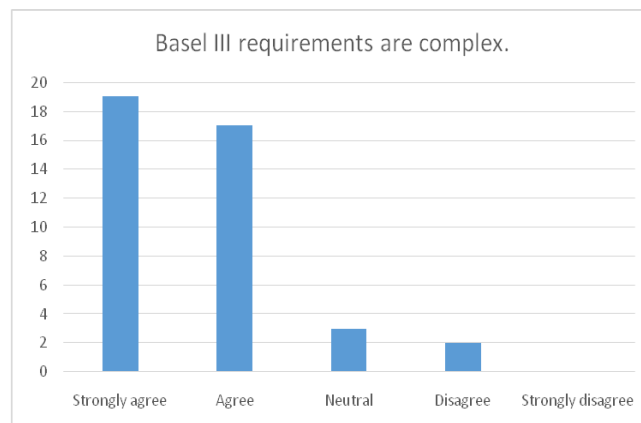
- **What are the impacts of Basel III on banking industry and the economy over all?**

The answer we have come across them was not proved by real data; I have founded that Basel III will affect the profitability of the banks beside that it also will affect the funding cost leading to affect the lending cost to the customer. Therefore, it will have some impact in the economy growth and it will lead to increase the cost of lending to high risk client or even will reduce the number of banking willing to grant them loans in order to keep their compliance with Basel III requirements.

Survey

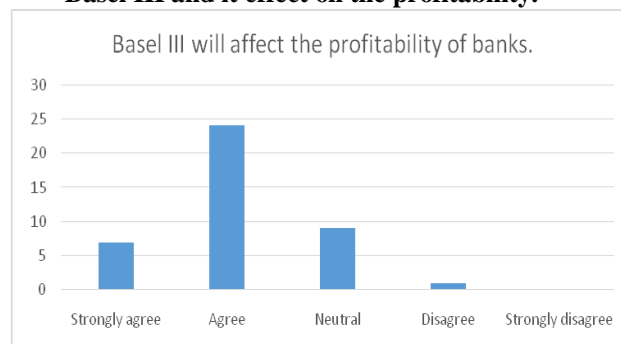
I have distributed survey regarding Basel III to bankers from Islamic banks and conventional banks and regulators. The survey was aimed to find the Basel III users point of view for the following area:

- **The complexity of Basel III**



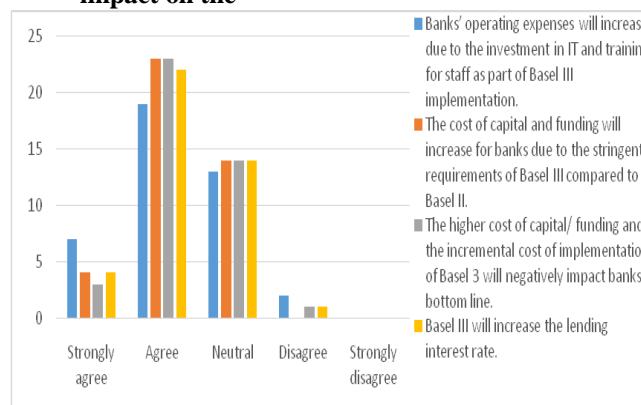
The survey result shows that out of the 41 participant two only found that Basel III is not difficult, three did not gave their opinion, seventeen think it complex and the remaining strongly agree that Basel III is complex. This mean that the majority of the samples thin that Basel III is complex. This means that the industries need to have a lot of training and courses regarding Basel III.

- **Basel III and it effect on the profitability.**



Based on the survey it is clearly founded that 75.6% of the participant agree with that Basel III will impact the profitability of the banks.

- **Basel III impact in the Bank expenses and its impact on the**

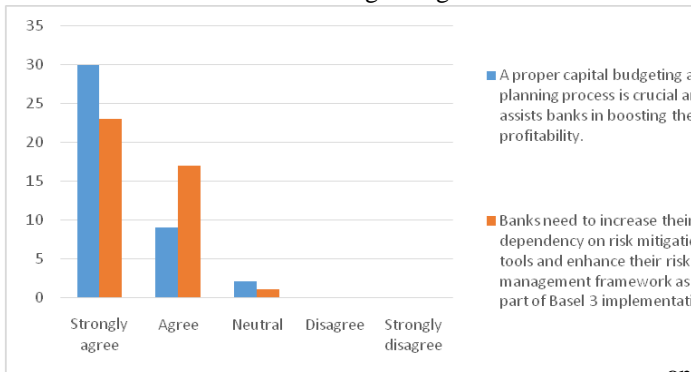


As it shows in the above chart almost 34% of the participants, they were natural and most of the remaining are agreeing that Basel III will impact the cost directly (through upgrading the IT system and training staff) and indirectly (through higher cost of funding). which will lead to impact the bottom line of the banks.



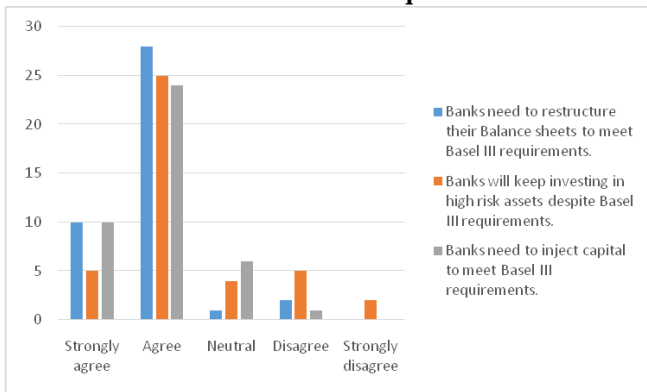
Beside that the lending yield will increase due to the increment in the funding cost.

- Banker’s attitude in investing in high risk assets.



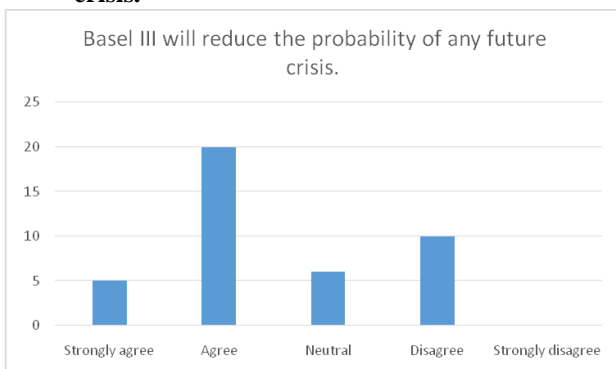
As per the survey the participants agree with that with proper budgeting and planning beside utilizing the mitigation tools and enhancing risk management framework banks can reduce the impact of Basel III on the profitability of the banks. There where it important for the top managements to have a good budgeting and planning for the bank’s assets.

- Banks reaction to Basel III requirements



As per the survey it is obviously noted that the regulators and banks agreed that the banks will restructure their Balance sheet beside their need to inject capital. However, they still think that banks should keep investing in high risk assets to generate higher income. Furthermore, the Basel requirement does not prevent banks from taking high risk exposures unless they have enough capital against it. At the end high risk exposures need to be finance by someone who went to enjoy the high return and bear the risk associate with it.

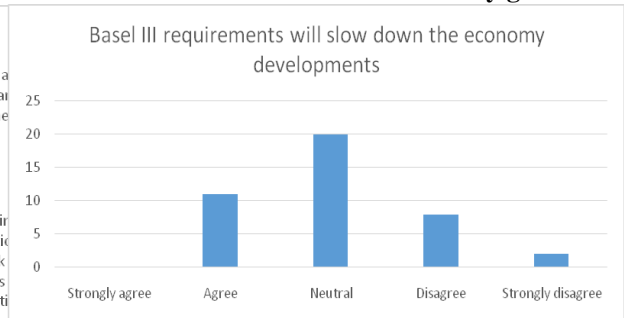
- Basel III will reduce the probability of any future crisis.



It is clearly showing that 61% of the participants agree

with that Basel III will reduce the probability of future crisis. However, 24% disagree with it.

- Basel III and its effect on the economy growth.



The survey result shows that out of the 41 participant three only strongly disagree that Basel III will impact and slow down the growth of the economy, eight participants also disagree with the aforementioned statement. On the other hand, eleven participants agreed with Basel III will slow down the economy growth. However, twenty participants they did not give their opinion about the relation between Basel III and the economy growth, there where it seems that the relation between Basel III and the economy growth is fogy and need to be study in deep in future.

V. CONCLUSION

In this study we went through the stage of Basel requirement from Basel I through Basel II to the latest amendment Basel III, it had been analyzed through different angels of view from regulator side and bankers side and It has been founded that the regulator try to stabilize the financial systems through introducing higher capital requirements and on the other side of the equation the bankers think that setting higher requirements mean lowering their opportunities, increasing their cost and decreasing their income. Furthermore, Banks usually are highly leverage this mean that most of their assets are funded by money other than the capital paid by the shareholder (in other word the bank debtors have more money in the bank than the shareholders) and the safety of the debtors’ money is the safety of the whole economy. This mean that regulator should not focus in the return on capital they should focus in the return in assets in sense that the bank should generate enough profit to satisfy all stakeholder in line with assuring the safety of their fund.

Furthermore, the introduction of Basel III will not prevent future crisis but it will reduce it. Besides that, the higher capital requirements, liquidity requirements and the leverage requirements will give the banking industry a cushion in the time of crisis from falling to insolvency and avoiding the domino effect and financial system collapse.

Recommendations

Finally, I want to conclude my research by suggesting the area where I found that need to be focusing in future researches and studies:



1. Leverage ratio

Leverage ratio has been set to be at least 3%. However, the criteria of taking the on and off balance sheets is find but setting the 3% should be investigated and compare it to the industry and to find if this ratio should be increased or decreased.1

2. Credit rating agencies

Basel III still relies on the credit rating agencies to determine the riskiness of the counterparty. Although the 2007 / 2008 financial crisis the rating agencies was one of causes of it. Therefore, a further research should be done to evaluate the credit rating agencies and compare it to an internal rating system.

3. Different type of banking structure

The banking industry has different type of banking type i.e. commercial banks and investment banks or retail bank and wholesale banks. Each one of them has it characteristic. Where Basel committee has set one rule and requirements across them, there a research should be conducted to evaluate the type of assets that each type is loaded with and also to evaluate the risk associate with each type. and to conclude if each type need modified requirement.

4. Basel III and its effect in the financial industry.

The effect of Basel III still not actually realize in sense that real data is still not capture beside that the Basel III requirements is implemented in phases till 2024 by that time the real impact in the financial system will be define. Therefore, a research by that time should be conduct to find the wither Basel III has affected the financial system in positive or negative way.

Research and Training

Further research and training to the industry is needed to strengthen the financial industry. Although, IFSB has taken the responsibility to research and develop the capital requirements for Islamic Financial Institutions similar to Basel requirements for conventional Banks. It the time to study these rules and try to enhance them to make them suit the Islamic Banks.

Abbreviation

| | |
|-------|--|
| IRB | Internal rating-based |
| BIS | Bank for International Settlements |
| IAB | Internationally active banks |
| ICAAP | Internal Capital Adequacy Assessment Process |
| CAR | Capital Adequacy Ratio |
| IFSB | Islamic Financial Standard Board |

APPENDIX

• Appendix 1

Questionnaire

1. What is the type of the organization you are working in?
 - a) Regulator
 - b) Conventional Retail Banking
 - c) Conventional Wholesale Banking
 - d) Islamic Retail Banking
 - e) Islamic Wholesale Banking
2. If you are working in a Bank. choose the department you

are working in.

- a) Financial Department
 - b) Risk Department
 - c) Compliance Department
 - d) Others
3. Basel III requirements are complex.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
 4. Banks need to restructure their Balance sheets to meet Basel III requirements.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
 5. Banks will keep investing in high risk assets despite Basel III requirements.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
 6. Banks need to increase their dependency on risk mitigations tools and enhance their risk management framework as part of Basel 3 implementation.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
 7. Banks need to inject capital to meet Basel III requirements.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
 8. Basel III will affect the profitability of banks.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
 9. Banks' operating expenses will increase due to the investment in IT and training for staff as part of Basel III implementation.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree



10. The cost of capital and funding will increase for banks due to the stringent requirements of Basel III compared to Basel 2.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
11. The higher cost of capital/ funding and the incremental cost of implementation of Basel 3 will negatively impact banks' bottom line.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
12. A proper capital budgeting and planning process is crucial and assists banks in boosting their profitability.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
13. Basel III will reduce the probability of any future crisis.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
14. Basel III will increase the lending interest rate.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree
15. Basel III requirements will slow down the economy developments.
 - a) Strongly agree
 - b) Agree
 - c) Neutral
 - d) Disagree
 - e) Strongly disagree

Appendix 2

Basel III Forms issued by CBB

Risk weighted assets

SECTION B

Reporting Currency USD '000

CREDIT RISK WEIGHTED ASSETS CALCULATION - CONSOLIDATED (exclude exposures that have been reported under the aggregation rules)
Standardized Approach

| Asset Categories for Credit Risk | On- and Off Balance Sheet Credit Exposures | Credit Risk Mitigant (CRM) (Note 1) | Unsecured Portion of the Credit Exposure | Risk Weighted Assets CRM | Risk Weights | Credit Risk Weighted Asset |
|--|--|-------------------------------------|--|--------------------------|--------------|----------------------------|
| | A | B | C = A - B | D | E | F = (C * E) + D |
| 1. Cash items (1.1 + 1.2 + 1.3 + 1.4+ 1.5) | | | | | | |
| 1.1 Notes and coins | | | | | 0% | |
| 1.2 Gold bullions held and backed by gold bullion liabilities | | | | | 0% | |
| 1.3 Cash items in the process of collection | | | | | 20% | |
| 1.4 Delivery-versus-Payment Transactions (1.4.1 to 1.4.5 inclusive) | | Note 2 | | | | |
| 1.4.1 For up to 4 business days | | | | | 0% | |
| 1.4.2 5-15 business days | | | | | 8% | |
| 1.4.3 16-30 business days | | | | | 50% | |
| 1.4.4 31-45 business days | | | | | 70.0% | |
| 1.4.5 46 or more business days | | | | | 100% | |
| 1.5 Non-Delivery-versus-Payment Transactions | | | | | | |
| 1.5.1 5 or more business days | | | | | 1250% | |
| 1.5.2 Exposures are not material (to be agreed with the CBB) | | | | | 100% | |
| 2. Total Claims on Sovereigns (2.1 + 2.2 + 2.3) | | Note 4 | | | | |
| 2.1 Total Kingdom of Bahrain & GCC sovereigns & respective central banks | | | | | 0% | |
| 2.2 Total other sovereigns & respective central banks - Relevant domestic currency | | | | | 0% | |
| 2.3 Total Other Sovereigns and claims on non-relevant currencies (2.3.1 to 2.3.6 inclusive) | | | | | | |
| 2.3.1 ECAI 1 (AAA to AA-) | | | | | 0% | |
| 2.3.2 ECAI 2 (A+ to A-) | | | | | 20% | |
| 2.3.3 ECAI 3 (BBB+ to BBB-) | | | | | 50% | |
| 2.3.4 ECAI 4 (BB+ to B-) | | | | | 100% | |
| 2.3.5 ECAI 5 (Below B-) | | | | | 150% | |
| 2.3.6 Unrated | | | | | 100% | |
| 3. Total Claims on International Organizations | | | | | 0% | |
| 4. Total Claims on PSEs (4.1 + 4.2 + 4.3) | | | | | | |
| 4.1 PSEs Treated as Sovereigns (4.1.1 + 4.1.2 + 4.1.3) | | | | | | |
| 4.1.1 Total Bahraini PSEs | | | | | 0% | |
| 4.1.2 Total Other Sovereigns PSEs - Relevant domestic currency | | | | | 0% | |
| 4.1.3 Total Other Sovereigns PSEs and claims on non-relevant currencies (4.1.4.1 to 4.1.4.6 inclusive) | | | | | | |
| 4.1.3.1 ECAI 1 (AAA to AA-) | | | | | 0% | |
| 4.1.3.2 ECAI 2 (A+ to A-) | | | | | 20% | |
| 4.1.3.3 ECAI 3 (BBB+ to BBB-) | | | | | 50% | |
| 4.1.3.4 ECAI 4 (BB+ to B-) | | | | | 100% | |
| 4.1.3.5 ECAI 5 (Below B-) | | | | | 150% | |
| 4.1.3.6 Unrated | | | | | 100% | |
| 4.2 All other PSEs (4.2.1 to 4.2.6 inclusive) | | | | | | |
| 4.2.1 ECAI 1 (AAA to AA-) | | | | | 20% | |
| 4.2.2 ECAI 2 (A+ to A-) | | | | | 50% | |
| 4.2.3 ECAI 3 (BBB+ to BBB-) | | | | | 100% | |
| 4.2.4 ECAI 4 (BB+ to B-) | | | | | 100% | |
| 4.2.5 ECAI 5 (Below B-) | | | | | 150% | |
| 4.2.6 Unrated | | | | | 100% | |
| 4.3 Any exposures exceeding 15% of Total Capital | | | | | 800% | |
| 5. Total Claims on MDBs (5.1 + 5.2 + 5.3) | | | | | | |
| 5.1 Eligible for 0% RW | | | | | 0% | |
| 5.2 Not Eligible for 0% RW (5.2.1 to 5.2.6 inclusive) | | | | | | |
| 5.2.1 ECAI 1 (AAA to AA-) | | | | | 20% | |
| 5.2.2 ECAI 2 (A+ to A-) | | | | | 50% | |
| 5.2.3 ECAI 3 (BBB+ to BBB-) | | | | | 50% | |
| 5.2.4 ECAI 4 (BB+ to B-) | | | | | 100% | |
| 5.2.5 ECAI 5 (Below B-) | | | | | 150% | |
| 5.2.6 Unrated | | | | | 50% | |
| 5.3 Any exposures exceeding 15% of Total Capital | | | | | 800% | |
| 6. Total Claims on Banks (6.1 + 6.2 + 6.3 + 6.4) | | | | | | |
| 6.1 Standard Risk Weights for Claims on Banks (6.1.1 to 6.1.6 inclusive) | | | | | | |
| 6.1.1 ECAI 1 (AAA to AA-) | | | | | 20% | |
| 6.1.2 ECAI 2 (A+ to A-) | | | | | 50% | |
| 6.1.3 ECAI 3 (BBB+ to BBB-) | | | | | 50% | |
| 6.1.4 ECAI 4 (BB+ to B-) | | | | | 100% | |
| 6.1.5 ECAI 5 (Below B-) | | | | | 150% | |
| 6.1.6 Unrated | | | | | 50% | |



An Analysis of Basel I, Basel II and Basel III and Its Impact on Profitability of Banks in Kingdom of Bahrain

SECTION B

Reporting Currency **USD '000**

CREDIT RISK WEIGHTED ASSETS CALCULATION - CONSOLIDATED (exclude exposures that have been reported under the aggregation rules)

Standardized Approach

| Asset Categories for Credit Risk | On- and Off Balance Sheet Credit Exposures | Credit Risk Mitigant (CRM) (Note 1) | Unsecured Portion of the Credit Exposure | Risk Weighted Assets CRM | Risk Weight | Credit Risk Weighted Asset |
|--|--|-------------------------------------|--|--------------------------|-------------|----------------------------|
| | A | B | C = A - B | D | E | F = (C * E) + D |
| 6.2 Short-Term Claims on Locally Incorporated Banks - BD and USD | | | | | 20% | |
| 6.3 Preferential Risk Weight for Claims on Banks (6.3.1 to 6.3.6 inclusive) | | | | | | |
| 6.3.1 ECAI 1 (AAA to AA-) | | | | | 20% | |
| 6.3.2 ECAI 2 (A+ to A-) | | | | | 20% | |
| 6.3.3 ECAI 3 (BBB+ to BBB-) | | | | | 20% | |
| 6.3.4 ECAI 4 (BB+ to B-) | | | | | 50% | |
| 6.3.5 ECAI 5 (Below B-) | | | | | 150% | |
| 6.3.6 Unrated | | | | | 20% | |
| 6.4 Any non equity exposures exceeding 15% of Total Capital | | | | | 800% | |
| 7. Claims on Corporates including Ins Cos & Category 3 Investment Firms (7.1 + 7.2 + 7.3) | | | | | | |
| 7.1 Corporates owned by the Government Bahrain | | | | | 0% | |
| 7.2 Other Corporates including Category 3 Investment Firms (7.2.1 to 7.2.5 inclusive) | | | | | | |
| 7.2.1 ECAI 1 (AAA to AA-) | | | | | 20% | |
| 7.2.2 ECAI 2 (A+ to A-) | | | | | 50% | |
| 7.2.3 ECAI 3 (BBB+ to BB-) | | | | | 100% | |
| 7.2.4 ECAI 4 (Below BB-) | | | | | 150% | |
| 7.2.5 Unrated | | | | | 100% | |
| 7.3 Any exposures exceeding 15% of Total Capital | | | | | 800% | |
| 8. Claims on Investment Firms - Categories 1 & 2 (8.1 to 8.7 inclusive) | | | | | | |
| 8.1 ECAI 1 (AAA to AA-) | | | | | 20% | |
| 8.2 ECAI 2 (A+ to A-) | | | | | 50% | |
| 8.3 ECAI 3 (BBB+ to BBB-) | | | | | 50% | |
| 8.4 ECAI 4 (BB+ to B-) | | | | | 100% | |
| 8.5 ECAI 5 (Below B-) | | | | | 150% | |
| 8.6 Unrated | | | | | 50% | |
| 8.7 Any exposures exceeding 15% of Total Capital | | | | | 800% | |
| 9. Regulatory Retail Portfolios | | | | | 75% | |
| 10. Mortgage (10.1 + 10.2 + 10.3) | | | | | | |
| 10.1 Residential Mortgage eligible for 35% RW | | | | | 35% | |
| 10.2 Residential Mortgage eligible for 75% RW | | | | | 75% | |
| 10.3 Commercial Mortgage eligible for 100% RW | | | | | 100% | |
| 11. Past Due Exposure (11.1 + 11.2 + 11.3) | | | | | | |
| 11.1 Where Specific Provision is less than 20% | | | | | 150% | |
| 11.2 Where Specific Provision is 20% or more | | | | | 100% | |
| 11.3 Where secured by qualifying residential mortgage | | | | | 100% | |

SECTION B

Reporting Currency USD '000

CREDIT RISK WEIGHTED ASSETS CALCULATION - CONSOLIDATED (exclude exposures that have been reported under the aggregation rules)
Standardized Approach

| Asset Categories for Credit Risk | | On- and Off | Credit Risk | Unsecured | Risk | Risk | Credit Risk |
|---|---|---------------|--------------|-----------------|------------|---------|-----------------|
| | | Balance Sheet | Mitigant | Portion of the | Weighted | Weights | Weighted Asset |
| | | Exposures | (CRM Note 1) | Credit Exposure | Assets CRM | | |
| | | A | B | C = A - B | D | E | F = (C * E) + D |
| 12. | Investments in Securities (12.1 + 12.2 + 12.3) | - | - | - | - | - | - |
| 12.1 | Equity Investments (12.1.1 to 12.1.5 inclusive) | - | - | - | - | - | - |
| 12.1.1 | Listed | - | - | - | - | 100% | - |
| 12.1.2 | Unlisted | - | - | - | - | 150% | - |
| 12.1.3 | Significant investment in the common shares of financial entities >10% | - | - | - | - | 250% | - |
| 12.1.4 | Significant investment in the common shares of Commercial Entities | - | - | - | - | 800% | - |
| 12.1.5 | Other exposures with excess amount over 15% | - | - | - | - | 800% | - |
| 12.2 | Investments in Funds (12.2.1 + 12.2.2) | - | - | - | - | - | - |
| 12.2.1 | Investments in rated funds (12.2.1.1 to 12.2.1.4 inclusive) | - | - | - | - | - | - |
| 12.2.1.1 | ECAI 1 (AAA to AA-) | - | - | - | - | 20% | - |
| 12.2.1.2 | ECAI 2 (A+ to A-) | - | - | - | - | 50% | - |
| 12.2.1.3 | ECAI 3 (BBB+ to BB-) | - | - | - | - | 100% | - |
| 12.2.1.4 | ECAI 4 (Below BB-) | - | - | - | - | 150% | - |
| 12.2.2 | Investments in unrated funds (12.2.2.1 + 12.2.2.2) | - | - | - | - | - | - |
| 12.2.2.1 | Listed | - | - | - | - | 100% | - |
| 12.2.2.2 | Unlisted | - | - | - | - | 150% | - |
| 12.3 | Look-through approach if used | - | - | - | - | - | - |
| 13. | Holding of Real Estate (13.1 + 13.2) | - | - | - | - | - | - |
| 13.1 | Premises occupied by the bank | - | - | - | - | 100% | - |
| 13.2 | All other holdings of real estate | - | - | - | - | 200% | - |
| 14. | Underwriting of Non-Trading Book Items (14.1 + 14.2) | - | - | - | - | - | - |
| 14.1 | Holding of private equity | - | - | - | - | 100% | - |
| 14.2 | Holding of real estate | - | - | - | - | 100% | - |
| 15. | Other Assets and Holding of Securitization Tranches (15.1 + 15.2) | - | - | - | - | - | - |
| 15.1 | Other Assets | - | - | - | - | - | - |
| 15.1.1 | Other Assets | - | - | - | - | 100% | - |
| 15.1.2 | Mortgage Servicing Rights | - | - | - | - | 250% | - |
| 15.1.3 | Deferred Tax Assets arising from Temporary Differences | - | - | - | - | 250% | - |
| 15.1.4 | Credit Valuation Adjustment | - | - | - | - | - | - |
| 15.2 | Holding of Securitization and Resecuritisation Tranches (15.2.1 + 15.2.2 + 15.2.3 + 15.2.4) | - | - | - | - | - | - |
| 15.2.1 | L/T Tranches (15.2.1.1 to 15.2.1.5 inclusive)- of Securitization | - | - | - | - | - | - |
| 15.2.1.1 | ECAI 1 (AAA to AA-) | - | - | - | - | 20% | - |
| 15.2.1.2 | ECAI 2 (A+ to A-) | - | - | - | - | 50% | - |
| 15.2.1.3 | ECAI 3 (BBB+ to BBB-) | - | - | - | - | 100% | - |
| 15.2.1.4 | ECAI 4 (BB+ to BB-) | - | - | - | - | 350% | - |
| 15.2.1.5 | ECAI 5 (B+ and below or unrated) | - | - | - | - | 1250% | - |
| 15.2.2 | S/T Tranches (15.2.2.1 to 15.2.2.4 inclusive)- of Securitization | - | - | - | - | - | - |
| 15.2.2.1 | ECAI 1 (A-1 / P-1) | - | - | - | - | 20% | - |
| 15.2.2.2 | ECAI 2 (A-2 / P-2) | - | - | - | - | 50% | - |
| 15.2.2.3 | ECAI 3 (A-3 / P-3) | - | - | - | - | 100% | - |
| 15.2.2.4 | All other ratings or unrated | - | - | - | - | 1250% | - |
| 15.2.3 | L/T Tranches (15.2.3.1 to 15.2.3.5 inclusive)- of Resecuritisation | - | - | - | - | - | - |
| 15.2.3.1 | ECAI 1 (AAA to AA-) | - | - | - | - | 40% | - |
| 15.2.3.2 | ECAI 2 (A+ to A-) | - | - | - | - | 100% | - |
| 15.2.3.3 | ECAI 3 (BBB+ to BBB-) | - | - | - | - | 225% | - |
| 15.2.3.4 | ECAI 4 (BB+ to BB-) | - | - | - | - | 650% | - |
| 15.2.3.5 | ECAI 5 (B+ and below or unrated) | - | - | - | - | 1250% | - |
| 15.2.4 | S/T Tranches (15.2.4.1 to 15.2.4.4 inclusive)- of Resecuritisation | - | - | - | - | - | - |
| 15.2.4.1 | ECAI 1 (A-1 / P-1) | - | - | - | - | 40% | - |
| 15.2.4.2 | ECAI 2 (A-2 / P-2) | - | - | - | - | 100% | - |
| 15.2.4.3 | ECAI 3 (A-3 / P-3) | - | - | - | - | 225% | - |
| 15.2.4.4 | All other ratings or unrated | - | - | - | - | 1250% | - |
| TOTAL CREDIT RISK WEIGHTED ASSETS (1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15) | | - | - | - | - | - | - |



Capital components

| | | Reporting Currency USD '000 | | |
|--|---|------------------------------------|--------------------|----------------------|
| | | Consolidations | | |
| | | CET 1 | AT1 | T2 |
| I | Tier 1 Capital | | | |
| L1 | Common Equity Tier 1 (CET1) | | | |
| L1.1 | Issued and fully paid ordinary shares | | | |
| L1.1.1 | Less: Employee stock incentive program funded by the bank (outstanding) | | | |
| L1.1.2 | Treasury Shares | | | |
| L1.2 | General reserves | | | |
| L1.3 | Legal / Statutory reserves | | | |
| L1.4 | Share premium | | | |
| L1.5 | Retained earnings | | | |
| L1.5.1 | Current interim cumulative net income / losses | | | |
| L1.5.2 | Accumulated other comprehensive Income and losses (and other reserves) | | | |
| L1.5.3 | unrealized gains and losses on available for sale financial instruments | | | |
| L1.5.4 | gains and losses on derivatives held as cash flow hedges | | | |
| L1.5.5 | gains and losses resulting from converting foreign currency subsidiaries to the parent currency | | | |
| L1.5.6 | unrealized gains and losses from a foreign currency hedge of a net investment in a foreign operation | | | |
| L1.5.7 | all other reserves | | | |
| L1.5.8 | unrealized gains and losses from fair valuing equities | | | |
| L1.6 | Total CET1 capital before minority interest | | | |
| L1.7 | Total minority interest in banking subsidiaries given recognition in CET1 capital | | | |
| L1.8 | Total CET1 capital prior to regulatory adjustments | | | |
| Less: | | | | |
| L1.9 | Goodwill | | | |
| L1.10 | Intangibles other than mortgage servicing rights | | | |
| L1.11 | Deferred tax assets | | | |
| L1.12 | Investments in own shares | | | |
| L1.13 | Reciprocal cross holdings in instruments other than Common equity | | | |
| L1.14 | Cash flow hedge reserve | | | |
| L1.15 | Defined benefit pension fund assets | | | |
| L1.16 | Gain on sale related to securitization | | | |
| L1.17 | Total CET 1 capital after the regulatory adjustments above (CET1 a) | | | |
| L1.18 | Less: Investment in financial entities where ownership is < 10% of issued common share capital (amount above 10% CET1a) | | | |
| L1.19 | Total Common Equity Tier 1 capital after the regulatory adjustments above (CET1 b) | | | |
| L1.20 | Less: Non-common equity Invest. in financial entities where ownership is >10% of the issued common share capital | | | |
| L1.21 | Total Common Equity Tier 1 capital after the regulatory adjustments above (CET1 C) | | | |
| Less: | | | | |
| L1.22 | Significant investments in the common stock of financial entities (amount above 10% of CET1c) | | | |
| L1.23 | Mortgage servicing rights (amount above 10% of CET1c) | | | |
| L1.24 | Deferred tax assets arising from temporary differences (amount above 10% of CET1c) | | | |
| L1.25 | Aggregated amount of exceeding the 15% of CET1c | | | |
| L1.26 | Additional deduction to absorb deficiency in AT1 | | | |
| L1.27 | Positive or negative adjustments due to aggregation of CET1 | | | |
| L1.28 | Total Common Equity Tier 1 capital after the regulatory adjustments above (CET1 d) | | | |
| L2 | Other Capital (AT1 & T2) | | | |
| i) L2.1 | Instruments issued by parent company | | | |
| j) L2.2 | Instruments issued by banking subsidiaries to third parties | | | |
| i) L2.3 | Share Premium | | | |
| L2.4 | Assets revaluation reserve - property, plant, and equipment | | | |
| L2.5 | General loan loss provisions | | | |
| L2.6 | Total Available AT1 & T2 Capital | | | |
| Less: | | | | |
| L2.7 | Investments in own Securities | | | |
| L2.8 | Reciprocal cross holdings in financial instruments other than common equity | | | |
| L2.9 | Investment in financial entities where ownership is < 10% of the issued common share capital (amount above 10% CET1a) | | | |
| L2.10 | Significant investments in the common share of financial entities (amount above 10% of CET1c) | | | |
| L2.11 | Deduction from AT1 & T2 before additional deduction to absorb deficiency in Tier 2 | | | |
| L2.12 | Deduction from AT1 to absorb deficiency in Tier 2 | | | |
| L2.13 | Positive or negative adjustments due to aggregation of AT1 & T2 | | | |
| L2.14 | Total AT1 & T2 Deductions | | | |
| L2.15 | Regulatory adjustments actually made to higher Capital Tier | | | |
| L2.16 | Net Available Capital after regulatory adjustments before Applying Haircut | | | |
| L2.17 | Net Available Capital after Applying Haircut | | | |
| L3 | Total Tier 1 | | | |
| L4 | Total Capital | | | |
| II. Risk Weighted Exposures | | Risk Weighted Exposures | | |
| | | Credit | Operational | Market |
| II.1 | Risk Weighted Exposures | | | |
| II.2 | Aggregation of Risk Weighted Exposures | | | |
| II.3 | Risk Weighted Exposures after Aggregation | | | |
| II.4 | Total Risk Weighted Exposures | | | |
| Minimum Capital Requirements before CCB | | CET 1 | T1 | Total Capital |
| Minimum Capital Requirements after CCB | | | | |
| % of Total Risk Weighted Exposures (CAR) | | | | |
| | | 0.00% | 0.00% | 0.00% |
| Limits | | Before CCB | | |
| | | After CCB | | |
| CET1 Ratio in accordance to CBB Rule book | | | | |
| Tier 1 Ratio in accordance to CBB Rule book | | | | |
| Total Capital Ratio in accordance to CBB Rule book | | | | |



Regulatory adjustments

SECTION B
Regulatory adjustments

Reporting Currency USD '000

Year 2015

Consolidated Solo

CAPITAL ADJUSTMENTS - Consolidated and solo

| | Consolidated | Solo |
|--|--------------|------|
| i.1 Goodwill | | |
| i.1.1 Total gross value of goodwill | - | - |
| i.1.2 Associated deferred tax liability which would be extinguished if goodwill becomes impaired or derecognised | | |
| i.2 Intangibles (excluding goodwill and mortgage servicing rights only) | | |
| i.2.1 Total gross value of all assets classified as intangible (excluding goodwill and mortgage servicing rights) | - | - |
| i.2.2 Associated deferred tax liability which would be extinguished if the intangible becomes impaired or derecognised | | |
| i.3 Deferred tax assets | | |
| i.3.1 Deferred tax assets which do not rely on the future profitability of the bank to be realised | | |
| i.3.1.1 Total value of deferred tax assets which do not rely on the future profitability of the bank to be realised (gross amount) | | |
| i.3.1.2 Total value of deferred tax assets which do not rely on the future profitability of the bank to be realised (net amount) | | |
| i.3.2.1 Total value of deferred tax assets which do rely on the future profitability of the bank to be realised (gross amount) | | |
| i.3.2.2 Total value of deferred tax assets which do rely on the future profitability of the bank to be realised (net amount); of which: | - | - |
| i.3.3 amounts arising from carryforwards of unused tax losses, unused tax credits and all other (net of pro rata share of any DTLs) | | |
| i.3.4 amounts arising from temporary differences (net of pro rata share of any DTLs) | | |
| i.3.5 Amount to be deducted from Common Equity Tier 1 capital in full | - | - |
| i.3.6 Amount to be subject to the threshold for deduction | - | - |
| i.4 Investments in own shares, own Additional Tier 1 and own Tier 2 capital | | |
| i.4.1 Total amount to be deducted from Common Equity Tier 1 capital | - | - |
| i.4.2 Direct investments in own shares, net of any short positions if the short positions involve no counterparty risk | | |
| i.4.3 Indirect investments in own shares | | |
| i.4.4 For own shares which the group could be contractually obliged to purchase, the total potential purchase cost | | |
| i.4.5 Total amount to be deducted from Additional Tier 1 capital | - | - |
| i.4.6 Direct investments in own Additional Tier 1 capital, net of any short positions if the short positions involve no counterparty risk | | |
| i.4.7 Indirect investments in own AT1 (eg through holdings of index securities in which the bank is a constituent), net of short positions | | |
| i.4.8 For own AT1 which the group could be contractually obliged to purchase, the total potential purchase cost | | |
| i.4.9 Total amount to be deducted from Tier 2 capital | - | - |
| i.4.10 Direct investments in own Tier 2 capital, net of any short positions if the short positions involve no counterparty risk | | |
| i.4.11 Indirect investments in own T2 (eg through holdings of index securities in which the bank is a constituent), net of short positions | | |
| i.4.12 For own Tier 2 capital which the group could be contractually obliged to purchase, the total potential purchase cost | | |
| i.5 Reciprocal cross holdings in the capital of financial entities outside regulatory consolidation | | |
| i.5.1 Holdings of common stock that are part of a reciprocal cross holding arrangement | | |
| i.5.2 Holdings of Additional Tier 1 capital or similar instruments that are part of a reciprocal cross holding arrangement | | |
| i.5.3 Holdings of Tier 2 capital or similar instruments that are part of a reciprocal cross holding arrangement | | |
| i.6 General loan loss provisions | | |
| For standardised approach portfolios | | |
| i.6.1 General loan loss provisions | | |
| i.6.2 Cap for inclusion of provisions in Tier 2 capital (1.25% of credit risk-weighted assets) | - | - |
| i.6.3 Total amount in respect of provisions to be included in Tier 2 | - | - |
| i.7 Cash flow hedge reserve | | |
| i.7.1 Total positive or negative value of the cash flow hedge reserve as stated on the balance sheet | - | - |
| i.7.2 Hedged amount of projected cash flows that are not recognized on the balance sheet | | |
| i.7.3 Hedged amount of projected cash flows on assets recognised on-balance sheet but are not fair valued on the balance sheet | | |
| i.7.4 Hedged amount of projected cash flows on liabilities that are recognised on-balance sheet but are not fair valued on balance sheet | | |
| i.7.5 other items | | |
| i.7.6 Amount to be deducted from (or added to if negative) Common Equity Tier 1 capital | - | - |
| i.8 Defined benefit pension fund assets | | |
| i.8.1 Benefit pension scheme on-balance sheet less any associated deferred tax liability | | |
| i.8.2 Amount by which above deduction from CET1 can be reduced by demonstrating unrestricted access to assets in the relevant funds | | |
| i.8.3 Amount to be included in risk-weighted assets in respect of the amounts used above to offset the deduction of pension fund assets | | |
| i.8.4 Total amount to be deducted from Common Equity Tier 1 capital | - | - |



An Analysis of Basel I, Basel II and Basel III and Its Impact on Profitability of Banks in Kingdom of Bahrain

| | | | |
|---------|---|--|--|
| i.9 | Securitisation gain on sale (expected future margin income) | | |
| i.9.1 | Securitisation gain on sale (expected future margin income) | | |
| i.10 | Investments in financial entities where ownership is < 10% of the issued common share capital | | |
| i.10.1 | Gross holdings of common stock | | |
| i.10.2 | Permitted offsetting short positions in relation to the specific gross holdings included above | | |
| i.10.3 | Holdings of common stock net of short positions | | |
| i.10.4 | Gross holdings of Additional Tier 1 capital | | |
| i.10.5 | Permitted offsetting short positions in relation to the specific gross holdings included above | | |
| i.10.6 | Holdings of Additional Tier 1 capital net of short positions | | |
| i.10.7 | Gross holdings of Tier 2 capital | | |
| i.10.8 | Permitted offsetting short positions in relation to the specific gross holdings included above | | |
| i.10.9 | Holdings of Tier 2 capital net of short positions | | |
| i.10.10 | Sum of all net holdings where the bank does not own more than 10% of the issued share capital | | |
| i.10.11 | CET1a | | |
| i.10.12 | The sum of all holdings exceeds 10% of the CET1a | | |
| i.10.13 | Allocation of the deduction to Common Equity Tier 1 capital | | |
| i.10.14 | Allocation of the deduction to Additional Tier 1 capital | | |
| i.10.15 | Allocation of the deduction to Tier 2 capital | | |
| | Amounts not deducted | | |
| i.10.16 | Holdings of common stock net of short positions | | |
| i.10.17 | Holdings of Additional Tier 1 capital net of short positions | | |
| i.10.18 | Holdings of Tier 2 capital net of short positions | | |
| | Total risk weighted assets of amounts not deducted | | |
| i.10.19 | Holdings of common stock net of short positions | | |
| i.10.20 | Holdings of Additional Tier 1 capital net of short positions | | |
| i.10.21 | Holdings of Tier 2 capital net of short positions | | |
| i.11 | Investments in financial entities where ownership is > 10% of the issued common share capital | | |
| i.11.1 | Gross holdings of common stock | | |
| i.11.2 | Permitted offsetting short positions in relation to the specific gross holdings included above | | |
| i.11.3 | Holdings of common stock net of short positions | | |
| i.11.4 | Gross holdings of Additional Tier 1 capital | | |
| i.11.5 | Permitted offsetting short positions in relation to the specific gross holdings included above | | |
| i.11.6 | Holdings of Additional Tier 1 capital net of short positions | | |
| i.11.7 | Gross holdings of Tier 2 capital | | |
| i.11.8 | Permitted offsetting short positions in relation to the specific gross holdings included above | | |
| i.11.9 | Holdings of Tier 2 capital net of short positions | | |
| i.11.10 | CET1c | | |
| i.11.11 | Amount to be deducted from CET1a as a result of application of 10% cap | | |
| i.11.12 | Amount to be deducted from Additional Tier 1 capital | | |
| i.11.13 | Amount to be deducted from Tier 2 capital | | |
| i.12 | Mortgage servicing rights | | |
| i.12.1 | Total mortgage servicing rights classified as intangible | | |
| i.12.2 | Associated deferred tax liability which would be extinguished if the intangible becomes impaired or derecognised | | |
| i.12.3 | Mortgage servicing rights net of related tax liability | | |
| i.12.4 | CET1c | | |
| i.12.5 | Amount to be deducted from CET1c as a result of application of 10% cap | | |
| i.13 | Deferred tax assets due to temporary differences | | |
| i.13.1 | Net deferred tax assets due to temporary differences | | |
| i.13.2 | CET1c | | |
| i.13.3 | Amount to be deducted from CET1c as a result of application of 10% cap | | |
| i.14 | Items subject to 15% limit (investments in FIs, MSRs, temporary DTAs) | | |
| i.14.1 | Significant investments in the common equity of financial entities not deducted as part of the 10% cap | | |
| i.14.2 | Mortgage servicing rights not deducted as part of the 10% cap | | |
| i.14.3 | Deferred tax assets due to temporary differences not deducted as part of the 10% cap | | |
| i.14.4 | Sum of significant investments in financials, mortgage servicing rights and DTA temporary differences not deducted as a result of the | | |
| i.14.5 | Amount to be deducted from CET1c as a result of application of 15% cap | | |
| i.14.6 | Assumed amounts not deducted (to be subject to 250% risk weighting) | | |
| i.14.7 | Significant investments in the common equity of financial entities | | |
| i.14.8 | Mortgage servicing rights | | |
| i.14.9 | Deferred tax assets due to temporary differences | | |
| i.14.10 | Total | | |

REFERENCES

1. S. K. D, "A systemic crisis demands systemic solutions," *The Financial Times*, 25 september 2008."www.bis.org," [Online].
2. P. E. C. G. C. K. F. M. O. R. a. H. S. S. Jón Danielsson, "An Academic Response to Basel II," 31 may 2001.
3. D. Samuels, *From 'Second Wave' Basel II to Basel III*.
4. G. Dionne, "Risk management: History, definition and critique," 2013.
5. M. Williams, *Basel II – implementation of the New Capital Accord in Barbados*, 2006.
6. E. Roberts, "An Overview of Basel II's Pillar 2," in Seminar for Senior Bank Supervisors from Emerging Economies, Washington, DC, 23 October 2008.
7. A. K. K. a. J. C. Stein, "Cyclical implications of the Basel II capital standards," *Economic Perspectives*, 2004.
8. C. Terry and P. Docherty, "The new Basel Capital Accord: A major advance at a turbulent time," *agenda*, volume 16, number 1, pp. 25-43, 2009.
9. Z. D. & G. R. -. Dorina, "THE LIMITS OF BASEL II ACCORD," *The Annals of the University of Oradea. Economic Sciences*, vol. 3, pp. 723-728, 2009.
10. B. C. o. B. Supervision, *International Convergence of Capital Measurement and Capital Standards - A Revised Framework*, Basel: BIS, 2004.
11. D. D. VanHoose, "Market Discipline and Supervisory Discretion in Banking: Reinforcing or Conflicting Pillars of Basel II?," 2007.
12. P. Victoria COCIUG, "FINANCIAL INNOVATIONS AND PRUDENTIAL REGULATION - IMPACT OF NEW RULES OF BASEL III," april 2014.
13. E. L. T. P. S. P. T. P. a. U. S. Philipp Härle, "Basel III and European banking: Its impact, how banks might respond, and the challenges of implementation," November 2010.
14. T. ANDRE and W. MATHIAS, *REGULATORY IMPACT ON BANKS' AND INSURERS' INVESTMENTS*, 2014.
15. A. R. Sorkin, "Easing of Rules for Banks Acknowledges Reality," *The New York Times*, no. Jan/8/2013, p. B1, 2013.
16. W. A. Allen, K. K. Chan, A. Milne and S. Thomas, "Basel III: Is the Cure Worse than the Disease?," 2010.
17. IFSB, <http://www.ifsb.org/>.
18. P. Angelini, L. Clerc, V. Cúrdia, L. Gambacorta, A. Gerali, A. Locarno, R. Motto, W. Roeger, S. V. d. Heuvel and J. Vlček, *BASEL III: Long-term impact on economic performance and fluctuations*, BIS Working Papers, 2011.

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