

Perceptions of the Quality of Basel II Regulations among Bankers- The Case of  
Bahrain



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*To the soul of my father and to my wife for her support, strength, and encouragement.*



## Abstract

Basel II regulations have been implemented in Bahrain since 2007. I worked as the Head of Group Risk Management in a Bahraini multinational bank with 10 subsidiaries in 10 countries. While carrying out these roles, numerous examples of misalignment, irrelevance, and impracticality were found, and various gaps between cases in practice and what is stipulated and implemented by the regulator within the framework of Basel II were identified. I became interested in finding out why Basel II regulations failed to *detect* triggers of the 2007 crisis ahead of time and how successful was Basel II in ameliorating negative repercussions of the crisis. The foremost important question was “*Was Basel II the right choice of regulations for banks and the banking system in the countries in which they were adopted?*”

There are numerous studies within the field of banking regulations and supervision on banking crises from regulators and standard setters’ perspective, but little has been written on the subject from bankers’ perspectives. More precisely, little has been written on what exactly constitutes efficient or inefficient regulations from bankers’ perspectives rather than from regulators, standard setters or academic perspectives.

The above questions motivated us to study the structure, design, objectives and implementation of Basel II in Bahrain. An investigation carried out from the perspective of institutions being regulated via questionnaires, one-on-one interviews, and examination of banks’ annual reports.

The purpose of this study is to assess whether the implementation of Basel II is an efficient or inefficient regulation. The study aims to provide the banking regulator in Bahrain with recommendations, solicited from within the banking system that would help the regulator to review its Basel II regulations and supervisions approach. An ethnographic account of the views, experience, and recommendations of the bankers are used to assess Basel II regulations and supervision in the country.

The study found that the general perception of the interviewees and the survey’s respondents that Basel II regulations do not help banks withstand financial crises, improve risk management practices, reduce systemic risk, or improve international competitiveness. Furthermore, the study

found that the regulator ignored the idiosyncratic nature of the banking system and its constituents while implementing Basel II regulations.

In light of the findings, the study offered several recommendations to the banking regulator in Bahrain. The regulator should, prior to adopting a regulatory tool and imposing it on banks, study the relevance and appropriateness of this tool with respect to the banks in the country. While designing its supervision program, the regulator should consider the idiosyncratic risks, financial performance, organizational structure, governance, and business model for each bank. In addition, the regulator should not rely on the implementation of Basel II to introduce risk management practices at a bank or prevent exposure to the financial crisis. The regulator should adopt tools such as stress testing for each bank and aggregate stress testing of the whole system in order to foresee and prepare for financial crises.

## **Acknowledgement**

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## Table of contents

Abstract .....	iii
Acknowledgement.....	v
Table of contents .....	vii
Abbreviations .....	x
Chapter 1. Research Issues.....	1
1.1 What is regulation and supervision? .....	2
1.2 Why do we need banking regulation? .....	2
1.3 How do governments intervene in banking regulation? .....	3
1.3.1 Bank Licensing.....	3
1.3.2 Restriction of activities .....	4
1.3.3 Capital requirements .....	5
1.4 How can we assess whether regulations meet their objectives? .....	6
1.5 Motivation for the study.....	7
1.6 Current Status of Banking Regulations Research .....	9
1.7 Main objectives of the study .....	11
1.7.1 Contribution to the conceptual development .....	11
1.7.2 Contribution to practice .....	12
1.8 Research questions.....	12
1.9 Structure of the thesis.....	13
Chapter 2. Literature Review .....	15
2.1 What Are Regulations and Supervisions?.....	15
2.2 Why Do Governments Intervene in Banking Regulations?.....	16
2.2.1 Public Interest Justification of Regulation .....	16
2.2.2 Private Interest Theory Justifications.....	23
2.2.3 Conclusion .....	24
2.3 How Do Governments Intervene?.....	24
2.3.1 Capital Regulations .....	25
2.3.2 Conclusion .....	58
2.4 What Are the Government’s Intervention Objectives? Have They Been Met?.....	60

2.4.1 Contain Systemic Risk.....	60
2.4.2 Enhance Risk Management.....	62
2.4.3 Build Resilience: Withstand Crises .....	67
2.4.4 Conclusion .....	75
Chapter 3. A Conceptual Framework and Research Methodology .....	77
3.1 Introduction.....	77
3.2 Theories of Banking Regulation .....	78
3.2.1 Positive Economic Theories of Regulation.....	82
3.2.2 Normative Economic Theories of Regulation .....	87
3.2.3 New Institutionalism Theory of Regulation .....	87
3.3 Banking Regulation Theoretical Conceptual Framework.....	90
3.3.1 Rule and principle-based regulation .....	91
3.3.2 Micro- and Macro-Prudential Regulation.....	92
3.3.3 Supervisory Program .....	93
3.3.4 Regulatory tool.....	94
3.4 Research Approach .....	95
3.5 Research Strategy.....	97
3.5.1 Questionnaire Structure .....	99
3.5.2. Interview Structure.....	100
3.5.3 Questionnaire Administration.....	101
3.6 Ethical Issues and Assurance .....	101
Chapter 4. Results and Analysis .....	103
4.1 Introduction.....	103
4.1.1 Chapter structure.....	103
4.1.2 Scope of data and the research questions.....	110
4.1.3 Data and methodology .....	111
4.1.4 Summary of the findings.....	116
4.2 Demographics and descriptive statistics .....	117
4.2.1 Respondents years of service .....	118
4.2.2 Respondents education.....	119
4.3 The role and impact of Basel II.....	119
4.3.1 Basel II and Risk Management.....	121

4.3.2 Basel II and financial crises .....	133
4.3.3 Basel II and Competitive Advantage .....	139
4.3.4 Basel II and Systemic risk.....	140
4.3.5 Conclusion .....	144
4.4 The appropriateness of the techniques and methods of Basel II.....	147
4.4.1 Operational risk.....	148
4.4.2 Credit Risk .....	152
4.4.3 Capital Adequacy Ratio .....	157
4.4.4 Basel II, good or bad regulations .....	160
4.4.5 Conclusion .....	161
4.5 The competence and the role of the CBB in Basel II implementation.....	164
4.5.1 Regulation .....	164
4.5.2 Supervision.....	175
4.5.3 Conclusion .....	182
4.6 Banks' Institutional Characteristics .....	186
Chapter 5. Conclusions and Recommendations.....	190
5.1 Overview of the dissertation .....	190
5.2 Contributions.....	192
5.3 Conceptual framework.....	192
5.4 Answers to the research questions.....	194
5.5 Conventional Versus Islamic Banks .....	200
5.6 Research limitations.....	202
5.7 Area of future research.....	203
5.8 Recommendations .....	203
5.6.1 Regulatory Policy.....	203
5.6.2 Supervision program.....	206
Appendix (A) .....	208
Bibliography.....	216

## **Abbreviations**

CAR	Capital Adequacy Ratio
CBB	Central Bank of Bahrain
CCB	Capital Conservation Buffer
CcyB	Counter Cyclical Buffer
CRWA	Credit Risk Weighted Assets
ICAAP	Internal Capital Adequacy Assessment Process
MRWA	Market Risk Weighted Assets
ORWA	Operational Risk Weighted Assets

## Chapter 1. Research Issues

But what is the government itself, but the greatest of all reflections on human nature? If men were angels, no government would be necessary. If angels were to govern them, neither external nor internal controls would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must enable the government to control the governed, and in the next phase oblige it to control itself.

James Madison, *Federalist Papers*, Number 51

In many countries and in various eras since banks have existed in their current institutional form, the regulation of banks by governments has always existed (Barth et al., 2006). The rigidity of regulations has varied among countries and industries, some of which experienced extremely tight regulations while others enjoyed more relaxed rules. After the Great Depression of 1929, however, most countries have generally tended to tighten their grip through interventions on bank operations (Calomiris, 2003). Even in the era of so-called “free banking” in the United States in the mid-1800s and in Scotland between 1695 and 1864, two archetypal examples of periods with minimal government intervention in banking, some cases of intervention have occurred (Kroszner, 1997). In the US in the mid-1800s, for instance, limits were imposed by the government on banks’ asset portfolio compositions (Haber, 2004; White, 1995; Bodenhorn, 2003). The stringency of banking regulations has increased over time; after each financial crisis, governments imposed additional rules or modified existing ones. Changes in banking regulations by governments have always taken place in the aftermath of banking crises (Calomiris and Gorton, 1991).

With this in mind, and to understand the framework of banking regulations for the purpose of this study, we should start by answering some fundamental questions about banking regulations and the role of government in their design and implementation. Answering these questions is important at this stage to conceptualize the motivation of the study, the structure of each chapter and the research design. First, what are regulation and supervision? Second, why do we need banking regulations, i.e., what are government justifications for intervening in the banking industry? Third, how do governments intervene? Fourth, how can we evaluate whether the adopted regulations meet the set objectives? Finally, if the regulations do not

meet the objectives, how should regulations be redesigned and implemented? In the following sections, we discuss these questions in their respective order. After discussing these fundamental questions, we move to address the motivations for and scope of the research followed by the research objectives we aim to achieve. After that, I highlight the contributions of the current research then move to address the research questions and hypothesis.

## **1.1 What is regulation and supervision?**

Regulation is generally defined as “sustained and focused control exercised by a public agency over activities that are valued by a community” (Selznick, 1985). It involves “promulgation of a binding set of rules to be applied to a body devoted to this purpose” (Baldwin et al., 2012). BRTF (London, 2003) provides a more succinct definition of regulation: “government intervention that seeks to change the behavior of individuals or groups. It can both give people rights and restrict their behavior”.

When we apply the above definitions of regulation to the banking industry, in particular, we can define banking regulations as a set of rules prescribed by a banking regulator related to all issues and areas related to banks’ technical operations and governance environments. These rules are combined and outlined in regulators’ rulebooks and from the banking regulatory policy in a given country. Supervision, in contrast, refers to the way a banking regulator ensures that these rules have been observed. Supervision takes the form (inter alia) of on-site inspection visits, periodic meetings with the banks, periodic requests for reports, ad hoc financial information requests, off-site examination, and analysis. After defining regulation, we should discuss, as in section 1.2, the justification that governments provide for bank regulation.

## **1.2 Why do we need banking regulation?**

There are two competing camps that explain government intervention in the banking industry: a) public interest justification for regulation and b) private interest justification of regulation.

The public interest theories justify regulations on the ground that a government has to protect the public from banks' actions, which might be detrimental to the public. The reasoning given is that the public lacks resources to monitor, and in some instances, an ability to understand actions of the banks. Furthermore, the public, if left without help from the government, will not have access to the necessary information they require to make informed decisions in dealing with banks.

The private interest theories of banking regulations, on the other hand, explain regulations on the ground that a regulator designs and implements regulations and supervisions to protect interests of the regulator or the regulated entities. According to these theories, the public interest rank secondary to the priority of the regulator. In Chapter Two, we examine the literature on these two polar extreme justifications of regulations — Public and Private — and we cite more examples.

### **1.3 How do governments intervene in banking regulation?**

Governments intervene in banking regulations using the following administrative powers:

- Bank licensing
- Restriction of activities
- Capital requirements

I discuss each one of these powers below.

#### ***1.3.1 Bank Licensing***

Governments exercise their power when regulating banks by restricting the number of new entrants to the industry, particularly deposit-taking banks. Licenses for deposit-taking banks have always been regulated (Kohn, 1999). Restrictions on new entrants stemmed from the importance of banks to commerce. Worldwide, banks have acted as moneychangers; hence, they have acted as the driving force of the value of currency. Therefore, unregulated banks meant that a country was exposed to mismanagement of its currency, as moneychangers were “constantly under suspicion of undermining monetary policy by trading bullion at market prices and exporting it to foreign mints” (Kohn, 1999, p.22). Bank licensing barriers are

viewed differently by the public and private interest theories of regulations. Public interest theory views the barrier as beneficial to the public because it promotes financial stability and prevents market failure. These two objectives are achieved because this barrier will ensure that only “fit and proper” entities are allowed to participate in the market; hence, the public is protected from rogue bankers and defrauders (Barth et al., 2006). Additionally, entrant barriers protect the public by restraining the negative impact of competition on financial stability; a large number of suppliers of funds and loans lead to excessive competition to attract a large number of borrowers. This increases pressure on rivals to further reduce interest on loans and to gain market share from other lenders. A reduction in interest rates on loans for this purpose creates a burden on the bank’s profitability (Hellmann, Muroch, and Stiglitz, 2000, 2002). Private interest theory views entrants as a regulation that benefits the regulator and those under regulation without helping the public. Existing banks will naturally not invite newcomers to share the “market pie” with them. Without new entrants, existing banks do not have to take into account the reactions of new rivals to the change in interest rates on lending and borrowing. To protect their interests, they now ask the regulator to approve newcomers. Governments support implementing this barrier because it will also be beneficial. With a low number of players in the “game” in a monopolistic environment, governments can guide banks’ credit and investment decisions (Barth et al., 2006).

### ***1.3.2 Restriction of activities***

Restriction of activities refers to the permissions granted to the banks regarding the markets in which they may operate, the types of products they can offer and the scope of work in the financial system that they can perform. In particular, this means that banks are restricted to focusing on banking, insurance, funds, investment companies, and so on; they are not allowed to mix these activities together. Even within the banking industry, banks must determine their niche and operate strictly within its mandates — being either a retail or deposit-taking bank or a wholesale bank focusing on large corporate clients. Justifications for a limitation on activities can be viewed from the public and private interest perspectives.

### *1.3.3 Capital requirements*

Capital requirements refer to the quantitative relationship between the size of capital<sup>1</sup> and the risks assumed with a bank's assets. Since their adoption by regulators, capital requirements have taken the form of a ratio with a minimum threshold. Although capital requirement existed prior to Basel I<sup>2</sup> and II<sup>3</sup>, it gained worldwide acceptance, standardization and application with the pronouncement of Basel I. There are numerous studies in the literature on capital requirements as a tool of regulation, which are greater in number than studies on entry and activities restrictions. In Chapter Two, we discuss and examine the findings of these studies. However, we find it useful to discuss briefly governments' justifications for imposing capital requirements at this stage. Banks assets are financed by deposits and shareholder investments. According to the public interest justification, bank shareholders are forced to share risks of ventured investments and loans with the depositors (Barth et al., 2006). When shareholders share the risks of loss with the depositors, the bank's management, as agents of the shareholders, will be conservative in terms of the size of risks assumed and targeted. Attributing the minimum regulatory capital requirement to the "loss sharing" of shareholders with depositors disregards the fact that shareholders share risks with depositors without adhering to the capital requirements limits. In the event of bankruptcies and the liquidation of bank assets, the bank's shareholders rank after the depositors. Although banks are limited liability companies, shareholders risk the loss of their whole investments similar to the depositors, who may lose their deposits if they were not insured and if the bank's assets became worthless. There is a dichotomy in the literature between researchers who found that a capital requirement is an effective tool of regulation versus those who found capital requirement less useful. In Chapter Two, we discuss these dichotomous views.

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<sup>1</sup> We provide the institutional details of how the capital requirement is calculated in Chapter 2. At this stage, we only seek to establish the concept that capital requirement is only one tool among several that regulators use in banking regulation.

<sup>2</sup> Basel I is set of banking regulation issued in 1988 by the Basel Committee of Banking Supervision (BCBS) of the Bank of International settlement in Basel City, Switzerland. The Basel I has also been dubbed Basel I Accord and Basel I concordat. It provides requirements for a calculation of how much of a bank's capital should be allocated to the risk assumed in the credit portfolio.

<sup>3</sup> Basel II is an advancement of Basel I initially issued in 2004 but was modified further in 2006. Basel II scope is wider than Basel I as it includes market and operational risks, internal assessment of risk coverage and transparency measures.

## 1.4 How can we assess whether regulations meet their objectives?

Regulations that meet the objectives set forth by regulators are considered efficient regulations; those that fail to fulfill their mandates are inefficient regulations. Chapter Four addresses the data and offers an analysis of our examination of this question in the case of Bahraini banks. It is, however, useful to distinguish between the concepts of efficient and inefficient regulations before we discuss the results as illustrated in Chapter Four as to whether the regulation objectives have been met from the perspective of the bankers.

I used the criteria outlined by Baldwin et al. (2012) to distinguish between efficient and inefficient regulations. Baldwin et al. (2012) used, however, the term “good” and “bad” regulations. I did not follow their terms because the term “good” and “bad” might give an absolute conclusion that they refer to a set of regulations that is entirely good or bad. “Efficient” or “inefficient” regulations could refer to the same set of regulations to indicate that the regulations have positive features but with some shortcomings. According to Baldwin et al. (2012), regulations are considered good when they are characterized by the following principles (Baldwin et al., 2012):

- *Proportionality*: The scope of regulation, its rigidity, and its complexity should be commensurate with the size of those under regulation, their capabilities and the nature of their business (e.g., commercial, investment, etc.)
- *Accountability*: Regulators should be held accountable for the effects and implications of the adopted regulations. A regulator should be questioned about the cost of compliance and the benefits reaped from these regulations.
- *Consistency*: Regulation should be congruent and integrated with other related regulations in the country.
- *Transparency*: Regulation should be straightforward, accessible and communicated in a diplomatic manner with those under regulation and any other stakeholders.

- *Targeting*: Regulators should be focused on the ultimate objective of imposing the regulations. The enforcement of regulations should not be swayed by a focus on minute, immaterial or irrelevant issues.
- *Necessity*: Regulation policy should only be implemented and enforced when there is substantiated evidence that the requirements in the policy are the best viable option or alternative for the regulator and for those under regulation.
- *Effectiveness*: Regulation should periodically be reviewed to avoid irrelevance. Outdated or irrelevant regulations are costly for compliance. Regulation objectives should be communicated in a transparent manner in the guidance or regulatory policy documents to those under regulation.

Chapter Four discusses the findings of our examination of these principles on banks in Bahrain in relation to Basel II regulations. The five questions about regulation and the role of government intervention I have discussed so far form the framework for examining Basel II regulations in Bahrain in this study.

## **1.5 Motivation for the study**

I worked as the Head of Group Risk Management in a Bahraini multinational bank with 10 subsidiaries in 10 countries. In addition to this role, we were also in charge of implementing Basel II and III requirements at the headquarters of the bank in Bahrain and all its foreign subsidiaries. While carrying out these roles, numerous examples of misalignment, irrelevance, and impracticality were found, and various gaps between cases in practice and what is stipulated and implemented by the regulator within the framework of Basel II or III were identified. The liquidity risk, for instance, is being supervised by the Central Bank of Bahrain (CBB) very lightly; from Bahrain's adoption of Basel II in 2007 to the outbreak of the financial crisis and the formation of Basel III, no formal monitoring of banks regarding liquidity risk was performed by the CBB. Only reliance on the maturity mismatch in the Prudential Information Returns (PIR)<sup>4</sup> occurred on a quarterly basis. This same procedure is applied to retail banks, conventional banks, Islamic banks and wholesale banks. This sole

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<sup>4</sup> Every bank in Bahrain is obliged to submit to the CBB a periodic report named "Prudential Information Returns". This report includes the capital adequacy calculations and risk management information.

reliance on mismatch procedures is applied with a blanket approach, i.e., there is no distinction between a bank with a business model that requires short-term liquidity and a bank that does not require the availability of short-term funds. An example of irrelevance is the regulation regarding a consolidated Capital Adequacy Ratio (CAR)<sup>5</sup> for a bank located in Bahrain with subsidiaries outside Bahrain. The irrelevance is due to the fact that CAR, on a consolidated level, is interpreted as having an available amount of capital, which includes only the accounting equity of the parent bank to absorb any unexpected losses in consolidated assets. In theory, the ratio indicates how much the shareholders participate regarding the size of asset risks ventured in the bank's balance sheet. In practice, because the ratio includes the parent bank's capital in its numerator while the denominator includes the subsidiaries' assets, a consolidated CAR does not indicate or assure regulators that the capital reported in the ratio is available to absorb subsidiaries' asset losses. An example of impracticality is the regulatory and supervisory reporting: the existing periodic Basel II-related reporting requirements to which we had to adhere are akin to ticking box exercises; there was the ambiguity of purpose and inflexibility of deadline and design. In addition to these on-the-job observations, the financial crisis of 2007 occurred. The 2007 financial crisis and its aftermath culminated in mass layoffs resulting from large failures of banks and other financial institutions. Practitioners and academics have been trying to find the root cause of this crisis and its casualties.

In the midst of the crisis, we became interested in answering questions such as the following: How could a bank fail and shut down its operations as a result of assuming excessive risks without being detected by its regulator? Why did the regulatory framework (particularly Basel II accord) fail to *detect* triggers of the crisis ahead of time? How successful was Basel II in ameliorating negative repercussions of the crisis; i.e., would the crisis have resulted in far more losses had Basel II not been implemented? Was Basel II the right choice of regulation for banks and the banking system in the countries in which it was adopted? Did regulators study the suitability and the necessity of Basel II to their banking system prior to adopting and imposing this regulation? Why did countries adopt Basel II? If Basel II was a poorly-structured regulation, was it because of its requirements or its implementation? If it is

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<sup>5</sup> For more information about the definition of CAR and the methods of its calculation please refer to Chapter 3.

a bad regulation, as defined by Baldwin et al. (2012), what are the alternatives? Are the alternatives affordable economically, politically and socially?

The above on-the-job observations and questions motivated me to study the structure, design, objectives and implementation of Basel II and III in Bahrain. This study is guided holistically by the above questions. I studied Basel II regulation in Bahrain because I want to investigate whether Basel II regulations and supervision in Bahrain is efficient or inefficient. The definition of “efficient” or “inefficient” is based holistically on the seven principles listed in section 1.5. An investigation will be carried out from the perspective of institutions being regulated. If our investigation leads to a conclusion that Basel II regulation in Bahrain is inefficient, the conclusion should help the CBB begin communicating with those under the regulation to examine the shortcomings and re-design its regulatory policy and supervisory conduct. If, however, the study leads to a conclusion that Basel II regulation in Bahrain is efficient, this conclusion should provide evidence and affirmation to the CBB that adopting and imposing Basel II was the right decision.

Throughout this study, Basel II refers to the document published in June 2006 Basel Committee of Banking Supervision (BCBS) paper titled “International Convergence of Capital Measurement and Capital Standards” (BCBS, 2006).

This thesis uses the term “Basel-based regulation” to refer to regulations based on Basel II. The recommendations of these accords are indicated in various Modules of the Rulebooks, especially the Capital Adequacy, Prudential Deduction and Consolidation Modules (Cbb.gov.bh, 2015).

## **1.6 Current Status of Banking Regulations Research**

In our review of the existing professional and academic literature, we found that studies on banking regulations, particularly those on Basel II, have examined whether Basel II regulations can engender a sound banking system. Researchers in these studies adopted a positivist stance by developing financial models and studying the impact of the minimum capital requirements, as measured by CAR as in Basel II or I, on portfolio compositions, by the risk-taking behavior of banks management for loans and investments, etc. Barth et al.

(2004), for instance, assessed the validity of banking supervision and its relationship to banking stability. Demirguc-Kunt and Detragiache (2011) assessed the relationship between banking supervision and achieving a “sound banking system.” They identified adherence to the Core Principles for Effective Banking Supervision as an indicator of a sound bank. Klomp and Haan (2012) used the database from Barth et al. (2004) to assess the relationship between banking regulations and a bank’s risk level. They developed a model of 25 risk indicators and found that large banks were affected. Avary and Berger (1991) studied the association between risk-based regulation and bank performance by analyzing US bank-level data and using a model developed by the researchers. Researchers who studied capital-based regulation have primarily focused on a *quantitative* analysis of the relationship between capital-based regulation and a myriad of variables such as asset composition, moral hazard, and portfolio risk. However, capital-based regulations from an ethnographic point of view have not been studied. In order for any regulatory policy and supervisory program to achieve, the objectives set forth by the regulator several factors have to be in place, chief amongst them is the buy-in from the regulated entities. Buy-in does not necessarily mean that the regulated entities *must* agree with the regulatory policy or the regulations will not be implemented. Instead, the regulated entities must understand clearly why they are implementing these regulations, whether these regulations are applicable and appropriate to their business model and environment, etc. When the regulator and the regulated both agree on the applicability and the merit of the regulatory policy and the supervisory program disputes, miscommunications, misunderstanding of the requirements and mistrust could be avoided. Thus, we sought to understand the bankers directly through taking accounts of their assessment and opinion and listening to their concerns, frustration, and disagreements with regard to Basel II regulations in order to be in a position to give informed recommendations to the local regulator. Examples of issues that, in our opinion, have not been sufficiently studied include a) bankers’ own assessment of the regulation and supervision program in place, b) what bankers perceive as practical and beneficial supervision programs and regulation policies for their businesses, c) whether bankers confirm the presence of benefits of capital-based regulations as claimed by the regulator.

## **1.7 Main objectives of the study**

This study's aim is to identify whether Basel II regulations and supervision in Bahrain are efficient or inefficient. In particular, the study assesses whether Basel II regulations have achieved the CBB objectives of adopting Basel II, which include a) assisting banks in enhancing their risk management functions, b) assisting the stabilization of the banking system, and c) improving the financial and non-financial health of the banks (cbb.gov.bh, 2015).

If Basel II regulations and supervision do not achieve any of these objectives, what could be the reason for this? Could this be attributable to shortcomings on the part of the CBB or the banks? If not, could this be due to the applicability and practicality of Basel II to the nature of banking system in Bahrain in terms of bank operations and size? Regarding the Basel regulation, is communication between the CBB and banks optimal for both parties? The answers to these questions will be shared with the CBB to improve the relevance of Basel II for the Bahraini banking system.

### ***1.7.1 Contribution to the conceptual development***

The study aims to contribute to the body of knowledge regarding the implementation of Basel II in a developing country that has two different types of banks, conventional and Islamic banks<sup>6</sup>, which feature different business model and sizes. This study should also contribute to the body of knowledge via a case study on how regulators in a country adopting

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<sup>6</sup> Islamic banks are financial institutions that offer their banking services on Islamic Jurisprudence law that prohibits interest, derivatives, sale of debt or any transaction entails uncertainty of future outcome. Conventional banks, on the other hand refer to interest-based banks, i.e. the traditional definition of banking, as we know it in finance. In Bahrain, the regulator issues two separate sets of regulations for each type. In some chapters of these regulations, we can find significant differences while in other chapters there are holistically few differences. In the capital adequacy and credit management chapters of the rulebook, the differences are significant because the treatment of credit products of Islamic banks are structurally different from those at conventional banks. Other chapters, which delineate the requirements for internal control, corporate governance, business conduct, financial crime, etc., are almost identical. Islamic and conventional banks, although differ in business model, but they are both subject to the same governance and risk management requirements. Organizationally, both types of banks have almost the same departmental structure and reporting lines. Islamic banks, however, are required to have a BOARD of scholar, called Sharia Board, comprises of Sharia scholars who should give a report, similar to the External Audit Report, in which they give their statement that the products and transactions carried out are within the Sharia principles. In terms of human resources, both types attract qualified people; there are no noticeable gap between them in terms of staff compensation and remuneration. Furthermore, Islamic banks in Bahrain attract and hire non-Muslim expatriate qualified staff in senior and executive posts.

Basel II could outline its regulation, create a supervision program and communicate its vision.

### ***1.7.2 Contribution to practice***

This study, the first study on banking regulations on banks in Bahrain, will assess the effectiveness of imposing Basel II on Bahraini banks. It should give the CBB the perspectives of the banks in Bahrain about how Basel II regulations and supervision are being coped with and used. These perspectives may alter how the CBB plans its regulatory scheme and conducts its supervisory program. The findings of the study should result in the CBB re-visiting its scope of Basel II adoption. The study should also give the CBB a basis for future consideration to augment Basel II with other regulatory tools.

## **1.8 Research questions**

This thesis should answer the following key questions:

1. How has Basel II implementation, in the context of the CBB Rulebooks, helped banks with risk management function and practice?
2. How effective is the CBB in implementing Basel II in its banking system with the design of its regulation policy and supervisory program?
3. Is the current CBB implementation of Basel II the optimal regulation for the Bahraini banking system?
4. Has the CBB achieved its objectives of implementing Basel II, and did the banks approve of these objectives?

In particular, we seek in this study seek answers the following specific questions:

- I. Do banks prefer to be supervised by principles-based approach than by rules-based approach?
- II. Do banks see the current supervisory program effective in addressing all the risks they are exposed to

- III. Do banks see the existing supervisory program as effective in aligning the regulation to their risk profile and appetite
- IV. Do banks see the existing regulatory program as effective in advancing their risk management practices?
- V. Do banks see Basel II implementation and its capital adequacy requirements as reflective of their essential risks and performance?

## **1.9 Structure of the thesis**

This thesis is divided into Five Chapters. Chapter One discusses research issues that cover the motives, objectives, and scope of study followed by the research questions and limitations. Regulation and supervision are then defined, and the current status of research on banking regulation and supervision is highlighted.

Literature is reviewed in Chapter Two. Texts on Basel II regulation and supervision fall into two groups. The first group includes writings which are in favor of Basel II regulation and focuses on the benefits of its implementation. The second group includes texts that address the pitfalls and weaknesses of Basel II regulation. The chapter then concludes with identifying deficiencies in the literature and the contribution of this thesis to the literature.

Chapter Three is structured in two parts. The first part introduces the conceptual framework examined in the thesis and the philosophical underpinning of the research. In this part, the theories of regulation are outlined and assessed. Discussions of Basel II in the literature includes a heavy focus on the positive economics view of regulation. Researchers are either proponents or opponents of Basel II. They do not provide an alternative theory for how banks should be regulated if Basel II regulations cannot achieve their objectives. The second part of the Chapter addresses the research design and methodology and explains the reasons for selecting ethnography as the research method. This is followed by a description of the data collection tools and analysis.

Chapter Four discusses and analyses the data. The findings and the discussions are grouped into four main categories: the role and the impact of Basel II, the appropriateness of Basel II requirements to the banks in Bahrain, the competence of the regulator to administer Basel II

regulations, and the banks' management familiarity and awareness of Basel II requirements. I found that bankers do not find that Basel II implementation at their banks help them advance risk management function and practices, enhance their international competitiveness, help them survive a financial crisis or reduce systemic risk in the country. I also found that bankers find Basel II methods, as imposed by the local regulator, are not appropriate to their business model or the environment.

The thesis concludes with Chapter Five which provides a summary of the conclusions drawn from the data presented and discussed in Chapter Four. The Chapter then provides the practical recommendations to the banking regulator in Bahrain in light of the findings and conclusions.

## Chapter 2. Literature Review

This chapter examines the professional and academic literature on Basel II regulation and supervision. I organize the literature into five categories according to the five fundamental questions discussed in Chapter One. These questions are: first, what are regulations and supervisions? Second, why do we have government regulations, i.e., why do governments intervene in banking regulations? Third, how do governments intervene? Fourth, what are the objectives that government hopes to obtain by intervening? Fifth, did governments succeed in achieving their objectives?

### 2.1 What Are Regulations and Supervisions?

Regulation is generally defined as “sustained and focused control exercised by a public agency over activities that are valued by a community.” (Selznick, 1985) It involves “promulgation of a binding set of rules to be applied to a body devoted to this purpose.” (Baldwin et al., 2012). London (2003) provides a more succinct definition of regulation: “government intervention that seeks to change the behavior of individuals or groups. It can both give people rights and restrict their behavior.” The literature offers a narrower definition of regulations that relates only to the economy. Economic regulation refers to “...Government intervention in the market [to]... legislative and administrative controls over rates, entry, and other facets of economic activities.”(Posner, 1974) In light of Posner’s definition of economic regulation, banks regulations might be defined as an economic regulation because banking is a major economic activity. I, however, seek a specific definition of bank regulations that explains the existing Basel II as an international regulatory tool and provides a framework for any attempt by banks regulator to regulate beyond the realm of Basel II. I could not find in the literature a specific definition of bank regulations. There is a large volume of studies on the relationships of banking regulations to a plethora of banking and economic variables, but a succinct and comprehensive definition of banking regulation was not elaborated in these papers. For instance, Seater (2000) examined optimal bank regulations and monetary policy without defining what he meant by bank regulation; Bhattacharya et al. (1998) studied the economics of banking regulation but did not offer a definition of banking regulation; Freixas and Santomero (2002), in elaborating their “Overall Perspective on Banking Regulations,” cursorily referred to banking regulation as the

“rational response of the government to ...market failure,” Barth et al. (2004), in their study “Bank Regulations and Supervision: What Works Best,” surveyed the practices in 117 countries to “assess the relationship between specific regulatory and supervisory practices and banking sector development and fragility.” Again, they do not illuminate what definition they have adopted for the purpose of their study. Even the Basel Committee’s papers did not give due attention to the definition.

For the purpose of this study and in light of available highlights in the literature of banking regulations, we define banking regulations as:

*The set of policies and supervisory activities designed by government agencies in proportion to the objectives of the government and the banks, which are subject to the economic, political, social, and institutional constraints surrounding the sector, and which aim to manage risks at an individual and aggregate level.*

In summary, the literature offered a large number of studies on banking regulations, but these studies failed to offer a succinct definition of banking regulation that could explain current national practices. I offer a definition and discuss its concepts and components in this Chapter and Chapter 3.

## **2.2 Why Do Governments Intervene in Banking Regulations?**

In this section, we discuss the literature on the economic justification for governments to intervene in the banking sector. There are two competing camps of arguments explaining the government’s intervention in the banking industry: a) public interest justification for regulation, and b) private interest justification of regulation.

### ***2.2.1 Public Interest Justification of Regulation***

Regulations triggered by the interest and welfare of civil society aim to protect the public from market inefficiencies and failures<sup>7</sup>. A market fails when resources, good, and services are not efficiently allocated amongst market players. Efficiency in a market is associated with

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<sup>7</sup> There is no consensus on a unified definition of market failure. The dominant definition of market failure is associated with the efficiency of allocating resources and the size of risks (Santos, 2001).

the situation where a player's pursuit of an outcome does not lead to the worsening of the conditions or situations of another player in the market. Generally, an efficient market in economics implies that resources are allocated in a manner that increases the production of goods and services, minimizes risks, and reduces information asymmetry. (Barth et al., 2006)

Governments intervene when they apply public interest justifications to banking, in order to reduce inefficiencies that might impede a banking system. The public interest view of banking regulation assumes that: a) there is a risk of market failure in the banking industry that benefits from government intervention to quell the potential failure, and b) the government is competent and able to ameliorate this failure to the benefit of society. I can summarize the justifications given by governments to regulate banks as follows:

- Protect depositors in society from losing their deposits due to bank's excessive risk-taking. (Barth et al., 2006; Santos, 2001). Depositors who entrust their funds with banks should theoretically be able to monitor these banks periodically to ensure that their funds are utilized diligently. Direct monitoring requires access to information about where their deposits have been utilized and for what purpose, as well as the competency, to conduct this monitoring. Some depositors will not be motivated to conduct such monitoring because the process of gathering the relevant information and having the competence to scrutinize this information might cost them more than the benefits yielded from the monitoring process. Thus, there are depositors who are not financially sophisticated enough to look after their interest at banks, and there are depositors who are not incentivized to do so because of the costs. Both types of depositors require the benevolent "helping hand" (Shliefer and Vishny, 1998) of a government regulator to carry out monitoring on their behalf. Regulating banks to protect depositors' money and interest, although it is a noble justification, has some flaws. First, a regulator, by acting as the benevolent helping hand to the depositors by looking after their interests and protecting them from the presumed greed and recklessness of the bankers, increases depositor's reliance on the regulator; this reliance decreases the incentive for depositors to monitor the performance of banks they are transacting with themselves, which would eventually make them incognizant of the underlying risks of dealing with these banks (Santos, 2001). If depositors are

unable to assess the underlying risks, then they would not be able to accurately ask for the rate of interest on their deposits that is commensurate with the risks assumed. In this case, banks will optimally exploit this opportunity to embark upon risky projects or grow the loans in their portfolios beyond their limits because they are motivated by higher profits margins. So, the regulation may create another problem for the depositors because of the banks, in the above case, become riskier. Second, there is some ambiguity about the term “protection of depositors’ interest.” If regulations are meant to create safe banks and having safe banks leads to the protection of depositors’ money and interest, then this claim fails to pass all of the tests in the history of banking regulations. Regulations were in place when the financial crises of 2007 erupted, to cite only one example, and not only were depositors’ money and interest not protected, thousands of people were sacked from their jobs.

- Reduce information asymmetry (Santos, 2001). Information asymmetry is defined as the availability of relevant information to some but not to all involved parties in a transaction. Banks accept deposits, which are typically short term, and transform these deposits into loans and investments, which span both short and long term time horizons. This contractual gap between the assets and liabilities exposes banks to liquidity risks, should there be an excessive withdrawal of these deposits with little or no notice. To honor depositors’ requests for their deposits, banks would either liquidate some of their assets or seek liquidity funding from other financial institutions. Due to information asymmetry on the value of the bank’s assets, other financial institutions might refrain from extending funds to the liquidity-troubled bank, which could lead to “run on the bank”<sup>8</sup> (Jacklin and Bhattacharya, 1988). A run on financial institutions could cause banks to prematurely liquidate their assets in order to honor the withdrawal requests. Panic by depositors and debtors with the disturbed bank might spread to depositors of other banks, causing them withdraw their deposits and foreclose their investments. The occurrence of such cases in a banking system leads to systemic risk and credit or liquidity crisis. The claim that banking regulations reduce information asymmetry is theoretical and not sufficiently

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<sup>8</sup> Excessive withdrawals of deposits with no or short notice

studied from a practical perspective. Santos (1999, 2001) highlighted the relationship between banking regulations and information asymmetry without specifically studying which part of the banking regulations reduces the asymmetry: is it the capital-based regulations, is it the corporate governance, is it the restrictions on executives' remuneration and compensation, etc. I did not find a dedicated study within the literature that asserted or denied the impact of banking regulations, specifically Basel II, on information asymmetry. This does not mean, however, that we do not think there is a relationship between the two. In Basel II, for instance, there is a voluminous set of requirements under Pillar 3.<sup>9</sup> Each bank is required to disclose full information about its loans portfolio composition, Basel II calculations, and its corporate governance framework (including the number of the board meeting, the presence of policies and procedures, etc.). Access to this information alleviates the risk of information asymmetry; shareholders have access to sufficient information to form their financing or investment decisions with the bank.

- Reduce principal-agent problems (Santos, 2001). An agency relationship exists when an individual or an organization (referred to as the principal) hire(s) and/or delegates another individual or organization (referred to as an agent) to act on behalf of the principal. Agents are entrusted to act and take decisions to meet the objectives set forth by the principals in a manner that maximizes the value to the principals. Agents undertake these responsibilities in exchange for financial and non-financial compensation or benefits. Specifically, shareholders' investments are used to create an organization, and a board of directors is nominated and elected by these shareholders to manage the organization, which in turn delegates the *management* of the organization to a team of individuals. The management is thus the agent that should work to maximize the value of the shareholders' investments. There are several reasons behind the separation between ownership and management:

(a) Expertise: shareholders may have the financial investments necessary to establish an organization, but they might lack the know-how to run this organization.

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<sup>9</sup> We will discuss Pillar 3 when we discuss Basel II structure in section 2.3.1.1

(b) The opportunity cost incurred to run the newly established organization by forgoing the management of other existing investments. Agency problems arise when the management acts in a way that is detrimental to the interest of the shareholders (i.e., management acts in a way that maximizes its own value and interest at the expense of the shareholders).

The problem is when the interests of the management deviate from the interests of the shareholders. Management is motivated to increase returns (e.g., to increase their bonus, prestige, and remuneration), which is typically accompanied by assuming excessive risks. Excessive risks might not align with shareholders' risk appetite and capacity, or they might not even be sufficiently understood by the shareholders such that they can approve these actions. Management might also be inclined to increase the size of the organization in an unsustainable manner and contrary to the objective of shareholders, in order to increase their prestige in the market. Public interest view holds that regulations restrain the deviations of management's interests with shareholders' interests, which will ultimately reduce both agency problems and information asymmetry (Santos, 1999).

- Reduce externalities (Baldwin et al., 2012). Externalities are costs that a counterparty incurs in a transaction but that the counterparty does not choose to incur. There is both a nominal cost and a real cost of a social or economic transaction. Nominal costs are what one counterparty explicitly pays to the other counterparty (i.e., the price tag). Real costs are the nominal costs plus what the counterparty does not pay in cash or in kind for the goods or services but subsequently pays them in the form of jeopardy or detriment to the financial, health, or economic conditions. For instance, when consumers pay for the price tag of the car tyres, this excludes the costs of polluting the rivers and seas with the tyres manufacturing waste. Manufacturers of tyres externalize" the cost of their action by not paying for the environmental damages or public health problems. Regulations of tyres manufacturing aim to "internalize" the total costs of pollution by imposing restrictions on the manufacturer that limit the waste discharge or by imposing fees for the pollution caused. In the realm of banking, consumers seeking loans from banks, for instance, pay the interest rate and for administrative expenses but do not choose to pay for the negative repercussions that might result from lack of bank's due diligence, relaxed credit

procedures for sub-prime customers, etc. A negative externality associated with a bank's behavior is a bank's failure, particularly if that failure spreads to other financial institutions, thereby causing disruptions to the whole financial systems akin to the damages of the financial crisis of 2007. Thus, according to Baldwin et al., banking regulations internalize risks; in banking, this takes place in the CAR. By setting limits on the minimum CAR and continuously aiming to keep the ratio above the minimum threshold, a regulator ensures that bank shareholders are also contributing their own money in every financial transaction. Advocates of this justification for regulation consider this shareholder *contribution* as the internalization of the bank's risks. While it has theoretical merit, this rationale of internalization has a major flaw. If we take Basel II as a tool of banking regulation that ultimately aims to internalize risk (in keeping with the arguments of Baldwin et al.), we find that Basel II did not reduce the externalities witnessed in the 2007 crisis. In a banking context, externalities are produced by one major factor: systemic risk. Systemic risk, in turn, is aroused by market failures. Although there is no unified definition of market failure in the literature, we deduced from the available studies that a market failure occurs when there is information asymmetry, inefficient allocation of resources amongst market players due to distortions of pricing mechanisms,<sup>10</sup> and high levels of interconnectedness amongst bad performers in the market. For banking regulations to reduce externalities, their design must typically include measures to quantify these determinants of market failures and also contain tools to mitigate them. This means that a regulator should have a measure that gauges the interconnectedness amongst the banks in place, predetermine the benchmark, have identified in advance which triggers actions should be taken by the regulator if this benchmark is reached, and the supervisory actions plan to be utilized in times of market failure. There would be no account in the literature if such measures were designed in banking regulations prior to Basel 1. Furthermore, Basel, I and II did not include such measures. Basel III extended the scope of the accords by including a

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<sup>10</sup> Distortion of pricing mechanism in the market may take place due to either a monopoly or the fire sale of financial and non-financial assets. Fire sale refers to the disposition of a firm's assets at deep discounted price. This might take place in times of crisis when banks are faced with severe liquidity risk; in order to honor their due obligations, and in absence of any other funding sources, they resort to the sale of their assets. The sale of these assets exacerbates the adversity of the market condition because in times of crisis the market is already in disequilibrium stage, i.e., the supply is not equivalent to the demand.

measure to partially mitigate the interconnectedness of banks through the systemically important bank buffer and the liquidity new ratios. The point that we are trying to make in here is that there is no account in the academic or professional arena that substantiates the claim that banking regulations can effectively reduce externalities.

In order for the public interest theory to work, there are three main assumptions: the market is efficient, the government will always intervene to the best interest of the public, and the public participate in the political space of the country. (Hertog, 1999)

When I apply the above benefits, assumptions, and arguments of the merit of the public interest theory to the case of Bahraini banking system, I found that the banking system in the past 10 years did not satisfy these assumptions. Due to the political structure in Bahrain, the public does not have any tools in which they can administer the banking regulatory process or hold the regulator accountable for actions if those actions turned out to be a detriment to the public interest. The sole regulator in the country does not share its strategic objectives neither does it disclosure the pros and cons of the actions taken. For instance, prior to the banking crisis of 2007, the CBB licensed many financial institutions (Islamic and non-Islamic, retail and wholesale) to work in Bahrain. The announced objective was, of course, for the public benefit by increasing competitions, reduced cost of credits, creating more jobs, etc. After the financial crisis, some of those institutions faced a challenge withstanding the crisis. The regulator “blessed” and encouraged those financial institutions to merge and the announced objective was, again, for the benefit of the public as those merged institutions would be well-capitalized banks offering longer and wider list of products. I argue here that if the public interest was the optimum objective right from the beginning, why no proper diligence and scrutiny of the business projections were carried out by the regulator in those institutions at the licensing stage. If proper due diligence was carried out, it would have become clear that those banks were not well capitalized to sustain their growth and desired business model. There have never existed a tool or a body in Bahrain that enables the public to assess whether any economic regulations or policy is either in favor or detrimental to their interest. That is not only peculiar to Bahrain; most of the developing economies in which the public has no or minimum participation in the political process face the same issue.

Therefore, one cannot conclude banking regulations, in general, and Basel II in specific are for the best interest of the public. To argue that Basel II is beneficial to the banking system,

and in turn to the public interest, there should be key performance indicators against which the public can make the assessment of the regulations and the most important of all, mechanism and systems that enable them to make such as assessment. Currently, neither of these requirements are available in the Gulf States, including Bahrain.

### ***2.2.2 Private Interest Theory Justifications***

The private interest theory of regulation is the extreme opposite of the public interest justifications. According to this view, regulations aim to enhance the welfare of private individuals or groups in disregard of the public welfare. This means that regulations are designed and implemented in order to enhance the welfare of the regulator, the regulated entities, or any other related parties (Kroszner and Strahan, 2001). According to this view, regulation is akin to a product that is governed by the laws of supply and demand. Governments intervene by supplying regulations to earn benefits in return (Barth et al., 2006). These benefits vary based on the political, economic, and social environment in a country. A government action to gain these benefits is not confined to the design of a regulatory policy that is biased towards regulatees; the regulatory policy might be “balanced,” but a government could use its power to adjust the policy’s implementation so as to favor its interests. For example, a country has a regulatory limit that the single obligor limit is 15%<sup>11</sup>. If individuals or corporations with close ties to the government need bank financing that exceeds 15% of the bank’s equity (i.e., a breach of this regulatory limit), the government could choose to make an exception to this limit for this situation. Another example of government interest is banks financing political electoral campaigns in exchange for the waiving of certain rules and regulations that benefit the campaign funders. This theory is also referred to in the literature as “capture theory.” This theory hypothesizes that if regulations were designed to serve a private group then eventually the regulator would be controlled by the regulated entities, and the regulatees would be the ones pulling the string; hence, the regulator is “captured” by the desire of the regulatees. Our take on this theory is that it does not spell out what distinguishes a relationship that is in pursuit of private interest versus one that serves the interests of everyone. For instance, let us take the example of Basel

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<sup>11</sup> Single obligor limit is a limit placed on banks to cap the credit facilities extended to a single customer at an amount representing 15% of the bank’s equity. There is no internal consensus on this limit; some countries have it at 15% or 25% and in some extreme cases, it is set at 50% (e.g., Sudan).

II implementation. A regulator might choose not to implement Basel II because of pressures exerted by certain interest groups, chiefly the bankers, that they might be negatively impacted if Basel II was implemented, even though the implementation could help the public as discussed in the above section. Nevertheless, we might ask why this scenario must be viewed as a battle between the regulator and the banks where the banks eventually win through halting implementation of Basel II: why not instead look at it as a bargaining process, which is perfectly normal and typically practiced amongst regulators and banks in many countries. Another unanswered question is why the theory assumes that if interest group(s) benefit from regulation, it must necessarily be to the detriment of the public or interest groups (Posner, 1974).

### ***2.2.3 Conclusion***

I found that the literature offers public interest theory as a justification for regulation. I tried to apply this theory to banking regulations and attempted to uncover whether the justifications given by the theory could be linked to the practice of Basel II regulations. I found that studies in the literature do not support the claim maintained by regulators that banking regulations reduce information asymmetry, principal-agent problems, or externalities. I found that the literature does not provide evidence of the applicability of this theory to banking regulation and does not answer the above questions, in general.

### **2.3 How Do Governments Intervene?**

Governments intervene via a set of regulations and supervisions programs carried out by a government agency (i.e., a banking regulator). The scope of the set of regulations is typically extensive; it covers the principles of activities that banks are permitted to conduct, corporate governance requirements, capital regulation, etc. For the purpose of this study and as outlined in Chapter One, I limit my discussions to capital regulations. I discuss capital regulations in the section below.

### ***2.3.1 Capital Regulations***

Capital regulations mean using the amount of capital reported in a bank's financial statements in a mathematical ratio in order to control the bank's activities. Prior to Basel 1 (issued in 1989), there was no uniform ratio or measure for capital regulations across countries. Basel 1 came up with the Capital Adequacy Ratio (CAR) which is calculated by dividing the bank's capital by its risk-weighted assets. CAR is set at a threshold of 8%. Basel I and II maintained this threshold while Basel III<sup>12</sup> proposes to increase it up to 10.5% by the end of 2018. Basel 1's definition of risk-weighted assets (i.e., in the denominator of the CAR) was confined to credit risk. Basel II modified the structure of the CAR and added new requirements.

There are a lot of studies in the literature that discuss the influence of bank capital on a myriad of variables such as the lending process, portfolio risk, risk taking, etc. For the objective of this thesis, we seek to review the literature on capital regulation that is relevant to why bank's regulation is capital-based, and why the BCBS has not augmented the minimum capital requirement with another requirement that is based on a bank's assets or liabilities.

Before we explore the literature on banking regulations, we thought it might be useful to provide some context for a bank's capital. The bank's capital is not deposited into an "untouched" bank cash account awaiting use as a "last cushion" for an unexpected loss, to meet excessive withdrawals of deposits, or to withstand financial crises. The capital is primarily spent on acquiring the assets on the bank's balance sheet. In some countries, the capital in the banking industry is very nominal; the major source of funding for banks in these countries (e.g., Sudan and Algeria) is deposited. This is because the deposits are considered extremely cheap or free. Depositors in these countries do not ask for a high-interest rate on their money, and this is due to the political, economic, and social environments of these countries. Yet, Basel II regulations focus only on the capital; Basel II

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<sup>12</sup> Basel III refers to the changes issued by the BCBS in the aftermath of the 2007 crisis. It was issued in 2009 to provide: a) newly issued ratios to manage liquidity risk, and b) enhance the existing capital regulations by introducing three new buffers, namely: countercyclical buffer, capital conservation buffer, and systemically important bank buffer. These buffers are discussed in some detail in Chapter 4.

regulations do not have any requirements for other sources of funding (e.g., deposits), thereby ignoring the main sources of risk (i.e., the bank's assets). Ignoring assets here refers to the fact that BCBS has not stipulated any requirements on the size, type, or quality of assets commensurate with each bank's size of capital, business model, risk appetite<sup>13</sup>, risk tolerance<sup>14</sup>, etc. In Basel II regulations, capital is used as a proxy against which the risk appetite and profile of a bank's board of directors and management are measured. The more a bank opts for risky lending and investments, the higher the charge against the capital, and subsequently the lower the CAR. Decreasing levels of CAR may lead to restrictions on the distribution of cash dividends to shareholders because that would push the CAR even further downward (Berger et al., 1995; Keeley and Furlong, 1990). This pressure on the CAR would motivate the bank's executive management and its board members to be vigilant about their financing and investments decisions and to encourage them to align their decisions with the level of risk assumed and the amount of capital available, which is the objective of capital regulation.

There are two distinct strands of literature on the capital-based approach: one strand argues that capital-based regulation is inefficient and relying on capital as the sole proxy is inadequate, and the other strand argues that capital-based regulation is effective in aligning the interests of the regulator, the bank's shareholders, and the depositors. I discuss the literature for each of these strands below.

First, we start with literature that discusses the efficiency of capital-based regulations. Koehn and Santomero (1980) examined the effect of minimum capital requirements on a commercial bank by investigating the behavior of the assets portfolio in relation to the capital requirements. The major assumption of this investigation was that the probability of a bank's failure primarily resided with the portfolio risk. Portfolio risk was implicitly defined as an inefficient portfolio allocation (or diversification). The hypothesis was that capital regulation should reduce the bank's portfolio risk. According to the financial model designed by the authors, they found that a commercial bank portfolio's risk does not decrease when the minimum capital requirements are factored into the model. The conclusion was that a bank

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<sup>13</sup> The size of the risks that a bank is willing (and has the capacity) to assume in pursuit of its objectives.

<sup>14</sup> The size of variation of the appetite a bank is willing to accept.

regulator should not rely solely on capital regulation in the form of minimum thresholds, but should combine its minimum capital thresholds with restrictions on assets and liabilities composition in light of the bank's risk appetite. This means that in addition to the capital threshold, a regulator should also observe the portfolio composition and the diversification process<sup>15</sup> of banks. Koehn and Santomero's (1980) conclusion was that capital regulation could not align a bank's risk appetite with the safety of the bank. An argument that could be made against Koehn and Santomero's model is that it focused too heavily on credit risk; it did not take into consideration the market, operational risk, or liquidity risk. Thus, their conclusion might be altered if they took into consideration the risks that Basel II and III subsequently included in their scope. Kim and Santomero (1988) addressed this drawback and studied the impact of capital regulation in relation to the liquidity and solvency of a commercial bank by utilizing the same mean-variance model used by Koehn and Santomero (1980). The hypothesis studied in their research study is that capital regulation reduces the bank's risk of insolvency<sup>16</sup>. Likewise, Kim and Santomero concluded that capital regulation could not reduce the risk of liquidity and solvency at a bank.

Moving to a wider scope of examination than capital regulation's effect on solvency and portfolio risk, Gehrig (1995) investigated the impact of capital regulation on the risk-taking behavior of a commercial bank. Gehrig raised the question, "Is it true that capital requirement reduces failure risk and hence increases safety and soundness of banks?" In this study, risk taking was defined as: a) direct investments in risky assets, b) negligence around conducting proper monitoring, and c) improper hedging for diversifiable risks. The conclusion Gehrig drew was that capital requirements do not reduce risk-taking by banks. One analysis of this study is that Gehrig did not show how he reached this conclusion. In particular, he did not: a) indicate if he applied the above definition of risk-taking on bank's cross-sectional data and compared the influence of capital regulation on the variables in the said definition, b) clearly distinguish between the influences of deposit insurance, competition, management incentives.

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<sup>15</sup> The factors a bank's management take into consideration in allocating its portfolios such as risk appetite, desired level of return, etc.

<sup>16</sup> Insolvency: a bank's going concern value is less than the expected value of its liabilities.

In a similar vein to Gehrig, Blum (1999) designed a dynamic model to gauge the influence of capital regulation on a bank's behavior. Blum criticized Koehn and Santomero (1980) for assuming a "static effect" in their examination of the impact of capital regulation on a single variable, *ceteris paribus*. Blum attempted to address the static effect by assuming that capital regulations keep changing, i.e., it is firstly imposed then tightened from one period to another. The outcome of this model, however, was not different from the ones criticized by Blum. He concluded that capital regulation could not reduce the insolvency risk of a bank. Blum's approach, however, might not be realistic. Capital regulations, once they become binding, do not change from one period to another. For instance, if a regulator imposes a minimum capital requirement of 8%, this threshold would not be changed from one period to another. The impact of the capital regulation, if a dynamic approach needs to be examined, should be studied by comparing changes in the size of a bank's loan portfolio from one period to another in relation to the capital requirement, or changes in the level of collateralization or provisions in the loans portfolio. These are some of the variables that typically change from one period to another, not the tightness of capital regulation.

Diamond and Rajan (2000) tackled capital regulation the angle of liquidity risk in the banking system and argued that capital-based regulations could reduce the probability of bank bankruptcy but would bring about liquidity shortages in the financial system. Diamond and Rajan (2000) reached this conclusion by constructing a model that studied the influence of capital requirement on a bank's capital structure, liquidity creation, the cost of funding, and the ability to force bank's borrowers to repay. The outcome of their study was that the CAR would increase the returns that the equity holders of the bank require and expect, which would eventually increase the cost of capital. This would ultimately affect the pricing of the loans, and the credit facilities might be negatively impacted as a result of the higher funding costs. Higher funding costs affect a bank's ability to make loans and increase its liquidity risk because if funding costs are high in normal times, then it would escalate in times of adversity; for adverse business times, banks need to develop a contingency funding plan. The plan enlists all of the possible sources of funds that are akin to the reservoir the bank can lean on to survive adversity. The higher the costs of funding, the lower the number of alternatives for funding. Fund providers (e.g., banks or other financial institutions) become very selective in times of crisis to funding institutions troubled with liquidity shortage.

Related to the cost of funding discussed above, Bhattacharya et al. (1998) examined the impact of capital-based requirements on a bank's cost of funding and efficiency. CAR would increase the bank's funding costs. The bank's efficiency could be distorted because competition might prevent them from adjusting their pricing strategy in times of increasing funding costs, especially in times of crisis and liquidity shortages. At the time that banks are unable to attract more deposits or secure lines from other financial institutions, they might be forced by their regulators to either inject capital or issue equities in order to restore the CAR and reduce the liquidity risk.

Brunnermeier et al. (2009) stated that capital-based regulation, especially after the proposed incremental increase to the capital thresholds specified in Basel III, would lower the capital returns in banking. Tightened requirements on capital would drive a bank's management team to either shrink its investment and financing activities, opt for risky investments because of the higher returns associated with increased risk, or shift from banking to unregulated activities (i.e., extending credit facilities under a license of investment or financing companies instead of a banking license).

#### 2.3.1.1 The Basel Accords

The Basel Accords have been called capital-based regulations because all of their versions (i.e., Basel I, Basel II, and Basel III<sup>17</sup>) they have essentially revolved around one important threshold. This threshold is the percentage of a bank's capital to the level of underlying risks in the bank's assets, which is referred to as the Capital Adequacy Ratio (CAR). After reviewing the literature on capital-based regulations, we found it useful to review the literature studies of the detailed requirements, especially the quantitative requirements, of Basel II and III (Basel I is obsolete in most countries). This review will provide perspective and context to the questions raised in the questionnaire and survey as well as the responses to them that are discussed in Chapter 4.

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<sup>17</sup> In this study I chose to examine the implementation of only Basel II and not include Basel III because Basel III's full implementation will be by end of 2018. Hence, the effectiveness of its implementation cannot be examined before that.

The Basel I Accord was designed as a response to the Latin American debt crisis of the early 1980s. The BCBS was motivated by the need for convergence amongst the Group of Ten (G10)<sup>18</sup> countries of their capital measurement standards because it was believed that such a crisis occurred due to the lack of standardized capital regulation amongst countries (BCBS, 2014). The initial focus was only on credit risk<sup>19</sup>. Basel I methodically introduced the concept of capital-based regulation, in the sense of the capacity of banks to absorb unexpected losses (i.e., their capital adequacy) that might occur during the course of their business, as measured by their capital-based ratio. This ratio, termed CAR, is calculated by dividing the bank's capital by its Risk-Weighted Asset (RWA). The latter is the outstanding amount of assets that are exposed to the credit risk, and that could be lost if the triggers of this risk take place.

BCBS amended Basel I from November 1991 until June 2004, in light of the industry's comments and central banks' feedback. In June 2004, the BCBS announced its "*Revised Capital Framework*" that includes, in addition to credit risk, market and operational risks and provides options for approaches to quantify each of these risks. This framework was confined to the capital requirements for the banking book<sup>20</sup>. In 2005, the BCBS addressed the capital requirements of the trading book<sup>21</sup> and added them to the 2004 framework, in its document titled "International Convergence of Capital Measurement and Capital Standards" which came to be known as Basel II.

### 2.3.1.2 Structure of Basel II

This section will provide an overview of the structures of Basel II, as stipulated by the BCBS. This overview includes the terminologies, concepts, and acronyms that are used within the literature and throughout the chapters of this thesis. It also includes my stand on the approaches, which underlies the motivations of the research and should help illuminate how the interviews and the questionnaire questions were designed and conducted.

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<sup>18</sup> Group of Ten (G10) countries: Belgium, Canada, France, Germany, Italy, Japan, Netherland, Sweden, Switzerland, United Kingdom, and the United States.

<sup>19</sup>"Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms." (BCBS, 2000)

<sup>20</sup> Banking book: an accounting term that refers to the record of assets held to maturities, loans, long-term investments that are not held for trading purposes, and fixed assets.

<sup>21</sup> Trading book: an accounting term that refers to the record of assets held for trading purposes.

Figure 2.1 illustrates the requirements of Basel II. It is based on three pillars. In Pillar 1, the BCBS sets out all of its quantitative requirements for the calculation of the CAR. These requirements cover only three types of risks: credit, market, and operational. In Pillar 1, a bank should quantify its regulatory capital. The regulatory capital is the amount of a bank's equity that is reported on the bank's balance sheet and adjusted for regulatory requirements such as deduction of goodwill. Also, in Pillar I the bank should quantify its credit risk weighted assets (CRWA), Market Risk Weighted Assets (MRWA), and Operational Risk Weighted Assets (ORWA). CRWA is the underlying risks in the credit exposures<sup>22</sup> in the bank's loans portfolios. To arrive at the amount of the CRWA, one applies a percentage of risk, called a risk weight<sup>23</sup>, to its exposure, as reported on its balance sheet. For instance, a loan receivable from client A of \$100 is reported a bank's balance sheet. If we assume that the risk weight for this exposure is 50%, then the CRWA for this exposure is  $\$100 \times 50\% = \$50$ . This exposure with a 50% risk weight means the bank could lose up to 50% of its money by having such exposure in its credit portfolio and could only recover the other 50%. I will discuss below how are these risk weights set. MRWA reflects how much could be lost from an investment transaction because of fluctuations in interest rates, foreign exchange rates, share prices, or commodity prices. Finally, ORWA represents the amount that could be lost due to a breakdown of a bank's systems, internal controls, staff conduct (e.g., a bank's staff committing fraud or misappropriating the bank's assets), or externalities (i.e., things that are beyond the control of the bank such as a hurricane that affects the bank's building, electricity outages that disrupt the banking system, etc.).

For credit risk, the committee outlines the following three methods to determine the risk weights:

- Standardized Approach (SA): predetermined risk weights are given by the Basel Committee to arrive at the CRWA.
- Foundation Internal Rating Approach (FIRB): the risk weight is determined internally by banks; banks should calculate the default probability of each customer in their portfolios and the exposures on their books. The banking regulators provide banks

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<sup>22</sup> Exposures refer to any outstanding amount owed by a client to a bank that is not covered by provision or collateral. Collateral is the financial and non-financial assets pledged by the client to the bank that the bank can lean on in case the client defaulted on the repayment of his/her obligations.

<sup>23</sup> Risk weight is a percentage of an estimation of how much could be lost in a banking transaction.

with the loss given default (LGD). The LGD is the amount of loss expected to be incurred as a result of a loan's default.

- Advanced Internal Rating approach (AIRB): similar to the FIRB, but in this approach, banks develop their own default probabilities, exposures at default, and LGD.

In this study, we mainly focus on the literature that addresses the SA because this is the method adopted by the CBB in Bahrain.

The CAR is calculated according to the following formula:

$$CAR = \frac{\text{Regulatory Capital}}{CRWA + MRWA + ORWA} \geq 8\%$$

The mathematical interpretation of the CAR ratio is that for each \$12.5 of total risks in assets (i.e., CRWA, MRWA, and ORWA), a bank is required to have \$1 in capital to support these risks. Hence, \$1 is also referred to in the literature as “capital charge.” I will discuss and examine the literature on the components of the denominator of the CAR in the follow section as follows:

- Credit Risk Weighted Assets (CRWA)
- Operational Risk Weighted Assets (ORWA)
- Market Risk Weighted Assets (MRWA)

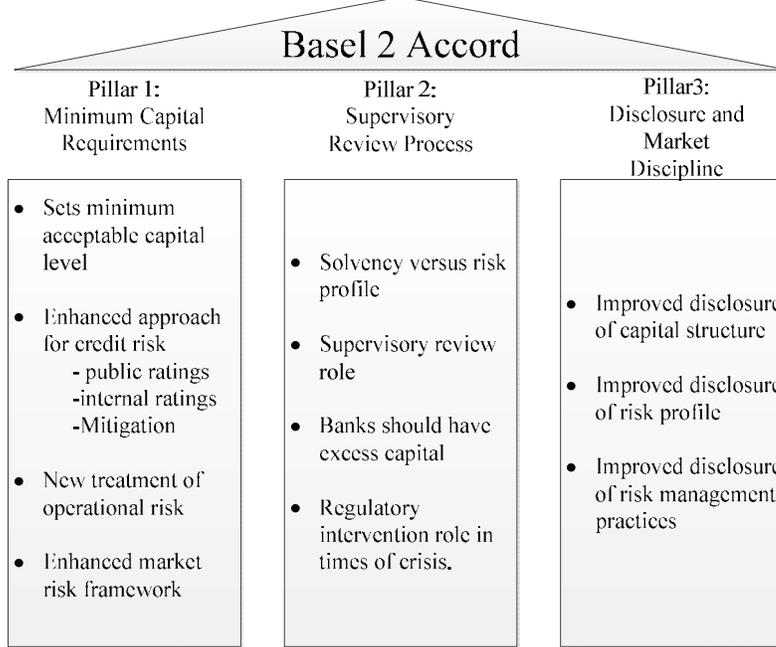
#### *I. Credit-Risk Weighted Assets (CRWA)*

The CRWA is a measure that reflects the credit risk level of a bank's “banking book.” Under Basel II, banks can choose from three methods to calculate their credit-risk-weighted assets<sup>24</sup>, as follows:

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<sup>24</sup> Banking book: a virtual record of long-term bank assets; it can also be defined as a record that includes all of a bank's assets other than those held for short-term trading and capital appreciation purposes. It includes loans portfolios, long terms investments, fixed assets, investments in associates, etc.

Figure.2.1 Basel 2 Structure



Under the SA, banks should classify their assets into the following counterparty classifications (BCBS, 2004):

- Claim on sovereigns
- Claims on banks
- Claims on corporates
- Claims on retail
- Claims on multinational banks
- Claims on investment companies
- Past due assets
- Other assets

These are the pre-determined categories given by Basel II. Every entry on the assets' side of the bank's balance sheet must be mapped to one of these categories.

After classifying the exposures in the banking book into one of the above categories, risk weights are applied to each exposure. Risk weights are predetermined and given by Basel II. These risk weights were based on the external ratings of the client. For instance, Basel II states that if a bank has an exposure with a corporation that is rated by a rating agency (e.g., by Standard & Poor's) at AAA, then this exposure should be multiplied by a risk weight of

only 20%. However, if the corporation was not rated, then the exposure should be multiplied by 100%. In essence, the SA is purely dependent on the rating agencies' assessment of a bank's credit exposures.

Basel II, however, has been heavily critiqued for relying on ratings by rating agencies to map exposures to predetermined risk weights. The predetermined fixed risk weights have been critiqued because they lack proper risk alignment with the bank's capital. Altman and Saunders (2001) argued that reliance on rating agencies produces "cyclical lagging rather than leading capital requirements." During a crisis, a bank's rated clients that are affected by the crisis might be downgraded; if a client is downgraded then the risk weight that should be applied to exposure with them would be higher. This results in a higher CRWA, and as we saw in the above CAR ratio, the higher the CRWA, *ceteris paribus*, the lower the CAR. The decrease in CAR might exacerbate the financial performance of the bank as the outstanding amount of the credit facility might become delinquent or non-performing<sup>25</sup> due to downgraded counterparties, and possible liquidity risk ensues due to increased borrowing rates as a result of a lower CAR<sup>26</sup>. The opposite scenario would take place during the "boom" stage of the economy. This "cyclical lagging" of Basel II due to its reliance on the rating agencies has been considered one attribute of the 2007 financial crisis (Moosa, 2010).

Another problem of the SA's sole reliance on rating agencies to determine the CRWA is the fact that clients in many countries, especially corporates, are not rated by any acceptable<sup>27</sup> rating agencies. Moreover, the country in which these clients are incorporated is itself not rated. BCBS suggests the application of the following risk weights to unrated corporates, banks, and sovereigns: 100%, 50%, and 150%, respectively. The majority of business models within most of the countries in the Middle East and North African regions, for instance, are targeted towards their local markets, in which corporations or banks seeking a credit rating are not a norm. For instance, corporations in Bahrain are predominantly family-based business. These corporations are not listed, operate solely in Bahrain, and they are not rated.

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<sup>25</sup> If provisions become non-performing, they have to be charged to the income statement

<sup>26</sup> As a bank's CAR decreases, other banks view them as increasingly risky, due to their lower level of capitalization. To compensate for the higher risk, other banks ask for higher interest rates on any funds loaned.

<sup>27</sup> Each central bank in all Basel-compliant countries was the discretion from the BCBS to name the rating agencies and credit ratings to be used in the SA calculation. The Central Bank of Bahrain recognizes the ratings from Standard & Poor's, Fitch, Moody's, and Capital Intelligence only.

Extending credit facilities to an unrated corporation in any of these countries<sup>28</sup> does not mean that a bank can potentially lose 100% of its outstanding exposure with its client, as the 100% risk weight would imply. On the contrary, the corporation could be of high quality, credit-worthy, profitable, and liquid, and the fact that it is not rated could be attributed to a wide range of reasons, chief amongst them are cultural and political ones. Exposure to an unrated bank is another example of this problem. An unrated bank does not necessarily expose a lender to a similar level of risk as that of a bank rated by an agency with a risk weight of 50%. Jones and King (1995) examined the RWA requirements and concluded that they need improvements, especially the treatment of non-performing loans (NPL)<sup>29</sup>. They indicated the need for increasing the risk weights for all NPLs. Their argument to increase the risk weights of NPLs, however, ignores the fact that a bank could have NPLs in its loan portfolios but these loans are provisioned or collateralized and guaranteed. Thus, from risk management perspective, the bank is hedged in this case and does not need to allocate capital for its unexpected loss. Hence, the bank might not need higher risk weights for this NPL.

There is, however, a deficiency in the literature about examining whether or not bankers consider the SA, as adopted by any bank regulator, to be reflective of the essential credit risk in the bank's portfolios. There is also a deficiency on studying what the bankers consider viable alternatives to the SA if it is deemed insufficient in quantifying the credit risks of the bank. This study would contribute to the body of literature by providing bankers' perspectives on whether or not the SA reflects the essential credit in their portfolios. Therefore, we think it is important that a regulator does not confine itself to the mere adoption of SA requirements. There is a need to address the shortcomings of SA. If a bank regulator adopts the SA, we think it is important for the regulator to examine the credit portfolio of the bank and assess if the capital requirement calculated by the SA is reflective of the credit risk assumed. However, the literature does not provide alternative methods that could augment or even replace the SA.

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<sup>28</sup> Examples of these countries include Algeria, Tunisia, Egypt, Sudan, Turkey, and Jordan. Source is based on the actual experience and involvement of the researcher in these regions. We are in charge of implementing Basel II and III in these countries in the subsidiaries that our bank owns.

<sup>29</sup> Non-performing loans (NPL) are loans in which the clients failed to pay the due installments for more than 90 days.

## II. Operational Risk- Weighted Assets (ORWA)

In this subsection, we will discuss Basel II requirements for quantifying operational risk, and the literature that discusses these particular requirements. Operational risk (OR) is defined in Basel II as the risk of loss incurred as a result of the failure in internal controls, technology systems, people, and externalities<sup>30</sup>. (BCBS, 2004). Basel II recommends three approaches to quantify the ORWA, namely, the Basic Indicator Approach (BIA), the Standardized Approach (SA), and the Advanced Measurement Approach (AMA). For the purpose of this study, we focus on the BIA because this is the only method accepted for implementation by Bahrain's banking regulator.

The BIA is considered the most simple and straightforward of the three approaches offered in Basel II to quantify the ORWA. According to this approach, the ORWA is calculated by taking the arithmetic average of the current and past two year's Gross Income (GI). The average GI is then multiplied by a predetermined fixed risk weight as follows:

$$ORWA = \left( \frac{GI1 + GI2 + GI3}{3} \right) \times 187.5\%$$

Where:

GI= Gross positive income in the last three years

187.5%= a predetermined fixed percentage specified by Basel II to approximate the OR in the GI

According to the BIA, if any of the last three-year's income is negative, then it should be excluded from the numerator, and the denominator is adjusted accordingly. This means that if in the past three years a bank had a net loss, then only the two positive years are included in the numerator, which should be divided by two only. If all of the three years are negative or the bank just started its operations (i.e., it does not have three years of income), then the matter is left to the regulator to decide, on a case-by-case basis, the best course of action.

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<sup>30</sup> Examples of failure in internal control are segregation of duties, lacks of policies and procedures, etc. People risk typically refers to fraud, misappropriation of banks assets by its staff, errors in judgments, etc. Externalities are events beyond the direct control of the bank such as hurricanes, floods, earthquakes, etc.

The BIA uses GI as a proxy to estimate the operational risks faced by a bank during the financial year.

Several observations can be made about the BIA. If net losses are excluded from the calculation, then there might be an underestimation of the ORWA as well as misalignment of the ORWA concept with the CAR. Exclusion of net losses means that the average GI is divided by a smaller number (i.e., the number of positive GI years only) which results in a higher CAR. The misalignment is that a bank that generates a negative GI will end up with higher a CAR than a bank that is identical except for the negative GI, *ceteris paribus*. For example, if the GI of a bank over the last three years is -\$100 million, -\$85 million, and \$0.1 million, then the ORWA will be \$0.10 million, which disregards the implications of the losses during the previous two years. These losses could be a result of important external or internal factors such as fraud, large human errors, and considerable fines paid for negligence, etc. In this example, the BIA would paradoxically fail to reflect the OR if a bank incurs losses. In addition, the BIA penalizes banks for making large profits. In principle, the higher the GI, the higher the ORWA, and the higher the ORWA, the lower the CAR. A low CAR means restrictions on financing and investments activities to avoid approaching the minimum threshold. Another paradox of BIA is that a bank with higher GIs is penalized with a lower CAR, while if a bank has a lower GI compared to the bank with a higher profit (or even incurs a loss), then their ORWA will be lower, and their CAR will be higher. The conceptual problem here is the implicit assumption that the OR events and the resultant losses that took place in the past would still occur in the present and in future years. Once banks have been exposed to internal or external fraud, system failures, etc., would logically mobilize rectification measures, as well as corrective and preventive tools, in order to ensure that these events do not occur again. This implicit assumption shows conceptual misalignment between the BIA and the essential operational loss events occurring in a given period. In this research study, we will explore whether bankers in Bahrain consider the BIA (which is imposed by the CBB) as a measure that adequately reflects the OR loss events of their banks.

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### Example 2.1

Assume Banks A, B, and C have the following information:

	Bank A	Bank B	Bank C
Capital	1,000,000	1,000,000	1,000,000
CRWA	5,000,000	5,000,000	5,000,000
MRWA	500,000	500,000	500,000
Year 1 income	20,000	3,500	4,000
Year 2 income	15,000	1,500	-5,000
Year 3 income	10,000	-4,000	-6,000
ORWA	28,125	4,688	7,500
CAR	18.09%	18.17%	18.16%

I assumed that the three banks have identical amounts of capital, CRWA, and MRWA. They only differ in the ORWA. According to the BIA, the negative figures should be excluded from the calculation. Bank A has the lowest CAR even though it has the highest profitability; Banks B and C both have higher CARs despite their net losses.

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I move at this stage to discuss the literature that examined Basel II operational risk capital requirements. There are numerous conceptual and technical arguments and disagreements on the definition of operational risk.

The conceptual arguments surround the definition of operational risk. In the academic and professional literature, it has been argued that operational risk (i.e., within the context of banking regulations) is highly controversial and that it is not yet clear why regulators emphasize its quantification (Moosa, 2007). One reason behind this controversy is the lack of understanding of the crux of this risk. Metcalfe (2003) dubbed operational risk as “Risk X,” while Crouhy (2000) called it a “fuzzy concept” because “it is hard to make a clear-cut distinction between operational risk and the normal uncertainties faced by the organizations in its daily operational.” However, Crouhy confuses *operational* risk with *operations* risk.

Operations risk is the risk of loss that results from the operations department (i.e., back-office activities such as treasury settlement, accounts reconciliations, etc.) Risks from these activities are distinctive from risks that arise from the lack of policies and procedures, internal control, or segregation of duties in a bank as a whole.

The academic and professional literature addresses two types of definitions of operational risk, the negative definition and the positive one. Negative definitions of operational risk define it as anything that is neither credit nor market risk. In other words, operational risk is a residual risk (Rao and Dev, 2006). Lopez (2002) suggests a brief but dubious definition of operational risk. He states that operational risk is “every type of unquantifiable risk faced by a bank.” This argument is dubious because it could eventually lead to the confusion of this definition with other distinct types of risk such as liquidity risk, merely because it is unquantifiable. For instance, there are three facets of the definition of liquidity risk. First, liquidity risk is the risk of the inability of a bank to pay its obligations when they fall due. Second, liquidity risk is the risk of the inability to liquidate or sell a bank’s assets within a short period with very low transaction costs. Lastly, liquidity risk is the risk of the inability to raise funds from the market at a time of stress. There are currently no practical methods to quantify the last facet of liquidity risk.

If we apply Lopez’s (2000) definition of operational risk to the latter definition of liquidity risk, we would include liquidity risk under operational risk, which is rather confusing. Lopez’s definition of operational risk is parallel to that of the Commonwealth Bank of Australia (1999). Namely, that is it is “all risks other than credit and market risk, which could cause volatility of revenues and expenses and the value of the bank.” It is unacceptable to consider the operational risk to be a residual risk to credit and market risks or as an aggregate of anything that is difficult to measure. Buchelt and Unteregger (2004) agree that this manner of addressing operational risk is not acceptable and that it is not suitable for a precise identification of all the risks a bank faces.

The positive definition of operational risk, on the other hand, portrays it not as a residual risk but instead as “the direct or indirect loss resulting from inadequate or failed internal

processes, people, and systems” (Robert Morris Associates et al., 1999). The BCBS’s definition is very close to that of Robert Morris Associates.

I now discuss the quantitative part of operational risk as defined under Basel II. Several issues are of interest and discussion amongst bankers, including a) why consider operational risk in the denominator of CAR instead of liquidity risk, which is structurally considered the second most important risk for banks after credit risk, and b) the methods of quantifying the capital needed for operational losses risk, particularly the BIA.

Herring (2002) criticized Basel II in charging capital requirement for operational risk. In his opinion, CAR should not include operational risk because of all attempts to quantify it is futile. He also criticized Basel II’s definition<sup>31</sup> of operational risk because it excludes business risk. Business risk is the operating leverage (i.e. the inability of banks to reduce costs or expenses as revenue decreases). His argument had no empirical evidence or case studies to validate his statements. Herring went on to criticize the treatment of operational risk by arguing that it is an idiosyncratic risk. He argued that if a loss event occurs due to fraud, lack of internal controls, or policies and procedures, then the loss would be confined to one institution only and would not spread to the whole banking system. Therefore, Herring argued that a bank regulator should not concern itself with a risk like an operational risk that does not cause systemic damage. Moreover, Herring argued that since operational risk loss events negatively affect the net income of banks and that they would, therefore, be more inclined to reduce these losses to increase their net income and subsequently their remunerations, regulators would not need to use a capital requirement tool to encourage them to reduce their operational risks. Furthermore, to ensure that banks are taking the operational loss seriously and prudently, regulators have several mitigation tools that could be deployed to ensure banks have them in place. An example of these mitigations tools might be insurance<sup>32</sup> to cover unforeseen external events, such as fire insurance for the bank’s building, deposits insurance against robbery or fraud (both internal and external). Another

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<sup>31</sup> Basel II defines operational risk as a risk of incurring a loss resulting from people risk, externalities (e.g., hurricane, volcano, flood, etc.), failure of internal controls, and failure of IT systems. The definition excludes legal risk.

<sup>32</sup> Moosa (2007) argues that insurance does not transfer operational risk and that it should not be regarded as an operational risk mitigants. Despite the validity of the point of transferability, from the point of view of the regulator insurance could reduce the size of the loss and hence protect the bank’s profitability and solvency. Thus, to a regulator insurance is a valid operational risk mitigants.

mitigation tool is the proper policies, procedures, and frameworks for internal controls, such as a work manual for each department, proper job descriptions, approved and updated credit, and risk and governance policies. Periodic validation of the soundness of these policies and procedures for internal controls, by way of continuous monitoring and follow-up, is the third example.

Danielsson et al. (2001) agreed with Herring (2002) that Basel II should not charge capital through CAR for operational risk because the operational risk is “predominantly idiosyncratic”<sup>33</sup> in nature, as opposed to credit or market risk. The basis of this argument is that the definition of operational risk is vague and that a bank’s estimation of the size of operational risk would be hampered due to the lack of adequate data. There are some points that can be raised against this argument. First, while it is true that operational risk is predominantly idiosyncratic, that does not mean it should be disregarded in the capital allocation for risks because it is a far-reaching risk. Operational risk management touches every single department at the bank as well as the board of directors. In addition, operational risk is unique because not all of its triggers can be hedged or insured. For instance, people who make bad judgment and decisions on credit and investment due to insufficient competence are an operational risk caused by people risk, as defined by the BCBS. This example of risk is not hedged; therefore, it would not be appropriate not to allocate capital for this risk. There should be a distinction between the importance of operational risk to a bank and what the BCBS stipulates in its regulations. There might be a disagreement or a challenge to the methods recommended by the BCBS to quantify the operational risk, but there should be no dispute that operational risk is an important risk for banks and other institutions. Operational risk, as defined by the BCBS, has inherently existed in banks long before Basel II. Potentially, every organization may suffer from a loss that occurs because of fraud or lack of internal controls. What prevents such loss from occurring is the scope and effectiveness of the controls put in place to circumvent it. Second, credit risk in banks occurs from insufficient due diligence, inappropriate credit mitigation, lack of credit culture and monitoring, insufficient follow-up, etc. All these are idiosyncratic in nature. Thus, if we apply Danielsson et al. (2001) reasoning around operational risk to credit risk, then we would

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<sup>33</sup> Characteristics that are peculiar to certain entities.

conclude that since credit management is idiosyncratic, there should be no capital requirement for credit risk.

### *III. Market -Risk Weighted Assets (MRWA)*

BCBS requires the calculation of MRWA for investments vulnerable to fluctuations in equity prices, foreign exchange rates, interest rates, and commodities. These are also called the market risk drivers or triggers. Basel II recommends the adoption of two approaches to quantify the MRWA: the Standardized Approach (SA) and the Internal Models (IM) approach.

The SA for MRWA applies a predetermined fixed risk weight for exposures in equities, interest rates, foreign exchange rates, and commodities. There is a deficiency in the literature examining the SA of MRWA. Contrary to the SA for CRWA, we have not found a study that examined or criticized the SA to calculate the MRWA. The SA for MRWA, as the name might imply, uses risk weights that are predetermined and fixed. Thus the calculation of the MRWA under this method could easily be described as risk-insensitive. For instance, the SA for MRWA requires that a bank's investments in shares of a company should be multiplied by a 300% risk weight if this company is listed on a stock exchange and 400% if it is not. By risk insensitive, we mean that the SA treats all listed stocks the same. The stocks of both newly established and listed company carry the same level of risk as the company that has been in the market for decades, is profitable and is liquid. The IM is an alternative approach given by the BCBS to address the risk-insensitivity drawback of the SA and allows banks to calculate the market risk of their trading and investment portfolios. One famous model is Value at Risk (VaR), which has been under a lot of scrutinies after the financial crisis of 2007 (for market risk and IM, VaR<sup>34</sup> is the most used model at banks). Banks have, however, been adopting VaR since it was launched in 1995 (i.e., before the announcement of Basel II). What the BCBS does for VaR is to provide recommendations on the parameters (e.g., time horizon of the data, the confidence level, etc.) of the model and monitoring framework. Acharya et al. (2010) analyzed the reliance of the regulators on VaR because "VaR was

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<sup>34</sup> VaR is defined as an estimate of the probability and size of the potential loss to be expected over a given period, and is now a standard tool in risk management (McAleer et al., 2013).

meant to be useful for comparing risk across desks and asset classes within a bank,” and they concluded, “lack [of an alternative measure to VaR] ... is at the root of practical failures of regulation.” Their argument is that VaR cannot capture loss events that have a less than 1% probability of occurrence (known as “tail events” in the literature).

Similarly, Danielsson et al. (2001) expressed worries on the reliance on VaR by regulators and they argued that VaR is insufficient for several reasons. First, VaR considers risk an exogenous process. Market risk, as we have defined earlier, is triggered by changes in equity and commodity prices, FX and interest rates (McAleer et al., 2013; BCBS, 2006). All of these factors are exogenous. In addition, the VaR for market risk is calculated based on historical or simulated *market* data, which is also exogenous in nature. This means that the argument against the use or recommendation of adopting VaR from the angle the market risk triggers are exogenous is debatable (Jorion, 2002). Second, Danielsson et al. (2001) argued that the VaR is not helpful if the returns are not normally distributed, as is the case with credit and operational risk. They argued that the VaR’s shortcomings can be avoided and that the Basel Accords did not account for methods to complement the VaR. The Basel Accord’s guidance on market risk, however, has always stressed the importance of having a robust framework to stress test and backtest the VaR model’s inputs and outputs (BCBS, 1995, 1996a, 1996b, 2004, 2011). Both of the techniques are considered acceptable and reliable tools for enhancing the VaR framework (Jorion, 2002).

So far, I have covered Pillar 1 of Basel II as illustrated in Figure 2.1. We have seen that the SA to quantify the CRWA has been criticized and accused of caused cyclicity in the market. I have also discussed the BIA for operational risk, reviewed the literature that examined this method of calculation, and concluded that the BIA is not commensurate to a bank’s operation and does not measure what it is designed to measure. For the MRWA, I found that the literature lacks an examination of the SA for the MRWA. The IM is an alternative to SA for the MRWA that has been examined in the literature, and it was found to be suitable for market risk only but needs to be complemented with a stress testing and back testing framework.

### 2.3.1.3 Pillar 2 – The Supervisory Review Process (SRP)

In this section, we discuss the second pillar of Basel II and the Supervisory Review Process (SRP). The SRP involves dialogues, continuous discussions, and consultations between the regulator and the banks about the following questions:

- a) How do banks manage risks other than those calculated in Pillar 1 (i.e., other than credit, market, and operational risk)?
  
- b) Is the CAR in Pillar 1 sufficient or does it require additional charges against capital, in light of the assessment in (a) above?

Conceptually, in quantifying capital adequacy, a regulator's capital adequacy assessment should include all of the risks to which a bank is exposed. The BCBS has not provided reasons of confining CAR to credit, market, and operational risks only, and for excluding liquidity risk, for instance, which is very much related to the fundamental role of banks in the economic system (i.e., liquidity transformation<sup>35</sup>). Another important risk that was not included in the Pillar 2 of Basel II is concentration risk. The definition of concentration differs based on the context. For instance, concentration risk in credit risk refers to the fact that a bank's loans portfolio is not spread across a large volume of customers but focused only on few clients. Similarly, concentration risk in a market risk management context might refer to the fact that the bank is focusing its investments in equity and not diversifying into real estate, commodities, etc.

Basel II requires banks to quantify all the risks they are exposed to and which are not included in the CAR (i.e., other than credit, market, and operational), and to report them in a document termed the "Internal Capital Adequacy Assessment Process (ICAAP)." ICAAP should be designed by each bank, submitted to the regulator, and periodically updated. Basel II does not provide predetermined fixed risk weights or stipulate the use of any statistical methods to quantify the risks. Basel II leaves it open to each regulator to impose the quantitative methods that they find most commensurate with the nature of the business and

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<sup>35</sup> Liquidity transformation is a process of accepting deposits from depositors (market participants who have surplus of funds) on short terms and channel them through to creditors (market participants who have shortage of funds) in the form of long-term finance and investments.

sophistication of their banks. ICAAP is submitted to the regulator for validation. The regulator should, in principle, examine the quantitative analysis, assess its robustness and correctness, and decide whether it needs to be re-assessed by the bank or whether it is approved. The outcome of Pillar 2 is that the regulator should add the size of the risks calculated in Pillar 2 to those of Pillar 1 in order to determine the adequacy and resiliency of the bank's capital. Since it covers all of the risks not in the CAR, the validity of ICAAP has important implications for both banks and regulators. The literature is deficient in examining ICAAP in particular and Pillar 2 of Basel II in general. I did not find any studies on ICAAP, its implementation, and its usefulness. This study would contribute to the examination of a regulator how to handle the ICAAP process and optimized it. After all, ICAAP is the core of Basel II. It is, by its definition and scope, the handbook of a bank's risk management. It covers how risks are identified, measured, monitored, reported, and how much capital is allocated to each one of them. In its process, the regulator is given a chance to validate the measures carried out to examine whether or not each measure of risk has achieved what it has been designed to achieve. Therefore, ICAAP is a great source of risk management frameworks for both the bank and the regulator. Yet, no attention has been given in the market to examining the effectiveness or efficiency of ICAAP's implementation in practice.

After having an overview of what constitutes Pillar 2, and after learning that banks are "left alone" to undertake the assessment process of all the other risks that were not covered under Pillar 1, how can a regulator trust that the internal assessments are done properly? The BCBS's answer to that question is that a regulator would have a comfort that the internal assessments have been carried satisfactorily if it can satisfy itself that the bank has in place a sound corporate governance framework. This framework would act as a backstop, i.e. the conduct and operations at the bank cannot slide below the minimum established objectives as laid out by the regulator and the board of directors. Thus, a corporate governance would need to be defined in here, and the relationship with the Basel II implementation would have to be reviewed in the literature and examined in the context of banks in Bahrain.

Corporate governance is a set of principles, policies, and procedures that clearly delineate the responsibilities and accountabilities of each party in an organization to reduce conflict of interest and achieve the organization's objectives.

The literature on corporate governance is voluminous. I intend to discuss in here only works on corporate governance that studies the relationship between corporate governance and risk management at banks, systemic risks, and financial crisis to be in line with the research questions and the research objective.

I shall first provide a context of the definition of corporate governance then survey the literature on it. In any commercial organization, there are three sets of people, the owners or the shareholders, the board of directors, and the management. The objectives, motives, and actions of the people in these sets vary, in some instances considerably. The optimum objective is, however, that the organization continues in its venture and its discontinuity negatively affects none of its stakeholders. Thus, there is a need for a set of principles, and subsequently, rules that align the objectives and motives of the people in the three sets toward the common objective, the prosperity, and continuity of the organization, that is. These principles should draw the lines of the relationships among these people, set the requirements for accountability of each party, and monitor how each one of them performs in light of the optimum organization objective. If we go back again and look at the three sets of people, it will come clear why corporate governance is particularly important for banks because that sets will be expanded to include the investors and depositors as well as the public in the society. It is also for the same reason why corporate governance at some organizations is rarely talked about such as the family business or in closed-net partnerships. That is because the owner's category of people is the same as the management as well as the board of directors. It is very important to note that there is no internationally accepted uniform set of principles of corporate governance. Even when practitioners talk about "international best practice" repeatedly after the crises, scandals, and risk management incidents, it has been found that the tag (the international best practice) is illusive and vague. What is considered as best practice corporate governance rules in a country is not considered so in another country. The differences are sometimes significant. Let us take the example of the position of Chairperson of the board and the Chief Executive Officer (CEO). In Bahrain, for instance, it is not permissible to mix these two roles. The reason is that to avoid the influence the Chair would have on the management of the organization. In the USA, it is acceptable and allowed to mix the two positions, and the regulator finds a great advantage of having one person assuming the two positions. In addition, they can argue quite well to

support that claim<sup>36</sup>. The regulator in Bahrain relies on the principles of corporate governance issued by the BCBS and the UK regulator.

To understand the relationship between corporate governance and risk management one has to understand first the objectives and elements of the corporate governance. The corporate governance is about the following objectives:

- Fairness: all stakeholders of the establishment are treated equally
- Accountability: Board and management are responsible for discharging their responsibilities toward the owners, regulators, and the society
- Independence: there is an independent function that monitors the conduct of the management
- Transparency: all stakeholders have access to all the information they need to make an informed decisions.

To achieve the above objectives, the following elements have to be in place:

- Board of directors' commitment toward the responsibilities of monitoring, corporate culture, and control environment.
- Effective internal control environment
- Transparent disclosure
- Board practice aligned with the objective and strategy of the organization.

To satisfy Pillar 2 requirements, banks would need to have in place policies and procedures for each identifiable risk, measurement methodologies, reporting mechanism, and information technology systems to help in managing the risks. Having policies and procedures demarcate the responsibilities of each function in the organization and align them to the organization's objectives, measuring and reporting the risks facilitate the disclosure requirements that help each stakeholder to study the disclosure and make an informed decision. In addition, in order for the policies and procedures to be effective would require that that boards of directors periodically monitor the implementation, have access to the right

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<sup>36</sup> Look at the Warren Buffer and Bill gates. Did their companies suffer financially, operationally, or structurally because they once assumed the two posts? The answer is no.

information and raise the right questions on the rights information. With that in place, the executive management would be remunerated according to the risks they bring on board.

We move now to survey the literature that examined the relationship between corporate governance and risk management. Kleffner et al. (2003) examined such relationship on Canadian banks. They surveyed the listed companies and unlisted company on the Canadian stock exchange. The listed companies are obliged to comply with the local regulatory, corporate governance standards while the unlisted companies do not. They found in their study that there is no significant change in the enterprise risk management in the two groups of companies. Although the explanation behind this indifference was not indicated in their study, my interpretation of Kleffner et al. (2003) study that the indifference is due to the cultural attributes of resistance to change to an enhanced risk management environment.

Wang et al. (2016) studied corporate governance from the perspective of risk management and the executive management incentives of listed companies in the financial sector and found that there is a non-linear relationship between corporate governance and risk management. What they actually found to make a significant impact on corporate governance and the corporate value was not the whole corporate governance principles but the executive management pay.

OECD (2014) report on the relationship between risk management and corporate governance found, after surveying some developed countries such as Norway, Switzerland, and Singapore that the current principles of corporate governance are “high-level” which makes issues of their implementation and assigning performance indicators for each principle fuzzy and argumentative.

The lack of correlation between corporate governance and risk management as concluded in the above and other studies is not surprising. After the financial crisis of 2007, it was examined by regulators and practitioners that what was lacking was not the risk management culture but also the proper code of governance that enforce the implementation and accountability of risk management functions and practice and culture. Aebi et al. (2012) provided partial evidence on that. They investigated whether risk management-related corporate governance mechanisms, such as for example the presence of a chief risk officer

(CRO) in a bank's executive board and whether the CRO reports to the CEO or directly to the board of directors, are associated with a better bank performance during the financial crisis of 2007. They measured bank performance by buy-and-hold returns and ROE and indicators for strong corporate governance through CEO ownership, board size, and board independence. They found that banks, in which the CRO directly reports to the board of directors and not to the CEO (or other corporate entities), exhibit significantly higher (i.e., less negative) stock returns and ROE during the crisis. In contrast, standard corporate governance variables are mostly insignificantly or even negatively related to the banks' performance during the crisis.

Datar (2004) calls for a distinction between corporate governance in each industry. To Datar, there should be corporate governance code to each industry because every industry is unique in its risks infrastructure, ownership, and management structure. Datar (2004) indicated three examples, which warrant a customized code of corporate governance, risk appetite, credit lending and liquidity risk. From a practical point of view, Datar (2004) view is valid. After the financial crisis, shocked by the repercussion of the crises, governments in developed and developing countries formed committees in the Congress, Parliament, Central banks and standards setters' level. The optimum objective was to come up with a code that is comprehensive in its scope, detailed in its depth yet simple and implementable to save the world from another crisis. Encouraged by the standards of fairness, accountability, and reliability, non-financial institutions and their regulators followed the practice of installing corporate governance in their frameworks. In some occasions, like the case in Bahrain, one could see that regulators share the same code and apply it to its own regulated entities. Nevertheless, what Datar (2004) did not address is that it is the lack of standards or codes neither it is the lack of industry specificities. The issue is the lack of implementation of these standards. In addition, when we ask ourselves why were all these corporate governance standards not implemented we find that, in my assessment, all the reports and codes issued by standard setters are rhetoric and generic in their terms. They are open for interpretation. Amid these interpretations, the substance of accountability, legitimacy, and independence are lost. Let us take for instance the Turnbull Committee, the focus of the outcomes is that any organization is free to pursue the shareholder's wealth maximization, but it should observe managing its risk while pursuing this objective and to ensure internal control and reporting

mechanism are efficient and effective. Which proxies are used to assess the efficiencies and effectiveness, who should assess the effectiveness of internal control, how frequent, and in which forms, are just a few questions that no code of corporate governance has addressed so far. If we take the example of Bahrain, the regulator expects banks to have a sound risk management department, and that should be linked with the objective of the organization. Yet, no benchmarks are provided as the minimum against which the implementation of the governance code is examined. It is not only the case in Bahrain; it is the same in the UK, USA, Singapore, Hong Kong, etc.

Macy and O'Hara (2003) after they delineated the differences in corporate governance between the Anglo-American and Franco-German systems, the similarities of the need for the governance among all commercial enterprises; they concluded that banks should be looked differently. The distinctive feature of the bank's balance sheet about the acceptance of the depositor's money necessitates the need for a wider scope of motivation for a robust governance system. Traditionally, the governance is to make that all the components and parties on entering rouse work toward a single objective, shareholders maximization. In banks, according to Macy and O'Hara (2003) deposits protection is as important as wealth maximization for the shareholders. Thus, Macy and O'Hara suggested a design of a mechanism through which depositors could hold shareholders accountable for any negligence. Albeit this suggestion is made more than a decade ago by the authors, the need for its implementation is validated by contemporary banking scandals. For instance, Wells Fargo bank created more than one million phony accounts for existing customers and charged them fees for overdrafts or penalty of minimum account banks without their knowledge; the depositors could not hold any of the executive management team accountable. It was just the government, which imposed a penalty charge to be paid to the government and to compensate the depositors of the fees incurred. Leaving the compensation aside, how can depositors hold the CEO, for instance, for this negligence? Most importantly, how can the depositors ensure that those who manage their funds are not taking too much risk to jeopardize their money? There is the existing mechanism. The only mechanism is through a government, which takes us to the discussion of the public interest theory of regulation and the surrounding argument whether the government really acts solely for the interest of the public.

McCrae and Balthazor (2000) examined the risk management component of the Turnbull Guidance and argued that Turnbull guidance to the directors, once implemented will give the compliant companies a competitive advantage over those companies, which do not implement the Guidance. Risks, according to the McCrae and Balcthazor reduce net income, minimize shareholders wealth and affect the competitive advantage. When implemented, the guidance could reduce fraud incidents, reduce the need for expensive risk hedging tools, increase the quality of the investments and lending portfolios. Turnbull guidance should be given credit for addressing risk management in a better way than the other guidance issued by regulators or standards setters particularly in explicitly addressing the fact that accepting risk is not an immoral act of any enterprise. Risks should be accepted given that it is properly calculated along with prudential decisions taken in an environment of high internal control, accountability and risk management monitored directly by the board. Turnbull Guidance is the only guidance that promotes self- regulation through robust internal control without the need for requirements imposed by regulators.

#### 2.3.1.4 Pillar 3 – Market Discipline

The main objective of this pillar is to enhance the level of banks' information disclosure to the banks' stakeholders. Before Basel II, there were no minimum requirements for the type, width and depth of information to be disclosed to the investors, depositors, shareholders and regulators. This lack of disclosure requirements was considered as one of the reasons of the financial crisis in 2008. (Vauhkonen, 2012). The requirements in Pillar 3 focus on the disclosure of the inputs needed to calculate the Capital Adequacy Ratio calculation, i.e. the bulk of the disclosure requirements are focused on the calculation of the regulatory capital, credit risk, market risk, and operational risk in the CAR. There are, however, qualitative disclosure requirements of banks' policies and procedures, strategies, and processes of the banks' risk management. The BCBS's objective of Pillar 3 is to enable the stakeholders (chiefly the depositors, investors and the regulators) to monitor by themselves the performance of their banks. When these stakeholders have access to the information of the risks and capital adequacy of a bank, they will be able to make prudent decisions of investing or placing deposits at a specific bank instead of other banks. This ability to make such decisions based on adequate disclosure enhances the discipline in the market as all market participants have access to the same information and similar right to act on it. Hence, the

BCBS called Pillar 3 a “Market Discipline.” There are two types of market discipline, direct and indirect. In the direct market discipline, market participants can directly exert an influence on a bank through the cost of funds supplied. When a bank is issuing debt securities or seeking to attract more deposits, market participants require a return based on their analysis of the bank’s risk profile as disclosed in the bank’s annual report. In the indirect market discipline, on the other hand, the prices of equity securities issued by a bank would be influenced by the demand of market participants on these securities. The demand is determined by the disclosed financial performance parameters (i.e. liquidity, profitability, solvency, leverage, and capital adequacy). The disclosure of these parameters acts as a *signal* to the market participants to guide their decisions.

In the literature, there are studies that examine banks’ disclosures but from the perspective of corporate governance or the impact of the disclosure on the spread<sup>37</sup> on the debt securities issued by a bank. For the objective of this study, I was looking for papers that specifically address the relationship between the disclosure requirements and the areas in the research questions, i.e. I was looking for the impact of disclosure requirements on the advancements of risk management practices, systemic risk, and financial crisis.

#### 2.3.1.5 Basel III

What was wrong with Basel II so that the BCBS found it necessary to have to upgrade Basel II and to Basel III? How successful so far is Basel III in answering some of the research questions? How the practitioners and academic assess the changes in Basel III? In this subsection, I will first provide a context of the Basel III requirements then I will address the literature to answer the last two questions.

Basel III came into existence because of some weaknesses in Basel II. It is only during and after the crisis of 2007 that these weaknesses were realized. These weaknesses were:

- Lack of leverage measure
- Lack of liquidity measure

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<sup>37</sup> The differences between the return from risk-free securities (e.g. treasury notes) and the premium required by the suppliers of funds based on the risk profile of the organization issuing the securities.

- Cyclicity of the standardized approach for credit risk
- Reliance on rating agencies
- Reliance on internal models

#### I. Lack of leverage measure

Every bank finances its assets either from its depositor's money (i.e. borrowing) or by its own money (i.e. capital). Leverage is the size of borrowing or debt in relation to the total size of assets. The higher the leverage, the higher the fixed charges (interest expenses) and the higher the risk. If given the option, banks would prefer to borrowing than their own funds because borrowing is typically cheaper than the equity. This is because the required rate of return on capital by the shareholders is higher than the interest paid on saving accounts.<sup>38</sup> By definition indicated above one would conclude that high leverage is risky for all types of business, banks and non-banks alike. While this is true but high leverage at banks is riskier at banks than non-banking institutions because of the following distinguishing factors:

##### a) Assets transformation

Banks generally borrow on short term and lend on various terms. A Bank has a unique risk that it is the only institution at which its creditors may come overnight and claim their dues.<sup>39</sup> This requires a stock of highly liquid assets to honor deposits' withdrawals at an unexpected time to avoid a run on the bank<sup>40</sup>.

##### b) Off-balance sheet exposures

One of the most important categories of banking products is off-balance sheet commitments, which include a letter of credits, letter of guarantees and bankers acceptance. The risk of these products that they are mostly irrevocably non-cancellable by the banks and when they are drawn or utilized by the clients, they require the presence of cash to be paid to the beneficiaries.

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<sup>38</sup> Some banks are financed by zero cost of funds as they rely on saving or current accounts on which no interest rate is paid.

<sup>39</sup>This includes the current accounts and all types of saving deposits because the depositors can still pay the penalty charges of early deposits redemption for termed deposits and withdraw their funds.

<sup>40</sup> A famous real-life case of this risk, run on the bank, is Northern Rock Bank in the UK. Shin (2009) provided an adequate reflection of the case and discussed a number of studies on the same subject.

it is because of this potential burden on cash that regulators put various limits on the tolerable level of off-balance sheet exposures in relation to total equity or total assets.

Basel II it is CAR did not address the liability side of the balance sheet neither did it address the risk of having excessive off-balance sheet exposures.

After the crisis, the BCBS has realized that their banks are operating well above the minimum threshold of CAR yet have excessive leverage either by the large volume of debt on their balance sheet or by off-balance sheet products. To reduce this risk, the BCBS recommended in Basel II that each bank adheres to the following leverage ratio:

$$\frac{\text{Capital}}{\text{Total Assets} + \% \text{ OBS}} \geq 3\%$$

## II. Lack of liquidity measure

CAR under Basel II addresses the credit, market and operational risk. Liquidity risk, as well as a myriad of other risks, were addressed under Pillar 2 of Basel II in which there were no minimum quantitative measures or limits to manage these risks. As I explained in Pillar 2 section that every bank is obliged to “write” to the regulator how it manages and measures its liquidity risk ( and other risks) in an unstructured policy and supervision program. Regulators, as a result of that, did not have a clear picture of the liquidity position of individual banks or the liquidity in the whole system. One could confidently say that thanks to Basel II, liquidity risk was not much of concern to the regulators then. Again, after the financial crisis of 2007, it was found that banks who suffered from liquidity shortage had a strong capital adequacy ratio. Those banks seemed to have managed their credit and market risk well but had an imprudent practice of liquidity management.

To address this risk quantitatively, Basel III recommended the adherence to the following two ratios:

- a. Liquidity Coverage Ratio (LCR): this ratio measures the ability of a bank to have a high-quality liquidity assets within 30 days that can cover the 30-day cash outflow at the time of stress. This ratio is akin to the current ration in the credit analysis in which current assets is divided by current liabilities. The different between this ratio and the current ratio is that the LCR is forward looking while the current ratio is a historical-based ratio, i.e.,.e. it does not take into account the potential cash outflow leaving the bank within 30-day. The minimum threshold for this ratio is 100%, which means that

every bank should have at least an equal amount of cash outflow in the form of either cash or high liquid assets to honor its shorter obligations.

- b. Net stable funding ratio (NSFR): this ratio takes a wider time horizon than the LCR. It measures the bank's ability to have stable funds to either grow or at least continue offering the same level of operation for a period of one year or more. The minimum threshold for this ratio is 100% as well.

### III. Cyclicalities of the Standardized approach

I have highlighted the issue of procyclicality of the SA under section 2.3.1.2 and defined "procyclicality" under section 2.4.1. To circumvent the cyclicalities risk, the BCBS had proposed a macro-prudential measure to act as a buffer in which each bank, during times of excessive credit or growth in the economy, create a reserve that can be used at times of crisis. The purpose of this buffer is to streamline the credit supply in the economy as banks would normally tend to decrease their credit supply in recession, this buffer would enable them to avoid a sharp or abrupt decline in credit supply because of capital requirements.

### IV. Reliance on rating agencies

As explained in section 2.3.1.2 that CRWA is calculated by multiplying the credit exposure to a given risk weight determined by the rating of the client by certain rating agencies approved by the local banking regulator. The practitioners have brought the diligence and credibility of the rating agencies to scrutiny after the crisis of 2007 because it was found that various instruments issued and financial institutions, which suffered dire financial consequences, were well rated shortly prior to the crisis<sup>41</sup>. The reliance on the rating agencies is not only manifested in Basel II, but it is also seen in various facets of the financial systems. According to Bahena (2010), page 5, "In the United States, as of September 2008, at least forty-four regulations of the Securities and Exchange Commission (SEC) incorporate the use of ratings. For example, the SEC limits money market funds to investments in the top two rating categories. Other countries, including Canada, Belgium, and Poland, require certain investors to obtain prior approval before

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<sup>41</sup> There are two famous case studies of this controversy, Enron and Parmalat (Daiy Italian company). Both of them were highly rated shortly before their collapse. Melis (2004) studied the case of Parmalat Scandal in detail in light of the corporate governance regime in Italy.

purchasing certain low-rated instruments and ban other investors from investing in low-rated investments at all. In Italy, securities must be rated before they can be offered to non-commercial investors.”

The BCBS has attempted to address this risk of relying on rating agencies for the calculation of the Standardized Approach by proposing a metric system for credit risk quantification. In its paper dated December 2014 titled “revisions to the standardized approach for credit risk-consultative document,” the committee proposed determining the risk weights of each credit exposure based on the specific features of the bank’s client’s financial performance such as the client’s leverage and turnover for corporate clients. For banking clients, the parameters would be the capital adequacy and assets quality. There is still no final stance of the Committee of whether it would adopt this methodology of calculating the credit risk. as it was only a consultative document that has not been implemented, I did not find a study in the literature that examined the proposed changes.

Having provided the context of Basel III, its requirements and the reasons behind its creation, I would discuss here the studies in the literature on Basel III.

Angeleni and Gerali (2012) examined the macroeconomic aspect to Basel III. In their study, they attempted to answer the questions of the impact of adhering to Basel III on the overall economic performance in a country and whether the implementation of the new accord will dampen the cyclicity problem Basel II created. The result of their study was in favor of Basel III. They found that the implementation of the new accord would not considerably cost the banking sector, as the capital requirements changes will insignificantly increase the cost of equity. Furthermore, it was found that Basel III could reduce the systemic risk. These outcomes have been supported by another study by Šútorová and Teplý (2013) who studied specifically the impact of Basel III implementation of the number of loans and lending rates of European banks. Through their quantitative model, it was found that most of the European banks are already in compliance to the Basel III’ new capital requirements and there will be minimal impact on the cost of loans. Apart from the technical quantitative part of Basel III, Howard (2014) discussed the impact of Basel III on the corporate governance. He argued that the changes in the Pillar 3 that address the disclosure and transparency

requirements will be improved which results in benefits to investors, creditors, and regulators alike.

Regarding the specific case of Islamic banks, Rizwan et al. (2012) collected data from countries that have a high number of Islamic banks to examine the impact of the Basel III on these institutions in comparison to the conventional banks. The examination was to the capital requirements, leverage ratio, and liquidity ration. It was found that even though Islamic banks are well capitalized and can meet the minimum capital requirement; these banks would face difficulty, in the long run, to meet the minimum thresholds off the liquidity measures, as there are very limited sharia-compliant products through which banks can satisfy their funding requirements. Boumediene (2011) criticized Basel III for not addressing the special characteristics of the Islamic banks despite that growth of the Islamic banks is rapidly increasing worldwide. He used one Islamic Bank in Saudi Arabia as a case study and applied the Basel III liquidity requirements on the bank to assess the impact. He concluded that although the bank in the case study is one of the liquid banks in the whole region, the Basel III liquidity indicators resulted in unfavorable outcomes. Obviously, it was concluded in his study that Basel III should no longer overlook the particularities of the Islamic banks and the BCBS intends to make its accords benchmark for international best practice it should provide comprehensive regulatory measures that address both, conventional and Islamic banks.

The argument by Angeleni and Gerali (2012) the Basel III would reduce the systemic risk and that it would eventually dampen the cyclical impact can easily be refuted. Basel, albeit the significant changes made on the criteria of high quality capital components, the liquidity measures, etc., it did not change the optionality of using the Standardized Approach for the CRWA, the major source of cyclical impact that Basel II was criticized for. In fact, the BCBS has attempted in 2015 to eliminate the usage of the SA for credit risk to decrease the reliance on the rating agencies to prevent the cyclical impact but receded that consultative document and did not proceed further due to lack of another alternative. So, for most of the developing countries, at least in the Middle East, the SA is still and will be in the foreseeable future, the preferred method for the CRWA for its simplicity. In addition, as long the SA is allowed there will always be a cyclical impact. Thus, Basel III cannot promise to reduce the

cyclicality as long as regulators can choose SA from the approved methods for the CRWA. Moreover, as long as the cyclicality is not eliminated it would be difficult to eliminate the systemic risk.

In regard to Howard (2014), what derives, in practice, the banking industry for enhanced disclosure and transparency is not only Basel II or Basel III but the International Financial Reporting Standards (IFRS) and the local corporate governance and public disclosures requirements by each regulator, Pillar 3 of Basel II plays a role but not the major driving force. When bankers refer to public disclosure, the first thing that they refer to is those requirements related to the IFRS. The IFRS requirements are rapidly updated and changing, at a faster pace than those of Basel Accords, as well as the case studies from corporate governance. So, it would require a thorough empirical examination to state the Pillar 3 of Basel III would increase the corporate governance because we need to isolate first the impact of the IFRS and other governance standards to arrive at a situation that convincingly asserts this governance and disclosure situations is due to Basel III. Regarding the Islamic banks, it is true that Basel III did not recognize the need to address the particularities of Islamic Banks. Islamic banks are left to do their homework of mapping the conventional banks instruments and in the details, if the Basel III, especially those related to liquidity risk, to come up with their own structure of the LCR and NSFR. There are attempts made by the Islamic Financial Service Board (IFSB) to “Islamize” Basel III and their attempts have been used in practice by some Islamic Banks in the market. The IFSB efforts have proved be working in that respect. Boumediene (2011) may not have examined the IFSB’s work on liquidity risks on his case study because it exactly addressed his concern.

### ***2.3.2 Conclusion***

I found that studies in the literature did not find the capital regulation to be efficient. Moreover, studies showed found that it can a trigger insolvency and illiquidity at banks. Various studies have shown that capital-based regulations would increase the cost of funding for banks, which might negatively affect the banks’ attitude toward risk. With regards to the question about why a banking regulation should be capital based, we found few satisfactory answers in the literature. The literature did not address the following: why is bank regulation

capital-based? Why has the BCBS not augmented the minimum capital requirement with another requirement such as limits on asset quality (e.g., the percentage of delinquent loans to total loans) or limits on liabilities? The literature also lacked studies that compare pre- and post-capital regulation in certain countries, which would have really assessed the usefulness of the capital regulations on the soundness of that country's financial system. Furthermore, the literature does not include a comparison of a banking system of a country that has not adopted Basel II regulations with a country that has adopted a Basel II regulation.

With regards to credit risk, there is a deficiency in the existing literature on examining whether or not the FIRB and AIRB reflect the essential credit risk faced by the bank. Moreover, we could not find any study that examines whether bankers consider the SA approach to be reflective of the essential credit risk in the bank's portfolios. I could not also find a study on what bankers think would be viable alternatives to the SA if it is indeed deemed to be lagging in quantifying the credit risks of the bank.

There is no consensus in the literature on operational risk in banking regulation that definitions of operational risk are not crystallized. There is a deficiency in the literature on examination of the question: why include operational risk instead of liquidity in the denominator of the CAR. In addition, there is a deficiency in studies that investigate whether bankers believe that Basel II's methods for calculating capital for operational risk are sufficient and aligned with the bank's business conduct. Concerning the internal models for market risk, the focus of the literature predominantly centers on the VaR, and this model is considered to be inadequately regulated by Basel II. Under Pillar of Basel II, Corporate, argued to be the only viable way through a regulator could use to ensure that the Internal Capital Adequacy Assessment calculation reliably calculated, were not found to enhance risk management functions and processed. We found that Basel III although claimed in some studies that it would enhance disclosure, reduce systemic risk and cyclicity, banks are still allowed in Basel III to choose SA to quantify the CRWA, which is the major trigger of cyclicity.

## **2.4 What Are the Government's Intervention Objectives? Have They Been Met?**

In this section, we address the objectives stated in Basel II accord as well as in the CBB literature. I found that the objectives stated are: a) contain systemic risk, b) enhance risk management practices at banks, and c) help banks withstand the crisis. I address the literature on these objectives in the following three subsections.

### ***2.4.1 Contain Systemic Risk***

Systemic risk is the risk of “distress in the financial system caused by an imbalance or a failure of a significant part of the financial sector – one large institution or many smaller ones – that has the potential to have serious negative consequences for the real economy.”

(Schwerter, 2011; FSB, 2009a, pp. 5-6; Acharya et al., 2010, p. 1)

From this definition, it is apparent that systemic risk arises from a failure and the subsequent spread of the negative outcomes of this failure to other banks, due to the interrelationship amongst them. Ultimately, the failure could spread across all banks. What exacerbates the impact of the banks, due to their regulations, on the economy is the fact that the Basel Accords are pro-cyclical<sup>42</sup> (Goodhart and Persaud, 2008; Moos, 2007). During the growth phase of the economy, there is an excess of liquidity, lending rates are high, asset quality is high, and the level of bank capital is high. According to the Basel Accords, the CAR is also high because of clients, rated by rating agencies, enjoy lower risk weights due to these market conditions (this is especially true in the SA). During times of crisis or troughs in the economic cycle, bank client ratings deteriorate due to lower demand, and the bank's asset quality deteriorates because of their clients' inability to honor their financial obligations. These phenomena lead to higher risk weights, lower net income (i.e., due to higher provisions), and lower CAR. When the bank is faced with a lower CAR, banking regulations force it to either inject capital or slow down its business to maintain the CAR at the set thresholds. The most viable option for the bank is to slow down its business (i.e., loans to

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<sup>42</sup> Pro-cyclical: in the context of an economic cycle, product life cycle, or any life cycle whose structure includes ups and downs, any variable that triggers fluctuations, causes greater fluctuations in the cycle, or exacerbates the impact of the ups and downs are called a pro-cyclical variable. If it does the opposite then it is called a counter-cyclical variable.

retail and corporations as well as investments), which means exacerbating the credit and liquidity problems in the economy.

In this section, we will survey the literature that specifically address the relationship between Basel II and the systemic risk and whether countries imposing Basel II would be less prone to systemic risk. I also seek studies in the literature that investigate whether or not bankers think that Basel II implementation can reduce systemic risk.

Acharya (2009) argues that because Basel II is a capital-based regulation, it cannot structurally address systemic risk. This is because capital-based regulations focus on each bank within the whole banking system on an individual basis. However, the correlation among banks is not taken into consideration in the Basel Accords<sup>43</sup>. Thus, Acharya (2009) proposes that regulators direct their attention towards adding correlations among banks on their supervision checklist but does not discuss any mechanism for doing so. Similarly, Schwerter (2011) found that Basel II was too weak to address the requirements of reducing the systemic risk and Basel III still requires further enhancements in this respect, despite the major milestones outlined within it to rectify this weakness. He attributed this weakness to the structure of Basel II, as it focuses on the wellbeing of every bank on a solo basis and ignores the interrelationships amongst the financial sector constituencies<sup>44</sup>. He concluded that macro-prudential regulation, which the Basel Committee addressed in Basel III, will alleviate the systemic risk (Bernanke, 2008). Hellwig (2009) shared the same conclusion that the issue of the systemic risk must be dealt with by the regulator or the central bank, and should not be left to the banks and their internal models.

However, in order for a regulator to deal efficiently with the issue of systemic risk, there should be agreement on the conceptual framework used to quantify systemic risk. A regulator would have to know the size of the systemic risk in its financial systems to be able to impose regulatory measures on banks (e.g., limits, periodic reporting, etc.). This can be achieved by measuring the interconnectedness amongst banks in the banking system. Interconnectedness can be measured by monitoring the placements of funds, investments, and financing amongst

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<sup>43</sup> This is a valid point under Basel II, but the Basel Committee has, in Basel III, addressed the issue of connectivity and its materiality in the framework of domestically and globally systemic important banks.

<sup>44</sup> This approach of banking regulation is called “micro-prudential” in the banking literature.

the banks by requiring periodic reports from each bank. After that, the regulator should identify the banks that serve as the *de facto* hub or intermediary for the majority of these transactions. A stress test should then be performed by the regulator to assess the potential repercussions should the identified banks face any financial difficulties, and to estimate the size of the implications of the system. The underlying challenge of quantifying systemic risk is the lack of a validated quantitative model that could be designed as a standardized regulatory matrix across countries (Schwerter, 2011; Adrian and Brunnermeier, 2009).

There is also a deficiency in the literature regarding how Basel regulations do or do not reduce systemic risk. Even the studies of Moosa, Goodhart, and Persaud about the procyclicality of Basel II and how it exacerbates systemic risk are not supported by empirical evidence or case studies. No study in the literature has focused on a country that suffered from systemic risk merely because it adopted and implemented Basel II, and how it ensured that risk. Nor is there a study that examines how regulators approach systemic risk in terms of regulation policy (e.g., thresholds) and supervision programs (e.g., reporting requirements). In this study, we seek to analyze how a regulator and a supervisor approach systemic risk in relation to Basel II implementation.

#### **2.4.2 Enhance Risk Management**

The purpose of this subsection is to review the literature that relates Basel II implementation to the risk management practices in banks. In this study when I use “risk management practices” we refer to the following: a) a bank’s tendency to assume risks, b) its attitude towards risk, and how its appetite is designed and altered, c) the use of risk management in making financing and investment decisions, and d) how risk management is congruent with setting out the bank’s strategic objectives and plan. Risks are inherent in banking operations, and they are at the core of any financial institution’s activities. The need for robust risk management discipline at these institutions emanates from this fact. Risk management does not, however, necessarily mean eliminating or reducing risks, rather, the goal of risk management “is to optimize risk-reward trade-off.” (Bontas et al., 2009)

The Pillar 2 requirements of Basel II<sup>45</sup> clearly encourage central banks to assess the overall risk exposures assumed by banks in their country to the extent that is wider than what was calculated under Pillar 1. Hence, from a regulatory perspective, there is a positive relationship between capital and risk, as the higher the risks assumed, the more capital is needed as a cushion (Shrieves and Dahl, 1992). With this mind, and in light of the stated objective of Basel II that the Basel Accords enhance risk management at banks, this section explores whether or not this claim has been studied in the literature.

Studies in the literature approach the relationship between the Basel Accords and risk management from different perspectives. I grouped the studies we found into the following facets of risk management:

- Risk tolerance
- Lending behavior
- Portfolio risk and solvency

#### 2.4.2.1 Risk Tolerance

How is a bank's risk appetite constrained or affected by regulatory capital? While bank management observes the impact of regulations on their investment decisions, they also look at the incentives they would earn in their risk-taking decisions. Hence, a bank's behavior towards risk taking cannot be just assumed to be impacted by capital regulations. Shrieves and Dahl reached the same conclusion "that risk-taking behavior tends to be constrained by bank owners' and/ or managers' private incentives." (1992)

Building on the work of Shrieves and Dahl, Rime (2001) investigated the behavior of banks towards risk in relation to Swiss bank's capital requirements. He concluded that capital pressure on Swiss banks that imposed financial or non-financial penalties in case of a breach of the minimum capital requirement would have an impact on the bank's capital-related activities. However, he did not find a strong correlation between regulatory pressure and the risk appetite of banks.

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<sup>45</sup> Please refer to Chapter 3 for more detail.

Similarly, Gonzalez (2003) used data on a panel of 324 banks in 37 different countries to examine the relationship between capital regulation and bank risk appetite. He found that banks in countries with tougher capital regulations tend to adopt less conservative credit and investment policies (i.e., increasing appetite for risk taking). On the other hand, in countries where capital regulations are less strict, banks tend to opt for more conservative credit and investment policies. Furthermore, he proposed that a capital requirements threshold should be flexible to reflect the level of diversifications in the bank's loans portfolios, appetite to take the risk, and charter value<sup>46</sup>. Barth et al. (2000, 2002) came to the same conclusion; there is an inverse relationship between strict capital regulation and risk-taking tendencies amongst banks' management.

Blum (1999) found that introducing capital regulation into his model would induce banks to assume more risk because capital regulation will eventually lead to reduced profitability. Lower profitability will decrease the owners' equity and thus would make the equity expensive (i.e., in terms of required return for the existing shareholders). To compensate for the resultant reduction in profitability, bank management would be induced towards excessive risk taking (e.g., in the form of relaxed loans or collateral requirements) in order to increase the size of their loans and investments, which would thus offset the reduction in equity. In this case, capital requirements would perversely result in a higher appetite for risk instead of curbing it. Furthermore, bank's executive remuneration and compensation packages are linked to the profitability and value that they share with shareholders. If they are restrained by the reduction in equity they might act aggressively, not only in credit and in investments but also by neglecting other areas in the bank such as internal controls or risk management; hence, principle-agent problems ensue.

#### 2.4.2.2 Lending Behavior

Regulatory pressures to meet capital requirements would affect bank management behavior in terms of risk management. The viable options to meet this regulatory pressure are either to inject more capital or to minimize risk exposures. Reducing risk exposures means a decrease

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<sup>46</sup> Charter value is the value of the bank's ability to continue doing business; it is the value of the bank's going-concern.

in RWA<sup>47</sup>, which is achieved by either reducing the number and size of the loans extended, obtaining sufficient collateral, or being selective in their prospective credit facilities. Berger and Udell (1991) found, however, that there is no evidence of a positive correlation between reduced credit granting and reduced pressure to maintain the required level of regulatory capital. Jackson et al. (1999) reached an identical conclusion in their examination of the impact of capital-based regulation on constraining banks' lending and the bank's competitiveness in the loans business. Jackson et al. used the same approach as Berger and Udell, but only used data from the G-10 countries. Ediz et al. (1998), in their study of the impact of capital-based regulation on UK commercial banks' lending behavior, concluded that the CAR ratio does not make banks cautious in their lending decisions. Instead, it encourages them to meet the minimum CAR by continuously shifting categories of counterparty risk weights but without changing their credit lending policy. Since the studies of Jackson et al. (1999), Ediz et al. (1998), and Berger and Udell (1991) were all based on Basel I, their conclusions cannot be extended to Basel II environment because Basel II drastically changed the risk weight sizes and categories of Basel I, and it added market and operational risks to the CAR. Zicchino (2006) analyzed the relationship between macroeconomic conditions, bank capital, and lending when banks are subject to risk-sensitive capital adequacy requirements as envisaged in Basel II. He found that when Basel II is implemented, a bank's ability to extend more loans would be constrained at the time of contraction and reversed during booms. Nachane et al. (2006) reached an identical result in their examination of commercial banks in India. They found that a bank's lending would be impacted by the introduction of Basel II as a bank lending ability and behavior correlates to the macroeconomic changes during contractions or booms<sup>48</sup>. In addition, since Basel II is cyclical in nature, capital based regulations will tighten bank's lending choices by forcing them to lend to lower risk-weighted clients. Liebig et al.(2004) investigated the impact of Basel II on the lending behavior of German banks to counterparties in the emerging markets.

Panagopoulos and Vlamis (2009) examined the adequacy of Basel II to address the risks of lending, particularly to the real estate. Their critique of the accord was that Basel II does not

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<sup>47</sup> The CAR in all of the Basel Accords is calculated by dividing the capital base of the bank by the total RWA. RWA means the level or size of the risk in each item of the balance sheet.

<sup>48</sup> They, however, did not conclude that Basel II is the only driving factor that would constrain a bank' lending behavior during contraction.

treat real estate as a stand-alone assets class and the accord does not provide an internationally agreed upon definition of real estate market value. I found that Panagopoulos and Vlamis (2009) critique was valid for the following reasons. There are several categories of real estates each one of them has different risk and return features. Holistically, for a bank, there are three main pools of real estates: commercial and residential mortgage, real estate investments, and the bank's own real estate (i.e. premises). Within the commercial mortgage, for instance, there are subcategories. As a bank, the risk of financing offices building is different from financing a mall building, which is altogether different from financing industrial facilities. For the same reason, the risks of investments in real estate depend on the types of the projects, locations, market concentration, etc. finally, the bank's premises also pose a great challenge for the Basel II to address. What constitute premises? Shall the bank include all the branches buildings as premises or only the headquarters? Basel II does not provide a risk sensitive quantitative measurement of the capital requirements for these different categories.

#### 2.4.2.3 Portfolio Risk and Solvency

Koehn and Santomero (1980) examined the impact of capital regulations on risk management from the perspective of its impact on loan portfolios. A statistical model was used to assess the impact of changes in capital requirements on a hypothetical commercial bank loan portfolio's behavior. The result showed identical results to Kahane (1977)'s conclusions, namely that an increase in regulator's capital requirements encourages bank management to assume more risks. This is because more risks assumed means increased returns, which would, in turn, increase net income and owners' equity and bank management remuneration. A point that could be made against their conclusion is that their definition of risk management was very narrow. They focused only on one aspect (i.e., portfolio risk) in one kind of risk (i.e., credit risk).

Finally, Jackson et al. (1999) concluded that the results of the two strands of the literature on the impact of Basel Accords implementation on bank's risk tendencies are mixed. There is no substantial evidence that capital requirements alter a bank's risk profile and appetite.

Accordingly, a strict minimum regulatory capital requirement might lead to an increase in the risks assumed.

### ***2.4.3 Build Resilience: Withstand Crises***

The relationship between Basel II and financial crises is studied in this subsection from two distinct perspectives, before and during financial crises. In the former, studies examine whether or not Basel Accords can prevent or immunize banks against exposures to financial crises. For the latter, studies examine whether or not Basel Accords reduce, contribute to, or even exacerbate the negative impact of financial crises.

This section explores the studies that answer the above two questions, with particular emphasis on the financial crisis that erupted in 2007. I emphasize this crisis because: a) it is the first financial crisis that erupted immediately after the implementation of Basel II<sup>49</sup>, and b) it is the crisis for which banking regulation has been hugely criticized. This section is divided into two subsections, one for each of the two questions above.

Nichols et al. (2011) tried to examine the impact of banking regulation on financial crises. The authors focused on the school of thought that the financial crisis was a result of too much regulation. In this article, Nichols et al. argued that the financial crisis did not happen because of a shortage of banking regulation in the USA, but because of housing policies and laws that forced banks to relax their lending strategies and standards, which eventually led to their involvement in the subprime crisis. Apart from the housing problems, the authors did not provide sufficient arguments and literature review on their hypothesis.

The question that ought to be examined is can Basel II prevent a crisis or immunize banks from crises.

The question of whether or not Basel II could prepare banks to withstand a crisis or prevent them from being implicated in one would typically be given a dichotomous answer. Scholars would either opine that banks might have incurred far greater losses without Basel Accords

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<sup>49</sup> The final document of Basel II was published by the BCBS in June 2006.

than what they actually incurred, while another set of researchers might opine the opposite (i.e., that Basel Accords did not help at all).

That is exactly what we found in the literature. One might notice, however, that the studies and articles that negate the idea that that Basel Accords help banks withstand a financial crisis outweigh those who advocate for its utility in mitigating crises.

I shall start with the articles and studies that believe that Basel Accords can quell a crisis. Caruana and Narain (2008) addressed two questions: (a) does Basel II address all of the risk management issues faced by banks, and (b) can full implementation of Basel II prevent financial crises or financial market disturbances? The argument used in their article is that even though Basel II does not address all of the risk management issues faced by banks (i.e., it does not address liquidity risk management and leverage), its full implementation could prevent the financial crisis from occurring. One problem with this statement is that it was not backed by references to numerical cases or examinations of a case study in which Basel II was fully implemented in a country, and that country withstood the crisis. The second problem with Caruana and Narain's conclusion is that their statement could be construed as speculative; Basel II was announced in June 2006, the crisis erupted in the summer of 2007, and their statement that Basel II could prevent a crisis was made in June 2008. A new banking regulation with a wide scope such as Basel II needs longer than a 12-month period to validate such a claim. What makes their claim particularly speculative is the fact that there is no study in the literature that examines the ability of capital requirements regulations (both prior to or after Basel I) to enable banks to withstand a crisis, or even to prevent them from being implicated in the first place.

Wellink (2008) agreed with Caruana and Narain (2008) that the financial crisis could have been prevented or its negative consequences alleviated had the accord been implemented earlier than it had been in the impacted countries. However, this article was not based on empirical evidence nor was any case studies used. Wellink (2008) argued, "It was a misunderstanding to say that Basel II would have allowed the risky practices among banks that triggered the crunch." However, he agreed, "Basel II adopts the models that failed to perform in the recent turmoil." He further argued that Basel II would provide the impetus for

banks to produce “forward-looking approaches to assessing, managing and holding adequate capital for risk.” The flaw in Wellink’s argument is that the crux of the matter is not about whether or not Basel II allows for “risk practices” amongst banks but about the validity of the accord itself and its scope. The discussion is about the design of the requirements within the accord and its validity. By validity, we mean whether the requirements in the system measure what they are supposed to measure, whether they prevent what they are supposed to prevent, etc. In the United States, for instance, all of the internationally active banks that were heavily impacted by the crisis of 2007, such as Lehman Brothers, were Basel II compliant. In Europe, the scenario is the same; all of the banks were Basel II compliant, yet they were impacted by the crisis (by different margins of course). Even countries that were far removed from direct exposure to the sub-prime crisis, such as Middle Eastern countries, that were compliant with Basel Accords were still considerably impacted by the crisis. Furthermore, in some of these Middle Eastern countries, there are Islamic Banks that do not deal with interest-based loans, derivatives, or sub-prime banking products; they were also impacted by the crisis, even though they are all compliant with Basel Accords. Therefore, this real life case studies all negate the claim made by Wellink or Caruana. Wellink (2008) and Caruana (2008) provided no evidence of how Basel Accords could have prevented the crisis amongst all the impacted countries. Each country has its own national discretion<sup>50</sup>, methods for calculating credit, market, and operational risk, varying complexity, and sophistication of the methods used to gauge liquidity, concentration and other risks under Pillar 2 of the accord. In light of all these differences, how could Basel II achieve the desired result of preventing a crisis? This question is not answered in the literature.

Zamorski (2008) argued, “Financial market turmoil is not an indicator of the failure of Basel II norms,” because “the accord itself is not a substitute for risk management.” Opponents of Basel II mixed their arguments with the presumption that Basel II is a risk management tool; although proper implementation of Basel II Accord could support a risk management culture, Basel II does not claim to be a risk management tool. But if we take the example of the Northern Rock crisis and its fall in 2008 as Basel II was implemented in Northern Rock

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<sup>50</sup>National discretion refers to the authority a bank regulator has in any country to apply all or part of the BCBS recommendations in its jurisdiction.

(including all of the advanced approaches of the accord), why did Basel II fail to prevent the bank from shutting down? Why couldn't it even alleviate the size of the damages?

Demirguc-Kunt et al. (2013) studied the relationship between bank capital and the stock return of the underlying bank before and during a crisis. In their study, they raised two questions: will a crisis affect the stock return of a bank and whether the level of the bank's capital plays a role in that effect. They used three concepts of "bank capital." These concepts were leverage, total assets and risk-based capital as calculated by the Basel accords. They used the first two concepts as a proxy of bank's capital because of the criticism of Basel II of relying on rating agencies rating to arrive at the capital adequacy ratio. According to the authors, the total assets or leverage are more relevant to the investors than the Basel II concept. In their study, they found that before a crisis, the bank's capital plays no role in determining the stock return irrespective of which concept used. At times of crisis, they found that stocks return performance were strongly correlated to the strong capital position defined by total assets or leverage rather than the capital defined by Basel accords.

I now move to the studies that criticize Basel II for its shortcomings during financial crises. Goodhart and Persaud (2008) critiqued Basel II for its inability to prevent financial crises due to its lack of measures to prevent cyclicity. As we explained earlier in the chapter, cyclicity relates to the reliance on rating agencies to determine the risk weight for exposures to calculate the CRWA under the SA (Moosa, 2010). Basel II gives three alternatives to quantify credit risk-weighted assets that should be included in the CAR. One method is called the standardized method; as the name indicates, this method uses standard risk weights given by the BCBS for each grade of external rating. The other two methods rely on a bank's own internal rating and risk weights instead of using the ratings provided by the rating agencies. Moosa (2010) argued against the reliance on the external rating because of the relationship between external ratings and pro-cyclicity (as discussed in Section 2.2) of this chapter. Although other scholars such as Griffin (2008) and Goldstein (2008) share this argument against the reliance on external ratings, Moosa did not support his argument with numerical examples or other empirical evidence.

Griffin (2008), Wellink (2008), and Goldstien (2008)<sup>51</sup> shared Moosa's stance against the reliance on bank's internal models. They analyzed the use of internal models and attributed the credit crisis to the failure of internal models to predict the coming losses. However, they did not substantively explain how the internal models failed to predict the future losses, nor do they provide much detail on the basis of which such models could have predicted the losses. Internal models such as VaR existed long before the issuance and implementation of Basel II in developed and developing countries. It has mostly been supported by stress testing and back testing to enhance its predictability. If the models failed to *reasonably* predict the negative outcomes, it does not necessary mean that this is a drawback of the accord. It may indicate instead a failure of a bank to a) support the models with stress testing and back testing, b) ensure the validity and relativeness of the data, and c) validate the model parameters by an independent party (Jurion, 2001). The regulator should also share the blame for the deficiency of the bank's internal models to predict losses, as it is responsible for validating the model in the context of the bank's business model. The literature that discusses the internal models in the context of Basel II does not give real examples of a bank that incurred losses in a crisis because of Basel-based internal models, *ceteris paribus*. Lehman Brothers failed during the crisis of 2007; yet, was Basel II compliant and had adopted the advanced internal models of Basel II (i.e., the AMA, AIRB, and IM). Instead, the bank was found to have failed because of unethical management and board conduct, weak investments standards, unfavorable market moves, and misrepresentation of its financial statements (Azadinamin, 2013).

Another argument that may be made against Moosa, Griffin, and Wellink and Goldstein's attack on Basel II is that the banking literature tells us that prior to the 2007 crisis there were more than 80 financial crises, all of which occurred prior to Basel II and its standardized method for handling external ratings (Reinhart and Rogoff, 2008). Thus, the repetitive occurrence of crises tells us that there should be something more important than the methods of calculation that is to blame. (Persaud, 2009).

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<sup>51</sup> Goldstein (2008) also critiqued Basel II Accords for causing the crisis, as Basel II allowed banks to rely heavily on credit ratings by rating agencies, who themselves lack proper regulation and supervision.

Another weakness of Basel II that was exposed during the crisis of 2007 is its lack of regulation for liquidity and leverage. Basel II does not have any regulations that help banks withstand liquidity and leverage issues in the normal course of business, let alone during a financial crisis (Moosa, 2010; Goldstein, 2008). This argument has many merits, as the crisis reveals that the issues were not only with credit but also with liquidity and leverage (i.e., off balance sheet excessive exposures). However, Moosa and Goldstein's conclusions are not backed by empirical analysis of real or hypothetical examples that examine how Basel II would have prevented the crisis if the existing accord were augmented with liquidity and leverage requirements.

Griffin (2008) explained the reasons behind the credit crisis. He attributed the causes of the credit crisis to poor risk management practices, especially in the area of reputation risk, concentration risks, and liquidity risks. It is worth noting that none of these risks was covered in Basel II calculation of capital adequacy, nor did Basel III offer any solutions to Basel II's shortcomings in this respect. Griffin also shed lights on the problems with the credit rating agencies, their role in the financial crisis, and the failure of the banking supervision of securitization. Griffin's take on the reliance of Basel II on internal models is that these models lead to conflicts of interest. However, Griffin does not elaborate how reliance on models would cause conflicts of interests. If developed internally, internal models could cause conflicts of interest if they are developed without proper validation from regulators. Nevertheless, if the model is not developed internally, it is not clear how reliance on them would cause conflicts of interest. That is because the risks associated with internally developed models occur in the design of the assumptions, choice of stressed scenarios, the time horizon and materiality of the data, and the use of appropriate statistical measures to run the calculation of risks. In the absence of regulatory monitoring, a bank would naturally tend to underestimate the size of the risks that it is exposed to and subsequently underestimate the level of capital required for these risks. Developing the models externally could partially resolve the issue of conflict of interest; however, the risk still exists that a bank, with an ownership of models and their operations hands-on, could manipulate the size of risks. Therefore, criticizing Basel II from this angle might not reduce risk to the minimum level desired. The only viable mitigant of the risk presented by models is close validation and monitoring on the design and implementation of the models by the bank regulator. The

criticism should be focused on the role of the banking regulator vis-a-vis the internal models and not on the usage of the models per se.

Griffin argued that one of the reasons behind the crisis is the lack or shortage of information. The disclosure requirements under Basel II combined with the accounting disclosure required by IFRS 7 were so detailed and prescriptive and were all disclosed in the banks' annual reports. Thus, Griffin's (2008) claim about a lack of information is not warranted. He concluded that Basel II implementation would enhance risk management in banks, which contradicts his claim that Basel II did not properly address concentration, liquidity, or reputation risks.

Rodriquez (2002) criticized Basel II for contributing to a less stable banking system, let alone preventing a crisis from occurring, by being so "complex and detailed." Likewise, Doerig (2003), Topping (2008), and Kaufman (2003) agreed with Rodriquez that a one-size-fits-all bank regulation does not have the capacity to prevent a crisis. Topping indicated that a bank regulator should take the following variables into account when designing its regulation (at a minimum): bank size (by assets or equities), risk appetite, strategy, and assets mix. He also argued it is only when a bank regulator addresses these variables for each bank and customizes its regulation accordingly that a crisis can be prevented (2008).

Hasan and Dridi (2012) examined the impact of the global crisis on the Islamic banks as compared to the conventional banks. The parameters of examination were the profitability, credit growth, assets growth and external rating. The conclusions derived in their study is that Islamic banks business model are nor prone to create bubbles like that at the conventional banks and the business of the Islamic banks are more related to real economics which makes them less susceptible to financial crisis. I find two problematic issues with this study, one with the data and the other with the conclusions derived from the data. the study gathered information from Islamic banks in different countries ( Malaysia, Bahrain , Kuwait, etc.) and identified indicators for profitability, credit growth, assets growth, etc. and observed the the performance of this indicators at the time of crisis as compared to the previous periods (2007-2009). This is tricky because it is not practical to consolidate the performance of these indicators to form a conclusion. It is not practical because even though these are Islamic

banks licensee but there are huge differences between their business models as they are operating in different countries. The differences are due to the nature of the local banking system, the school of thoughts of the sharia scholars on each bank in each country, the level of capital, the nature of the credit focus ( i.e. is real or corporate focus), the level of investments abroad ( i.e. risk appetite of the bank to have a trading desk, investments in equities of financial and non-financials institutions, etc.). All these differences have to be catered for in order to accurately conclude that Islamic banks were impacted or not. For instance, we cannot say that an Islamic bank (A) did not suffer directly from financial crisis because it operates based on sharia principles. The true story is that the bank did not suffer from the crisis because the bank was not allowed either by the local regulator or the board of directors or the sharia schools to have investments beyond its border and the local focus is all on consumer loans. Thus, the impact of the crisis would not be direct on this, it might be indirect by the shortage of the liquidity, but that is another story. There are products that are totally banned in some Islamic countries due to different sects interpretation of sharia, but it is totally fine in Malaysia, for instance. Until now, there are products that are approved and transacted by the Islamic banks in Malaysia that are not acceptable, by sharia, in Bahrain. This makes the comparison between the credit growth of the bank in Bahrain and analysis tricky and not accurate unless an analysis is made to exclude these anomalies from the data to normalize it for comparison. Another issue with the study is should have compared the data at least three years before the crisis, say 2004, and then compare the results to the those of 2010. That would have given an evidence of the direct impact of the crisis on Islamic banks. I will cite only one evidence of how the particularities of each Islamic banking market were taken into consideration is that in the conclusions it stated that Islamic banks did not suffer a lot of loss in the real estate market. That is not true. Islamic banks in Bahrain and Kuwait has suffered a tremendous loss because of the real estate as they have heavily invested in the real estate before the crisis hits, and liquidity crunch erupted. Their real estate investments faced the same destiny of the subprime loans mortgages houses in the USA. If they keep them will continue to shrink in value and if they sell they would incur a discount in value. That is precisely why the regulator in Bahrain asked the banks after 2007 to spin off their real statement investment through establishing a real estate company to take a form of a subsidiary to avoid having the financial statements hit by the real estate movements. In sum,

this paper could provide convincing evidence that Islamic banks are less prone to financial crisis than conventional banks.

In summary, this section addressed the literature that examined the impact of Basel II on financial crises, particularly the one that erupted in 2007. Studies in the literature focused on either whether or not Basel II could prevent a crisis from occurring, or whether or not it could reduce or exacerbate the negative consequences of a crisis. Even though there are some studies that concluded that Basel II could prevent a crisis from occurring and reduce the negative results, the overwhelming majority of studies reached the opposite conclusion. Points raised by the opposition include Basel II's reliance on banks' internal models and external rating agencies in the SA, which exacerbated the undesirable results in the crisis. The deficiency in the literature is that all of the studies that criticized Basel II for being a cause of the crisis (i.e., because of its methodologies and loopholes) are theoretical in nature. There is no evidence that all of the banks that failed or were bailed out by the government during the crisis suffered financial losses because of Basel II. Specifically, there is no evidence that the internal models, such as VaR or any quantitative tool, caused financial losses during the crisis

#### ***2.4.4 Conclusion***

I found the literature does not support the idea that Basel II could reduce systemic risk because Basel suffers from pro-cyclicality. It has also been argued that it is difficult to design a standardized regulatory matrix for systemic risk across countries due to the lack of a validated model to quantify systemic risk. Finally, it should be noted that the literature does not have a country-specific real example of how a bank regulator approached systemic risk in light of Basel II implementation, which this study seeks to analyze.

In regard to the impact of Basel II on risk management practices, we found that risk management was defined differently in different studies. These studies could be grouped into three categories, according to the perspective of risk management under study: risk tolerance, lending behavior, and portfolio risk and solvency. The dominant conclusion from these studies is that capital regulations do not alter bank lending behavior or loan portfolio composition. There are two shortcomings in the studies. First, the literature does not address

how Basel II can enhance the risk management *functions and practices* in banks. It does not address how stringent minimum regulatory capital would help establish robust risk management frameworks and which of Basel tools could achieve that. Secondly, most of the studies either examined the impact of Basel 1 or were conducted prior to Basel 1. I found that the studies in the literature do not support the idea that capital regulations help curb a bank's management appetite for risk. Furthermore, there is a shortage of studies on banks in Basel II countries that directly discuss the experience of these banks with Basel II implementation during the crisis.

## Chapter 3. A Conceptual Framework and Research Methodology

The purpose of this chapter is to describe a theoretical model for banking regulation in relation to Basel Accords implementation. This chapter also explains the methods of the research project and chapter is divided into three parts. Part 1 describes the philosophical underpinnings of the research project. Part 2 describes the conceptual framework of Basel Accords regulations and supervision. Finally, part 3 describes the research method used in this project and explains the reasons for selecting ethnography as the research method. This is followed by a description of the data collection tools and analysis<sup>52</sup>.

### 3.1 Introduction

As a risk manager at a financial institution who is in charge of Basel implementation in a Basel Accords environment of banking regulation, we have been intrigued by the theoretical basis of the design of Basel Accords. The objective of this study was to investigate a theoretical model in the literature that might shed light on how the accords were designed. I juxtapose the actual implementation with a theoretical model that explains the accords adoption and implementation by regulators in light of the deficiency of the underlying theoretical model. The chapter is split into two parts. Part 1 discusses regulation theories via three sections. Section 1 discusses the “positive economics” theories of regulation, which addresses why and how banks *are* regulated. Section 2 addresses the “normative economics” theories of regulation, which addresses how and why banks *should* be regulated. In section 3 we discuss the neo-institutionalism theory. In Part 2, we move to a discussion of the research project. Section 4 illuminates the research design, and section 5 discusses the regulatory framework adopted in this research.

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<sup>52</sup> Part 1 of this chapter has already been published : “Jaffar Mohammed Ahmed , (2016), "A conceptual framework for the Basel accords-based regulation", Journal of Financial Regulation and Compliance, Vol. 24 Iss 1 pp. 90 – 103”

## **Part 1: philosophical underpinning and conceptual framework**

### **3.2 Theories of Banking Regulation**

A researcher creates and maintains a paradigm of the phenomenon or the reality underlying his inquiry. This paradigm is defined as a set of perceptions, beliefs, and assumptions that determine the approach and tools adopted by the researcher in their process of inquiry. The process of inquiry starts with an examination of the ontological beliefs, i.e. the *reality of the phenomena*, followed by a description of *how to go about discovering that reality* and then with the design of the methods (i.e., epistemological beliefs).

With regards to ontology, there are two positions that a researcher may take: nominalism or realism. Nominalism assumes that no real structure of the objects under study exists in the world; there is only what the individual perceives them to be. There are no “real” objects or phenomenon but only names or tags that social participants perceive them to be. In a society, for instance, the nominalist perspective rejects the idea that there is a real solution to a social phenomenon; the solution, according to the nominalist, depends merely on the perception of the social participants with regards to the problem and how they choose to go about solving it. Realism, on the other hand, asserts that a real structure of the object under study exists and that “*reality*” exists independent from individual cognition (Willison, 2002). This means that in a real description of a social phenomenon or problem exists, as does a defined solution to it (even if social participants may not yet recognize it). If we relate these two positions to the issue of banking regulation and supervision, we understand that a nominalist would not look at it universally; his analysis of the need for regulation and supervision, its design, and the methods of implementation would be based on his understanding of the parties or social participants involved in the regulation and supervision sphere. Furthermore, the peculiar characteristics of the participants (i.e., regulator and the regulated entities) would also play a role in the outcome of the assessment of the phenomenon; such characters might include gender, the level of education, geographical attributes, and political environment and association. A realist, on the other hand, would approach regulation and supervision differently, as per the above definition as well. According to the realist, none of the peculiar attributes and the participant’s cognition change the fact that such phenomenon may only be approached and resolved via certain measures and tools.

With regard to epistemology, there are also two positions: positivism and anti-positivism. Positivism consists of studying the patterns and causal relationships amongst the constituents of social phenomena via scientific methods in order to prove these relationships. A positivist's definition of knowledge is that it can only be verified using scientific, quantitative methods. Anti-positivists, however, reject the notion that knowledge is only recognized if validated scientifically. Hence, an anti-positivist rejects the notion of studying patterns and causal relationships between the elements of social phenomenon in order to understand a social world. Anti-positivists accept the notion that an understanding of a social world is only feasible if the researcher does not take an "observer" position but instead works from within the world to understand the perceptions, beliefs, and concerns of this world's constituents. To relate these positions to the phenomenon of banking regulation and supervision, we may understand from these definitions that a positivist maintains the position of the observer; quantitatively studying the phenomenon and analyzing it through assessment of the variables and their interrelationship(s) in order to form a conclusion about the best course of action. An anti-positivist, on the other hand, would participate and come along with the parties involved in banking regulation, either through direct work or through immense immersion into the constituents of the banking regulation and supervision phenomenon; for instance, an anti-positivist might work in a bank or at the central bank, or direct soliciting their views and feedback.

Before we illuminate which ontological and epistemological position we adopted in this study, we need to describe firstly how we conceptualize banking regulation and supervision. The nature of banking regulation can only be well understood by understanding the nature and role of banking in society. The public entrusts their money, and financial transactions with banks and banks use this money, along with its own money that has been funded by shareholders, to invest and make loans. Banks profit on the spread between the money lent and the money received. Failure on either part, the public or the banks to honor its obligations toward the other results in disruption of the system. Each of these parties has their own objectives and motivations, and if they are not properly aligned, then conflict and disruption ensue in the economic system and society as a whole. Therefore, we envision banking regulation and supervision as a social context. Social context is defined as:

Human social environments encompass the immediate physical surroundings, social relationships, and cultural milieus within which defined groups of people function and interact. Components of the social environment include built infrastructure; industrial and occupational structure; labor markets; social and economic processes; wealth; social, human, and health services; power relations; government; race relations; social inequality; cultural practices; the arts; religious institutions and practices; and beliefs about place and community.(Barnet and Casper, 2001, p.465)

From this definition, we envision banking regulation and supervision as a social context constructed by the interactions, negotiations, and production of meanings of the constituent elements (Willison, 2002). It is a social context comprised of the regulated (i.e., banks), the regulator, shareholders, depositors and debtors, and the public. The behavior and action of each of these elements are influenced by banking regulation and supervision. For example, when the regulator designs the regulations they will be influenced by the technological infrastructure at their site, the technological infrastructure at banks, the competence of the bankers, the political climate of the country, their own strategic economic objectives, etc. These are, in turn, influenced by the power culture of the country. Furthermore, failure of one or more of these elements to reach its own objectives could potentially lead to a negative impact on another element, for example, if a bank failed to remain solvent and liquid then its depositors would be negatively impacted.

Banks and regulators view regulation and supervision differently. Banks view and react to regulations from a perspective of maximizing profit, growing lending and investment portfolios, increasing their market share, outperforming their rivals, attracting more deposits, etc. The priority of these perspectives varies across banks and depends on the cultural attributes of its board of directors and management, even as they may generally be common attributes among all banks in the same country. Regulators, on another hand, view and design regulations from the perspective of the macroeconomic and political climate, the impact of policies on the general public, and the charge to avoid panic and distrust in the system. If the different perspectives of the regulator and the regulated are not properly aligned, communicated, and understood by one another, then the regulation and supervision program might be ineffective. I can align them by understanding and explaining the “individual conciseness and subjectivity within the frame of reference of the participant as opposed to the observer of the action” (Burrell and Morgan, 1979, p. 28). Thus, insights from the social

reality of this context and its elements can only be gathered by appreciating the perceptions, views, concerns, objectives, constraints, and meanings that both parties ascribe to a negotiated phenomenon.

Banking regulation and supervision should not be studied independently of the cultural attributes and environment of banking in a country. Thus, I should not confine my study of banking regulation to a set of quantitative thresholds and rules. Nor will we have the full picture if we merely expand the lens of inquiry to the relationships between these variables or the effectiveness of these thresholds and rules in achieving the set of objectives that the regulators outline. To account adequately for the cultural and political context of banking regulation, a broader set of perspectives is needed.

In light of the above philosophical underpinning, we adopted a nominalist ontological and anti-positivist epistemological position in this research project. I was persuaded to adopt these positions by my practical experience in a bank handling risk management and Basel Accords implementation in more than 10 countries. I found tremendous variations amongst these countries in their conceptions of regulations, objectives of regulations, and various definitions of regulatory and banking failure. For the same reason, how each country designed its supervisory activities differed. With such international divergence, we deemed difficult to philosophically study Basel II regulation and supervision as an abstract and isolated from my involvement and experience in Basel regulations context.

I found that a major part of the banking regulation literature follows the positive economic theory's views towards regulation<sup>53</sup>. Economic phenomena are explained in relation to a dichotomy between positive and normative economics. Positive economics is a branch of economics that studies the causal relationships between behavioral and economic variables. In this literature, theories of banking are discussed within the scope of general economic regulation theories. For instance, theories that explain the rationale for regulation are an extension or application of a theory that explains the need to regulate a merchandising firm (Freixas and Rochet, 2008). Banks share some attributes with agents or players in the

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<sup>53</sup> We will refer to it as “positive regulation” throughout the text as opposed to “normative regulation,” which follows the normative economic views of regulation.

economy on which the general economic regulation theories are applied, but banks also differ in many respects. For example, banks accept deposits, make loans, act as intermediaries in financial deals, etc. These are functions that are not necessarily entrusted to other agents. These differences should be addressed to formulate one or theories that positively and normatively explain banking regulation. Theories of economic regulation are defined as “explicit legislative and administration control over.....any facet of economy” (Posner, 1974). In the following sections, we discuss public interest theory, cultural theory, administrative theory, and neo-institutionalism theory. In discussing these theories, we will indicate the applicability of each to banking regulation in general, and to Basel-based regulation in particular.

### ***3.2.1 Positive Economic Theories of Regulation***

Theories of positive economics explain an economic phenomenon by focusing on its nature, its reason for being, and its functions. In discussing banking regulation as an economic phenomenon, a positive economist addresses questions of how banking regulations are designed: Why do we need to regulate banks? Why are banks regulated in their current form? This section discusses three subsets of positive economics including public interest theory, administration theory, and cultural theory.

#### **3.2.1.1 Public Interest Theory**

The public interest theory of regulation is a theory that views regulation and supervision from the perspective of public interest only. It focuses on general public interest as opposed to the interest of lobbies, political parties, self-interested investors, etc. This theory views regulation as a benevolent hand that helps the public survive amongst self-interested groups of individuals or firms (Baldwin et al., 2012).

Public interest theory holds that economic regulation is supplied in the marketplace in response to a demand by the public to protect their interest from malpractice and misconduct

from market power, externalities,<sup>54</sup> and information asymmetry<sup>55</sup>. (Freixas and Rochet, 2008). It is spurred on by the behavior of free market players in the form of agency problems in which market players pursue objectives that are detrimental to the shareholders and the public interest (Moran, 1986). A government is expected to intervene via structured regulation to ensure that the pursuit of self-interest by the regulated entities does not encroach on the interests of the public. According to this theory, regulation should be designed to ensure that public interest is hedged against imperfect competition, unbalanced market operation, missing markets, and undesirable market results.

The principles of the public interest theory of regulation have been applied to a wide range of economic issues, including anti-monopoly legislation (Baumol, 1977; Braeutigam, 1989), maintaining market equilibrium and anti-excessive competition legislation (Kahn, 1988, pp. 172-178; Hertog, 1999), and information asymmetry (Hirshleifer and Riley, 1979; Nelson, 1970; Darby and Karni, 1973; Akerlof, 1970).

Public interest theory has been applied to financial regulations and has been used to justify the imposition of capital-based regulations. Regulators justify their intervention in the banking sector through capital-based regulations to protect depositors' money in the banks. Loss of deposits is an important externality that bank regulators seek to reduce because of the significance of its consequences (Santos, 2001). I have not come across a theoretical model that explains *how* capital-based banking regulation *is* designed in light of public interest theory. Safe banking implies that banking regulations would reduce the possibility of the eruption of a financial crisis and reduce the information asymmetry between banks and shareholders. This would eventually reduce systemic risk. In addition to the reduction of systemic risk, individual banks and the entire banking system are expected to be “safer” within this regulation.

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<sup>54</sup> Externality: a cost or benefit that occurs to an individual or a firm who did not choose to incur such a cost or benefit. In economics, there are two types of externalities: positive and negative. Negative externality is the loss a depositor incurs because of a bank's bankruptcies, for instance.

<sup>55</sup> Information asymmetry: in decision-making, one party has more or better information than the other. In an economics setting, information asymmetry occurs when the buyer and the seller do not have access to the same level of information.

### 3.2.1.2. Administrative Theory

Administrative theory deals with regulations from the position of a government's inherent control on economic activities and on the conduct of firms. There are three strands of the theory: a) tools for administration, b) data for administration, and c) implementation of the tools. First, regulation as an administrative tool requires having various classes of tools that are specifically customized to each economic phenomena or problem. Applying the wrong tool to the wrong economic problem results in a regulatory failure. For example, a government that seeks to control a monopoly problem in its country via a "price control" tool would aggregate solid empirical evidence on the suitability of this tool to circumvent the monopoly problem. Breyer (1982) and Hood (1984) attributed the failure of economic regulation to an administrative failure to match a control tool to an economic problem or phenomena. In this context, we can translate this thinking to Basel-based banking accords, where the Basil Accords are a tool adopted by regulators to control the capital adequacy problem facing banks.

Second, aspects of this theory relate to the type, volume, detail, and periodicity of information gathered by the regulator from the regulated entities. It views regulation from the angle of the administrative power needed to learn from and react to the intelligence. The regulator uses this bank information to recommend or devise a plan to rectify malpractices in the regulated entities. This aspect has been applied and studied in the field of organizational behavior, and information gathering by the regulator turns out to be a monotonous, symbolic, box-ticking exercise that is sometimes unnecessarily strict (Wilensky, 1967; Feldman and March, 1981). It has also been found that the regulated entities tend to report information that is too arcane and complex to enable the regulator to take action. There is a deficiency in the application of this aspect of administrative theory to banking regulation and the intelligence gathered by the banking regulator. This theory does not address how useful the regulator finds the periodic reporting submissions in making effective and swift decisions about regulation and supervision, nor does it consider the value that regulatees find from the reporting requirements. Finally, the theory does not address the economic benefits of adhering to the imposed questions or how the regulator utilizes the gathered intelligence.

The third aspect of this theory examines the issues that regulatory bodies face in implementing regulations. It demonstrates that regulation is an administrative tool in the hands of the government and that regulatory implementation failure might be due to lack of expertise and specialization in the regulatory staff. Possible reasons for why the regulator may fail to act swiftly and effectively in light of the submitted information from the regulated entities include lack of proper coordination, lack of communication, or the lack of comprehension of the submitted information due to a lack of specialization or appropriate training. A lack of expertise would render the regulation redundant and dangerous (Pressman and Wildavsky, 1973). It could be dangerous for the regulator if the regulated entities submit all of the required information (i.e., information intelligence) to the regulator and the regulator failed to fathom the indications in the reports (e.g., due to lack of specialization or competence) and thus fails to act swiftly. The regulator would then need to justify and explain the eventual crisis in light of the submitted information.

As in the case of the first and second strands of this theory, a theoretical model does not yet exist that applies this strand to the theory of banking regulation. There is a lack of conceptual frameworks for studying the alignment between the level of expertise at banks and that of the regulator, concerning the complexities of the banking system. These gaps are important to be studied and theoretically conceptualized. Let us consider an example that uses administrative theory to justify banking regulation and supervision, for example by gathering intelligence and imposing a tool such as the Capital Adequacy Ratio (CAR) to control the capital at risk. If there is a gap in expertise between the administrator (i.e., the regulator) and the banks, then the regulator might not appreciate the severity of the implications of what the detailed CAR calculations reveal. The regulator might also fail to recognize potential manipulations in the calculation. This manipulation of the CAR reports and the subsequent oversight failure could lead to a disruption in the banking system if the regulator is not cognizant, and this would render the regulations useless.

### 3.2.1.3 Cultural Theory

Cultural theory is a theory that focuses on the impact of the cultural features of each nation on its regulatory and supervisory style. National peculiar attributes such as (inter alia) traditions, values, political systems, and demographics play major roles in designing and

implementing regulations on any social or economic activity. According to this theory, it is difficult to standardize regulations across countries. Cultural attributes influence the design and implementation of regulations. The impact of national culture extends to all regulations in a country. Some nations regulate their financial systems in a conceptual framework similar to the way that they regulate trafficking, educational system, etc. (Moran, 1986).

For example, Ogus (1994) and Williamson (1985) found that the culture in the United Kingdom is based on mutual trust between the regulator and the regulated, which leads to the design of regulation policy with minimal “checks and balances” and is thus focused on self-regulation. In the United States, however, there is an adversarial and distrustful attitude between the regulator and regulates, which results in a large number of checks and balances including prescriptive rules and pluralized perspectives (Jing and Graham, 2007; Hofstede and Vogel, 2001).

The principles of the cultural theory have been applied to health, work safety, (Kelman, 1981), and environmental protection (Vogel, 1978, 1983a, 1983b), but we could not find an account of the application of cultural theory to banking regulations, particularly with regards to capital regulation and Basel Accords. The Basel Accords, as well as other papers issued by Basel Committee of Banking Supervision (BCBS) such as those related to corporate governance and board and executive remuneration, have been adopted by many developing and developed countries. In the implementation of the requirements in these documents, countries would inevitably encounter requirements that conflict with the cultural sphere of their country. For instance, BCBS issued a guidance paper on requirements for a bank’s executive management and board remuneration. One requirement is that a bank must disclose the breakdown of the monthly and annual remuneration package of each executive. This requirement has been viewed in the Gulf region as a breach of the executive’s personal life and information. While it might be acceptable in the West for such information to be disclosed, it is considered very sensitive to do so in the Gulf. Banks in this region heavily protested this requirement when their central banks announced it, and they successfully lobbied against its implementation. To quell the resistance and to comply with the BCBS papers in spirit, regulators compromised and asked for the monthly and annual remuneration packages to be disclosed as aggregate figures without mentioning specific names. This small

example gives us insight into the importance of observing the country's culture while designing regulation and supervision.

### ***3.2.2 Normative Economic Theories of Regulation***

The focus of normative economics is on values or what the outcomes and goals of economic phenomena *should be*. In discussing banking regulations as an economic phenomenon, positive economists focus on explaining the ways that banking regulations are carried out and expounding upon the reasons why they are carried out in their current form. Normative economists focus on how banking regulations *should be* designed and implemented to achieve the regulator's objective (e.g., increasing competition and reducing the information asymmetry cost). From this definition and in the context of banking regulation, normative economics should focus on what regulations and supervision would achieve, the banking regulator's objectives such as reducing systemic risk, enhancing risk management at banks, and protecting depositors' money.

In the professional and academic literature, discussion of Basel II includes a heavy focus on the positive economics view of regulation. Basel II is merely a concordat amongst developed countries that describe recommendations perceived to be the "cure" for the banking crises that have hit banks in these countries since the 1970s. The focus in the literature is dichotomous: researchers are either proponents or opponents of Basel II. Researchers who oppose Basel II and its capital-based regulation have numerically studied how the accords in their existing form cannot achieve the regulator's objectives within a certain context. However, they do not provide an alternative theory for how banks should be regulated if Basel II regulations cannot achieve their objectives.

### ***3.2.3 New Institutionalism Theory of Regulation***

Thus far, we have discussed theories of banking regulation to understand why banks are regulated, but we could not find theories that help us understand how banks *should be* regulated. I next discuss a theory that might help us understand the institutional forces that influence how a regulator chooses a particular policy or regulatory tool. In this section, we use the concepts of neo-institutionalism theory to understand the effect of institutional forces

on banking regulation in Bahrain. By institutional forces, we mean both the influence of the regulator on the regulated entities (i.e., banks) and the influence of these entities on the regulator itself.

New institutionalism theory (also referred to as *neo*-institutionalism theory in the literature) uses a sociological lens to explain the relationship between institutions in a given context. There are various strands of neo-institutionalism theory such as sociological, normative, historical, etc. The normative strand of this theory is of most relevance to this study. This theory describes how institutions behave, react to regulatory rules, and interact with each other beyond economic norms or rules. For example, in an economic setting such as a price regulation, the institutions involved in this setting are the firms that offer the goods or services, the customers of these firms, and the regulator. The regulators of these firms impose rules and constraints such as the maximum price that a firm can ask for its products or services. New institutionalism theory studies many elements, such as how do these firms react to the price limit? Will the firms collaborate or compete as they react to the price limit? Will the regulator consider non-economic factors when designing and implementing the price limit? How will the regulator interact with the firms as they consider their reaction? These multilateral interactions are also called the “rules of the game” (North, 1995).

These multilateral interactions can similarly describe banking regulation. The new institutionalism theory studies whether the banks’ regulators consider the sociological reasons behind designing rules and regulations, how banks respond to these rules, how banks interact with each other within these regulations, and how banking regulations are set, implemented, altered, or dramatically changed. At this point, there are two major questions. First, because new-institutionalism theory’s focus is on the sociology of relationships that entail values, beliefs, norms, etc., then what is the difference between it and the cultural theory discussed in subsection 3.1.3 above? Second, why would we need to discuss neo-institutionalism theory in the context of this study? I answer these questions below.

With regards to the difference between the cultural and new institutional theory, there is some common thinking that is found in the two theories (Grendstad and Selle, 1995). These commonalities stem from the role a national culture plays in shaping the regulation policy

and behavior of the regulator as a whole. The cultural theory of regulation narrowly addresses this role without delving into the differences between the types of industries or institutions within the same nation. For instance, a cultural theorist might explain how regulation in France is protective and prerogative (Hayward, 1983), while in the USA it is adversarial and coercive (Vogel, 1983; Moran, 1986), and in the UK it is based on cooperative self-regulation and non-prescriptive regulation (Jing and Graham, 2007; Ogus, 1995; Williamson, 1985). The theory does not, however, explain the variations between firms within the same industry or even across industries; it does not examine whether the influence of culture is more or less prevalent in banking regulations versus in health or safety regulations. These variations are addressed by new institutionalism theory. Thus, cultural theory is construed as an initial form of new-intuitionism (Grendstad and Selle, 1995).

The second question asks why a discussion of neo-institutionalism theory is needed in this chapter. A partial answer has already been discussed, namely that cultural theory explains only the broad influence of culture on regulation. The Cultural theory does not explain the choice of a particular regulatory policy, its implementation and whether the implementation achieves the regulator's objectives. Regulator's objectives hinge on a myriad of factors besides culture including how the regulated entities interpret the appropriateness and logic of the given policy. New-institutionalism theory can explain how the understanding of the applicability and repercussion of the regulation policy affects the behavior of the regulated entities. The logic of appropriateness of a regulation policy means that actions by the regulated entities are "matched to situations by means of rules organized into identities" (March, 1994). This concept of appropriateness in new institutionalism theory has been used in the design of this study's data collection instruments, including the questionnaires and the interview questions. In particular, the concept has been applied to the relationship to the appropriateness of Basel approaches and capital-based regulation for each bank, and to understand how a bank acts towards any mismatch between the regulation and the real situations that it encounters.

As indicated above, each theory has partial applications to banking regulation, and this applicability varies. It narrows when we discuss Basel II as in the case of cultural theory and extend this to the case of administrative theory. The conclusion that can be drawn from this

theoretical discussion thus far is that it is not useful to rely solely on one theory to explain capital and Basel regulations. In light of all the theories discussed above, we developed a theoretical model that delineate a conceptual framework for banking regulation based with Basel Accords. This is discussed further below.

### 3.3 Banking Regulation Theoretical Conceptual Framework

The following diagram depicts the concept that we developed from practical experience and in light of the theories indicated earlier in the chapter.

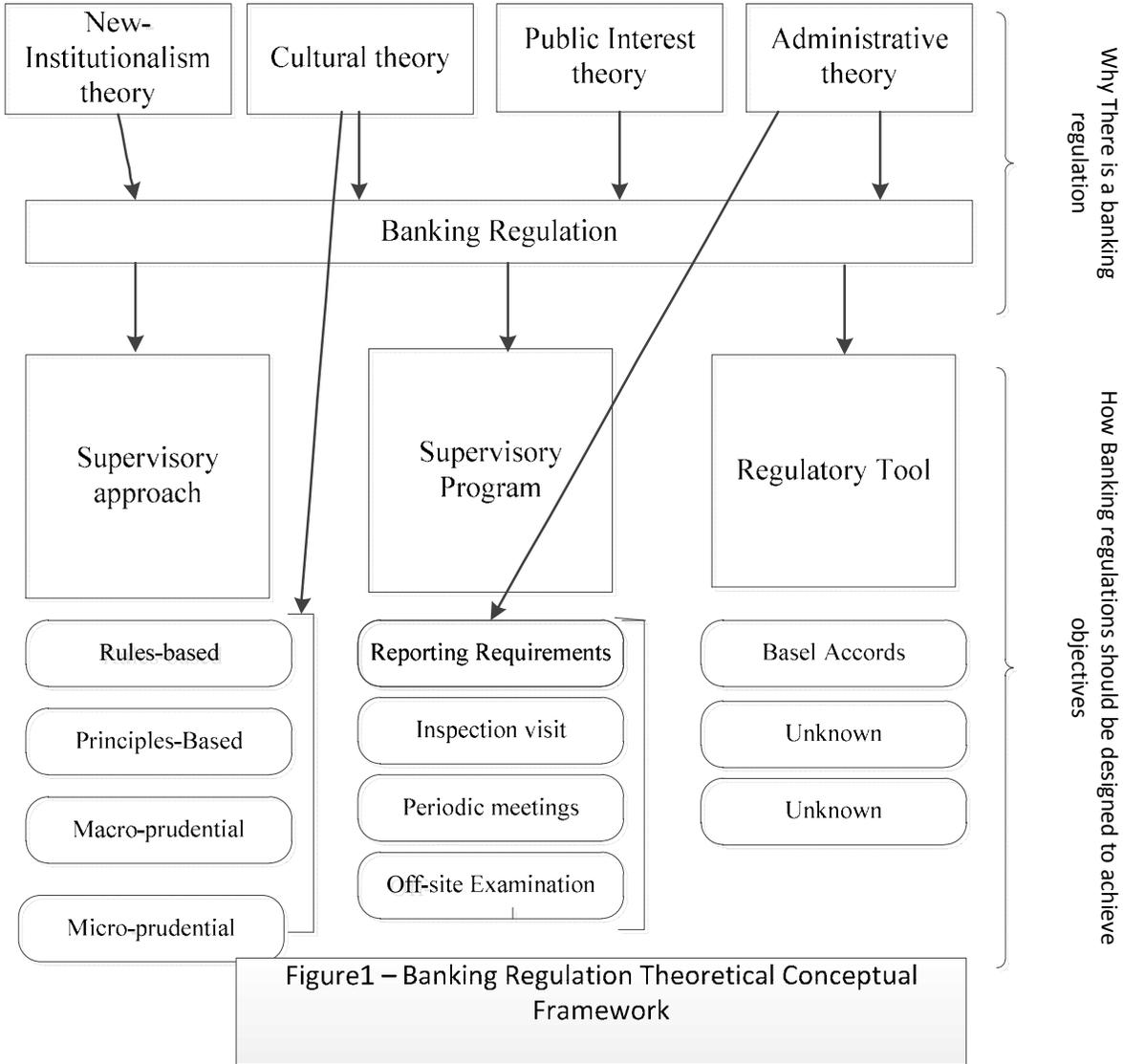


Figure 1 illustrates the application of the theories we discussed in the sections above. As indicated, banking regulations in practice cannot be completely explained by one theory.

Public interest theory, cultural theory, administrative theory, and new-institutionalization theory collectively provide an explanation of the existing banking regulations and supervisions. Banking regulations manifest themselves in three ways: a regulatory approach, a supervisory program, and regulatory tools. The regulatory approach can be classified into two categories, based on its economic scope: micro-prudential and macro-prudential regulations. There are two sets of regulation methods, rule-based regulation, and principle-based regulations. The economic and methodological scopes are not mutually exclusive. These approaches can be applied in parallel, i.e., a regulator might apply a micro-prudential rules-based regulation or macro-prudential rules-based regulation. In addition, a combination within the same category is also possible, i.e. a regulator could design its regulations by addressing the micro and macroeconomic factors but from a principle-based scope or a rules-based scope.

### ***3.3.1 Rule and principle-based regulation***

The rules-based approach to regulation implies that bank regulators dictate prescriptive, detailed rules and processes to the regulated. In a rules-based setting, there is little regard given to the peculiarities of each bank, such as a given bank's size and business model. Banks are expected to abide by these rules, and any exceptions they have must be justified and approved by the regulator. In contrast to rules-based regulation, in principles-based regulation, the regulator outlines to the banks the principles governing their conduct and the desired outcomes. The regulator would consequently have to ensure whether the banks have met these expectations. In this approach, there is greater room for direct communication and dialogue between the regulator and the regulated. There is also a shift between this approach and the rules-based scheme that changes the emphasis from the rigorousness of the rules to the rigorousness and competencies of the regulator to *judge* whether the expected outcomes have been met, and (most importantly) to devise a plan to work together with the bank to get things done correctly.

### ***3.3.2 Micro- and Macro-Prudential Regulation***

At the beginning of the discussion about standardized financial regulation that emerged in light of the 1970s and 1980s financial crises, the focus was on micro-prudential supervision (Kapstein, 1991). At that time, the term “micro-prudential” was not popular in the banking literature. This concept was only established after the financial crises of the 2000s and 1990s. The micro-prudential approach can be defined as a model of supervision designed on the premises that the entire banking system can be sound if the individual banks are safe and sound, as assessed through a capital adequacy ratio. It has been argued that this approach caused and escalated systemic risk in the banking system because it disregarded the correlation between the decisions taken by banks and their impact on the price and interest rate levels within the system and endogenous aggregated risks of this correlation (Persaud, 2009).

This argument has a lot of merits. Indeed, when BCBS analyzed the 2007 crisis, it concluded something similar and included two new measures in its Basel III suggestions:

Countercyclical Buffer and Systemically Important Bank Buffer Macro-prudential regulation, on the other hand, is defined as:

The assessment and monitoring of the strengths and vulnerabilities of financial systems in terms of macro-prudential indicators comprising both financial soundness indicators and other macroeconomic indicators such as GDP growth and inflation along with information on the structure of the financial system, qualitative information on the institutional and regulatory framework, particularly through assessments of compliance with international financial sector standards and codes, and the outcome of stress tests. (Sundararajan et al., 2002)

The difference between micro-prudential regulation and macro-prudential regulation is that the former primarily focuses on the safety of the banks and implicitly presumes that the safety of the parts will guarantee the safety of the whole. Macro-prudential regulation assesses the soundness and safety of the banking system by examining the economic indicators of the financial sector (e.g., implications of GDP, employment, interest rate, etc.). The difference between the two approaches is that macro-prudential regulation is intended to reduce systemic risk while micro-prudential regulation is intended to limit the idiosyncratic

risk of banks (Crockett, 2000; Chul, 2006; Borio, 2003). It might be optimal to marry both regulations to enhance the financial stability of banks, according to Crockett (2000).

Upon examination of the definition of each approach and having enumerated their shortcomings, it seems intuitive and optimal to marry the four approaches. There is a consensus in the literature that rules-based regulation and the micro-prudential approaches cannot create sound financial and banking systems; the recent banking crises revealed their inability to do so. To the best of my knowledge, there is no research paper that has discussed the viability of marrying the four approaches.

### ***3.3.3 Supervisory Program***

The oversight activities of the regulator are meant to ensure that banks adhere to all of the issued rules and regulations. The regulator also has to assess their performance, governance, and risks. These activities include:

Reporting requirements: periodic financial and non-financial reports submitted by banks to the regulator.

Inspection visit: on-site periodic visits by the regulator to conduct substantive assessments of the performance and risks management of the bank. It includes an assessment of controls, systems, and records.

Periodic meetings: prudential meetings held between the central bank and the bank management or board of directors.

Off-site examination: off-site oversight activities to identify, assess, and monitor regulatory returns, audited financial statements, compliance matters, and provide an overall assessment of the risk management and financial performance of banks.

### ***3.3.4 Regulatory tool***

Banking regulation includes several areas such as capital regulation, corporate governance, anti-money laundering, etc. I use regulatory tools to refer to capital regulation only. The Basel Accords are regulatory tools adopted by countries to curtail the risk that might impinge upon bank capital. I say that Basel II is merely a tool because CAR is not an end in itself. It is a threshold that guides the regulator to the areas of weakness in the bank's capital or excessive risks in its credit or market portfolios. Similarly, ICAAP in Pillar 2 is not an end in itself either. It shows the regulator how a bank quantifies its risks and how its systemic risk, risk management, internal controls, and policies restrain these risks. The "unknown" in figure 3.1 refers to the fact that Basel Accords are merely a tool that is adopted by tens of countries; however, this does not mean that Basel Accords define how banking regulations should operate. There is voluminous literature on how Basel Accords failed to achieve its own objectives in the 2007 crisis. Thus, in my opinion, research is needed to devise another tool for banking regulation. This new tool should be conceptually theorized while also considering the cultural attributes, institutional features, and the political and economic sphere of a country.

In conclusion, banking regulation and supervision cannot be explained by one or even a couple of theories. It cannot be justified on the ground of one discipline only, such as the economic characteristics of the operating environment. Banking regulations and supervision should be designed to protect the financial system from the crisis (i.e., an economic motivation). It should also be deliberated based on the unique cultural attributes of the banks' operating environment. Furthermore, a banking regulator should diligently study the institutional characteristics within each country prior to the imposition of the particularities of the rules and regulation.

I found that Basel II regulations were not theoretically conceptualized or explained in the literature by more than limited economic backgrounds such as reducing systemic risk and protecting depositors' money.

Here, we provide a theoretical framework for banking regulation and supervision that caters to differences in political, cultural, economic, and institutional national attributes. This framework could be envisioned as a blueprint for the design of rules and a supervision program that are not confined to Basel II requirements.

## **Part 2: Research Methodology**

### **3.4 Research Approach**

This research adopts a qualitative approach to achieve its research objectives. The qualitative approach is adopted because the aim of this research is to examine Basel II regulation and supervision from the perspectives of the regulated parties, i.e. the bankers. To examine the impact of Basel II regulation through analysis of the financial information of the banks is theoretically possible but impossible in reality. This type of financial information is neither disclosed in the banks' annual reports nor accessible through interviews or surveys with a staff of the banks or the CBB itself due to confidentiality reasons. Also, if the information becomes available, then the analysis would be passive; it would not study and listen to the issues faced by the banks while implementing Basel II regulation beyond what the financial information conveys. I would only have an understanding of the bank's financial situation, whereas we are interested in understanding the experiences of banks, the values they ascribe to Basel regulation, the values they attribute to the CBB role in supervision and regulation, their frustrations and recommendations. This ultimate objective can only be optimally achieved through a non-parametric approach that includes interviews, questionnaire surveys, and case studies.

In this body of research, an interpretive qualitative approach is adopted. It turns to ethnography as a suitable qualitative method. This method was chosen "because of a need to study a group or population, identify variables that cannot be easily measured, or hear silence voices," which is better than using "predetermined information from the literature or rely on results from other research studies." (Creswell, 2013)

The regulation and supervision relationship between the regulator and the banks is a negotiation process. Evidence of that lies in the international implementation of Basel Accords. Prior to issuing its documents of standards and guidance in their final form, the

Basel Committee gave practitioners and academics a chance to study the documents and provide feedback. The Committee yielded, in some cases<sup>56</sup>, to the pressure exerted by banks on some of the requirements, they deemed unreasonable requirements, and typically they would not have succumbed to these pressures. International implementation of these accords has seldom been identical across countries. Each country takes from Basel Accords what “works best” for its banking and financial system. Countries may adopt Basel Accords in their entirety and impose additional rules, and we refer to these countries as “Basel Plus” countries. On the other hand, there are countries that can be categorized as “Basel Minus,” as these countries slice and dice the accords and take only the elements that they think are most feasible for their regulators and the banks they supervise. For example, such countries may adopt only the credit risk methodologies of calculating the capital required for such a risk, but choose not to adopt or to defer the adoption of the operational risk methodology. Lastly, there are “Copy-Paste Basel” countries that take Basel Accords exactly as they are and strive to implement them to satisfy the regulator in what is normally called a “box-ticking” exercise. As indicated above, before adopting any of these positions, a banking regulator in a country would take into consideration the size of the financial system, the banking system, the sophistication of the banks, the complexities of the banks’ activities on its soil, etc.

The negotiation process is inevitably influenced by the impacted parties’ different judgments, perceptions of values and benefits of the banking regulation and supervision and motivations. A regulator might be motivated to prevent panic in the system (Santos, 2001) whereas banks may be motivated to have more flexibility in extending credit and venturing into investments projects. These differences may be studied and examined by soliciting the perceptions and views of the regulator and the regulated, then analyzing the perceptions and values that both parties ascribe to banking regulations vis-a-vis Basel Accords. The purpose of adopting a qualitative approach is illuminated succinctly by Creswell (2013):

We conduct qualitative research because we need a complex, detailed understanding of the issue. The detail can only be established by talking directly with people, going to their homes or places of work, and allowing them to tell the stories unencumbered by what we expect to find or what we have read in the literature. (Creswell, 2013)

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<sup>56</sup> A recent relevant example is when the BCBS issued its paper on liquidity measures (later known as Basel III), and the Liquidity Coverage Ratio (LCR) was initially set at a minimum threshold level of 100%. Later on, the BCBS relaxed the ratio to be 70% with gradual increases to 100% by 2019.

### 3.5 Research Strategy

To be in a position to develop a “theory” about a group, an ethnographer has several methodological options for collecting the data needed, such as through active and close participation and observation of the group (Creswell, 1997; Fetterman 1998). This means that the researcher has to go to the field (namely the bank and central bank offices), and “observe” their actions, words, perceptions, etc. This option is not feasible for two reasons. First, due to the confidentiality and sensitivity of the information and documents exchanged in their workplace the central bank and/ or the banks do not allow researchers to sit in their offices and observe them. Second, for the purpose of this body of research, perceptions, values, and concerns cannot be solicited through mere observations and note taking but instead through discussions and questioning of the elements of the group.

Within ethnography, the second option for data gathering interviews. As previously indicated, due to the confidentiality and sensitivity of the information, interviews with bankers and regulators have to be formal in nature, conducted in a place where they feel sufficiently comfortable that they will reveal their concerns and perceptions, and should use pre-set questions. Regardless of the design of the pre-set questions, issues and topics raised in an interview may vary from one interview to another. The same questions might be phrased differently to be suitable to the interviewee’s education level and experience; the scope of the subjects to be covered during an interview and the level of elaboration sought could also be customized based on the time allowed from the interviewee and his/her subject matter knowledge and competence. This aligns to testify to what Hammersley and Atkinson (1995) have stated:

Ethnographers do not usually decide beforehand the exact questions they want to ask, and do not ask each interviewee exactly the same question, though they will usually enter the interview with a list of issues to be covered. (Hammersley and Atkinson, 1995, p. 151-152)

Data analysis is carried out inductively and deductively. Inductive data analysis occurs by moving from a particular point of view or stance to a general perspective, in an attempt to explore a theme in the data. Data analysis also occurs deductively, by attempting to link the explored theme to evidence in real life or in the literature, thereby validating the theme. The findings from these two phases are then discussed, based on the researcher’s experience and on the literature.

Researchers in the business discipline adopt a positivist approach to developing models and studying the impact of regulations, such as the minimum CAR, on the financial performance<sup>57</sup> of banks as reported in their financial statements. For example, Barth et al. (2004) assessed the validity of banking supervision and its relationship to banking stability, and Demircuc-Kunt and Detragiache (2011) assessed the relationship between the banking supervision and a “sounder bank.” They used the adherence to “Core Principles for Effective Banking Supervision” as an indicator for a sound bank. Klomp and Haan (2012) used the database of Barth et al. (2004) to assess the relationship between banking regulation and bank risk. They developed a model of 25 indicators of risk and found that banking regulation only affects big banks. Berger and Udell (1994) studied the association between risk-based regulation and bank performance through a US bank-level data and their own model.

Studies on banking regulation and the analysis of Basel Accords have generally adopted a quantitative, positivist approach. Researchers who studied banking regulation and supervision have not adequately approached the topic from an ethnographic point of view. The perceptions and thoughts of the bankers on what they think of the regulation and supervision program have not yet been explored in depth, including whether or not they perceive the supervision program to be practical and beneficial for their activities, or whether they have reaped the benefits claimed by the regulator.

For this reason, an ethnographic method has been chosen for this body of research. In this regard, we adopt the definition of ethnography proposed by Goodenough (1976):

The culture of any society is made up of the concepts, beliefs, and principles of action and organization that an ethnographer has found could be attributed successfully to the members of that society in the context of his dealings with them. (Goodenough, 1976, p.5)

Creswell (2013) also echoes this definition, for whom:

Ethnography is a qualitative design in which the researcher describes and interprets the shared and learned patterns of values, behaviors, beliefs and languages of a culture-sharing group. (Creswell, 2013)

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<sup>57</sup> As measured by certain indicators or ratios such as Return on Equity (ROE), Return on Assets (ROA), ratio on non-performing loans (NPL) to total credit portfolio.

By examining the above definitions, it becomes clear that the ethnographer could only formulate a “theory” about a certain group by examining the actions, opinions, perceptions, preferences, beliefs, and attitudes of its members.

The methods utilized in this research study are questionnaire surveys and one-on-one interviews. One-on-one interviews are confined to the senior staff of the banks in Bahrain who are directly involved in Basel regulation implementation. Questionnaire surveys are shared with the banks, and the CBB Interviews are used to gather information from the respondent bankers about real case studies, specific issues, and malpractice issues they faced in relation to Basel regulation implementation and supervision. Questionnaires are used to provide specific responses to specific questions. The data collected from both methods (the questionnaire and the interviews) are analyzed and presented through descriptive statistics. The information is presented in tabular and graphical forms. The descriptive statistics are meant to highlight potential areas of the regulation and the supervisory practices that could require reassessment or re-design.

### ***3.5.1 Questionnaire Structure***

A set of questionnaire was designed and distributed to the banks. The questionnaire contains 32 questions, including five demographic questions. The remaining 27 questions were categorized and ordered as follows:

- Objectives of Basel: what Basel Accords implementation is expected to achieve. For instance, does not improve risk management at banks; reduce systemic risk in the banking system, etc.
- Assessment of Basel regulation: whether the quantitative requirements in Basel Accords are applicable and valid; i.e. do they correctly measure what they are designed to measure.
- The CBB’s supervisory conduct: the perceived effectiveness of the CBB’s Basel II regulatory and supervisory program.
- The perceived benefits of Basel regulation and CBB supervision.

The questionnaire is a multiple –choice survey, and all questions are scored on a 5-point Likert Scale. In designing the questions, we used a closed-ended format but included a short

explanation to ensure that the respondent understands the purpose of the question. For example, the question about the impact of Basel regulation on risk management is structured in this way, “Do you think that Basel II implementation, in the context of the CBB Rulebooks, helped to improve your bank’s risk management function and practices?” Answer choices used a Likert scale design and were tailored to each question rather merely using generic responses such as “strongly agree” or “strongly disagree.” For example, instead of “strongly agree” we suggested, “Yes, we find a strong positive correlation between Basel II implementation and risk management practices at our bank.”

### ***3.5.2. Interview Structure***

With regards to the interviews, 26 one-on-one semi-structured interviews were held with banks and one interview was held with the CBB. Requests for interviews were arranged directly between the researchers and the interviewees. There were questions outlined prior to the interviews while other questions were asked in light of the answers provided by the interviewee.

The pre-defined questions were shared with the interviewees prior to the interviews, at their request. Each interview lasted between one and a half hours and two hours. Notes were taken off the answers then transcribed. The transcribed interviews were sent to the interviewees to ensure that no statements were left out or incorrectly understood. The outcomes of the interviews were analyzed horizontally and vertically. In the horizontal analysis, the outcomes collected from each interview for each question were aggregated. For instance, answers from all of the interviews on the question “in what ways have Basel Accords implementation helped improve your bank’s risk management?” were consolidated into one file. The same procedure was applied to the rest of the questions. In the vertical analysis, the outcomes from the interviews with each bank were noted in a separate file.

In the interviews, open-ended questions were asked in order to get more in-depth responses that highlighted the interviewee’s views and concerns. For instance, instead of asking “did Basel II implementation help your bank’s risk management” I instead asked, “how, if at all, did Basel II implementation help your bank’s risk management?” Questions were asked without giving an appearance of having a pre-determined stance of the issues under discussion.

The interviews were exclusively confined to the employees in positions of “Head of Risk” or “Chief Risk Officer,” “Head of Financial Control,” “Head of Internal Audit,” “Head of Compliance,” and Chief Executive Officers. This is because these are the positions that are ultimately responsible for the implementation of the regulation and supervision implementation.

Likewise, the interviews with the CBB were with decision makers or designers of the rules and regulations, such as Executive Directors, Directors, and Advisors.

### ***3.5.3 Questionnaire Administration***

The 120 questionnaires were distributed via email to the banks in Bahrain. The questionnaires were hosted on a website. The emails included a link through which a respondent accessed the questionnaire and fill it out electronically. The emails were distributed directed by the researchers to the banks and through an “email campaign” that was disseminated by the Bahrain Bankers Association (BBA) to all the banks. The help of the BBA was sought to increase the responses rate. Responses were anonymously stored on the website.

The responses were exported from the website to an Excel file, which was in turn exported to the Statistical Package for Social Science (SPSS) for analysis. Collecting responses through a website is more appropriate than collecting them during a one-on-one meeting, through a phone interview, or by asking the respondent to save or scan and send the file via emails. Web-based questionnaires are easy to administer and affordable (Oppenheim, 2003). There are, however, a few drawbacks such as the inability to clarify or explain the questions or terms mentioned in the question, and a lack of control over the respondents to ensure that all of the questions are answered.

### **3.6 Ethical Issues and Assurance**

Due to the reasons expounded upon in Section 1.6 of Chapter 1, the names and positions of the respondents to the pilot questionnaire will not be revealed. The approval of their banks was sought and confirmed prior to the interviews.

Voluntary participation in the online questionnaire was pledged. The emails that included the link to the online survey also included a pledge that due consideration for anonymity and confidentiality would be taken.

## Chapter 4. Results and Analysis

### 4.1 Introduction

#### 4.1.1 Chapter structure

This chapter analyzes and discusses the results from the surveyed and interviewed bankers. I start by recalling, briefly, the assumptions, and methodology of the study. I then discuss and analyze the data gathered from the questionnaires and the interviews. The chapter then ends with conclusions drawn from the results.

I organize the discussions and the analysis along the following themes; the questionnaire and the interviews were designed based on these themes as well:

- Demographics and descriptive statistics
- The role and impact of Base II. I raised questions in the interviews soliciting views of the interviewees about whether or not Basel II regulations are suitable for banks and for the whole banking system and we asked them to justify their stance.
- The appropriateness of the techniques and methods of Basel II (e.g., risk measures, ratios). This theme includes the interviewees' responses to questions on the technical quantitative and qualitative requirements in Basel II regulations. Specifically, we asked whether the requirements are reflective of and commensurate with a bank's assets size and complexity.
- The competence and the role of the CBB (regulations, supervision, inspection and reporting). This theme includes the interviewees' descriptions of the regulatory environment in Bahrain. How, from the bankers' perspective, are regulations designed and implemented? Are banking regulations fragmented or integrated within the whole economic system? What are the 'rules of the game'? This theme includes the interviewees' responses on how the CBB supervises the implementation of Basel II regulations. The supervision specifically includes inspection visits, off-site examination, and reporting requirements
- The banks' management practices and familiarities with Basel II concepts, requirements and implications. To appreciate the interviewees' stances, complaints,

and reservations about the regulation and supervision, we believe that it is necessary to understand the environment in which the interviewees work. What are the governance culture and attitude towards risk management and regulation in the interviewees' work environment? What are the board's and executive management's attitudes towards regulation? This theme includes details provided by the interviewees that would help us interpret their responses to the other questions.

It is very important for the reader to provide a description of the institution's set up of the financial system in the country prior to delving into the findings of the questionnaires and interviews. This description would help the reader better understand the interviews' quotations and appreciate the interviewees' stances as well as interrelate to the theoretical framework outlined in Chapter 3 about institutionalism. Conventional retail banks in Bahrain by the end of 2007 witnessed an expansion. December 2007, total retail bank deposits stood at BD 13 billion, up from BD4.9 billion in March 2007. Nonetheless, Bahraini retail banks continue to have relatively easy access to retail deposits, given the high levels of liquidity currently available in the country (and in the Gulf region as a whole). Historically, locally-incorporated retail banks have exhibited high capital adequacy ratios. As at end-September 2007, the aggregate capital adequacy ratio stood at 16.7%. Similarly, the core capital ratio (ratio of Tier 1 capital to risk-weighted assets) declined from 14.8% in March 2007 to 9.6% in September 2007. Retail banks experienced a 78% growth in net profits. As at September 2007, the net interest margin for locally incorporated retail banks was 2%. Return on average assets (ROAA) also increased from 1.6% to 1.9% over the period.

Locally-incorporated retail banks had over 40% of their loan book in two sectors: "consumer and personal" and "financial." As at end-September 2007, aggregate non-performing loans (NPLs) in all retail banks stood at 2.5%, down from 5.1% as at end-March 2007.

If we compare the above results with the performance of the banks in 2008, we will find that as at end-September 2008, the aggregate capital adequacy ratio for locally-incorporated retail banks stood at 15.5%, compared to the 24% level attained in December 2007. The core capital ratio (ratio of Tier 1 capital to risk-weighted assets) also fell to 10.9% (from 17% in December

2007). Also, as at end-September 2008, return-on-assets (ROA) was 1.1% for local retail banks, down from 1.7% last December. Return-on-equity (ROE) amounted to 9% for local retail banks, down from 12% in December 2007. Although slightly down, the capital buffers of Islamic retail banks was robust. As at end-September 2008, the regulatory capital adequacy ratio for Islamic retail banks was 28%, lower than the 34% recorded for end-December 2007. The core capital ratio was 24.4%, compared to 29% in December 2007. Asset quality for Islamic retail banks remained healthy. As at end-September 2008, aggregate non-performing financing facilities (NPF) were 3.8% of total facilities, only slightly higher than the 3.5% recorded at the end of December 2007. The volume of liquid assets available to Islamic retail banks has fallen from 25% of total assets in December 2007 to 18% by end-September 2008. In regard to the Capital Ratio, as at end-September 2008, capital the regulatory capital adequacy ratio (CAR) stood at 24.6%, compared to 40% in December 2007. Regarding the non-performing loans, at end-September 2008, aggregate non-performing financing facilities (NPF) in Islamic wholesale banks stood at 7%, up from the 4.2% recorded in December 2007. In terms of merger or bankruptcies, the impact of the crisis was not witnessed until after 2000. After 2000, several banks could not survive, and the CBB encouraged them to merge to avoid the calamity of individual banks bankruptcies. In sum, banks in Bahrain, Islamic and conventional, suffered from a reduction in their capital adequacy ratio, profitability, liquidity and non-performing loans in 2008, compared to their performance in 2007.

The Central Bank of Bahrain (CBB) is the sole regulator of the financial sector in Bahrain. Table 4.1 lists the categories of the financial firms in the financial sector. The sector contributes 27% to the country's Gross Domestic Product (GDP). (CBB, 2016). The CBB is also responsible for monetary policy of the country, the financial stability, issuing the currency, and issuing the government debts.

In Bahrain, there are about 400 financial institutions employing a workforce of 13,887, 65% of them Bahraini nationals and 35% foreign nationals. (CBB, 2016). The following table illustrates the categories and number of these institutions.

<b>Attribute</b>	<b>Description</b>
Banking sector	113 banks
Insurance sector	152 companies
Investment firms	60 firms
Funds industry	2,647 authorized funds
Specialized firms	60 firms- money changers, microfinance institution, trust services, etc.

Table 4.1 Financial Sector in Bahrain

Source: [www.cbb.gov.bh](http://www.cbb.gov.bh)

In Banking Sector, there are about 113 banking institutions. There are two categories of banks in Bahrain, Retail and Wholesale banks. Retail banks are those banks, which accepts deposits from individuals and make loans to individuals and commercial entities. Wholesale banks, on the other hand, are those banks, which do not accept deposits from the public and conduct investment banking activities such as private equity, projects finance, wealth management, and underwriting services. Within each category of these two categories, there are two sub-categories, Islamic and Conventional Banks. Therefore, overall, in Bahraini banking system, there are Islamic retail and wholesale banks as well as conventional retail and wholesale banks.

<b>Attribute</b>	<b>Description</b>
Total Assets	USD 192.7
Retail Banks	28 banks, 13 of them locally incorporated and 15 branches of foreign banks.
Wholesale banks	76 banks
Islamic Banks ( included in above)	25 banks
Representative office	8

Table...Banking Sector in Bahrain.

Source: [www.cbb.gov.bh](http://www.cbb.gov.bh)

In the banking part of the financial sector, which is the focus of this study, the CBB intervenes through setting out detailed rules and regulations, approval of the appointment of

the Board of Directors and the executive positions. Each bank, prior to appointing, for instance, Chief Executive Officer, Chief Risk officer, or Chief Internal Auditor, should seek a prior written approval for such appointment and the CBB interviews the candidates as well.

The CBB is a quasi-government entity. Although it is officially a public entity, it has some of the features of the private sector<sup>58</sup>. Article 5 of the CBB Law requires that the CBB shall have a Board of directors but these directors are appointed by royal decree. The day-to-day management of the CBB is entrusted to a Governor, with ministerial rank, and who is directly accountable to the Board. The Governor is also appointed by Royal Decree. In regard to banking regulation, only one Executive Director is assuming the responsibilities of banking supervision in the country. The Executive Director is appointed by a decree of the Prime Minister. There are five directorates reporting to the Executive Director, the Inspection Directorate, the Retail Conventional Banking off-site Supervision Directorate, the Wholesale Conventional Banking Offsite Supervision Directorate, the Islamic Banking Directorate, and the Licensing Directorate. The Directorates are headed by Directors who are also appointed by the Prime Minister by undisclosed criteria. There is no transparency and no disclosure of any sort of information about the nomination and appointment of the Executive Director or the Directors reporting to him. In terms of career path and staff compensation and benefits, the CBB pays its staff lower than those in the banking sector. That is why CBB staff are inclined to leave their jobs to join banks. It is rare that bankers leave banks to join the CBB.

When the CBB plans to impose a new set of regulations, it follows two options, either consult with the industry or impose it directly without consultation. From practitioner's view, the CBB follows the consultation route for a proposed set of regulations for the implementation of these regulations that would significantly affect the bank's business and financial statements. One would expect, given that view, that the CBB has followed that route when introducing Basel II and Basel III. The CBB followed, however, the direct imposition of the Basel II and Basel III regulations. The reason is explained in the Interviewee 1-CBB's statement

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<sup>58</sup> The CBB defines itself on its website as "public corporate entity".(CBB,2016)

*Interviewer: when the CBB wanted to implement a new regulation for the General Reserve, you implemented it through consultation with the practitioners, and arranged workshops. I am wondering, why did not you follow the same approach when you started implementing Basel III in 2010 and back in 2007 for Basel II?*

*Interviewee1-CBB: the answer is simply if we followed that approach that would mean we have a choice to implement or not to implement Basel II or III based on our result of our consultations with the industry.*

*Interviewer: what is wrong with that?*

*Interviewee1-CBB: there is nothing particularly wrong in that, but we do not have the choice. We have to implement them. There are so many institutions supervising us as a country as issuing reports on us. Examples of these institutions are the rating agencies, World Bank and the International Monetary Fund. Representatives of the World Bank and the IMF visits us periodically and issue an assessment report on the whole banking and financial system infrastructure in the country. In this report, they particularly address the point of whether we are implementing the international best practices or not. Undoubtedly Basel II and III are international best practices. Similarly, the rating agencies include the same criteria when issuing the country report. Now, if we do not implement these regulations [Basel II and Basel III], that would impact the country rating which would in turn negatively impact the rating of the banks operating in the country.*

The CBB follows the second approach, direction imposition for the regulations that are non-financial, i.e. does not directly affect the calculation of the CAR, Income Statement or Balance Sheet of the banks. Examples of such regulations are corporate governance, internal control, compliance, money laundering, cyber security, business conduct and financial crimes.

The regulations, once outlined by the CBB, sent to the banks for implementation. If they were finally issued (i.e. without consultation), banks have no option but compliance. Banks have no official means through which they can voice their concern. Banks are not allowed to send their objections to the CBB for any kind of regulations once finalized. Requests for deferral of implementation is negotiated with the CBB on a case-by-case basis. The decisions at the CBB is taken by a couple of senior officials only. There is no union or an association that could be construed as a “lobby” of banks against any unfavorable set of regulations.

Pressure may be exercised by some banks, through their board of directors, which include high net worth individuals or politically influential person. The influence is exerted by direct contact with the CBB to express dissatisfaction of the regulations. Once these influence efforts are successful, the CBB does address these influenced changes into its Rulebook through periodic updates. Banks do not interact, officially with each other or form a pressure group or anything of its like to voice their concern or discontent. Every bank negotiates, if it has influential powers, on its own.

The relationship between banks is competitive in nature rather than collaborative. When faced with an imposed regulations that are not in their best interest, banks do not collaborate to voice their dissatisfaction to the CBB or join forces to quell the regulatory pressure on themselves. Instead, banks, when there is more advantage under those very regulations, will exploit the opportunity to gain more than the disadvantaged.

There is a question always raised amongst practitioners “what does the CBB consider or think about before imposing or drafting any regulations?” Does it take into consideration the social factors, economic factors, the political factors, the regional factors? Does the CBB think of the social or cultural attributes of the society? The interviewed CBB officials have always highlighted the pressure of meeting the international best practice. In addition, that refer to the IMF the rating agencies. We should also not forget the political pressures which the competitions amongst the countries in the region on which country would be the financial hub for Islamic banks or which country would be the financial center of the middle east for insurance, etc. in particular, there is a competition amongst Bahrain and Dubai in that aspect. So, going back to answer the question of whether the CBB looks into the social factors when drafting regulations and supervisions.

The political setup of the country over the years created cultural attributes that determined the regulations’ culture in the country. The impact of this culture is not confined to a specific industry; it became the way the government regulates everything, from the banking industry to hotels, private universities and other educational institutes, insurance companies, etc. One of these attributes is the absence of trust. Regulations are planned, developed and implemented under the influence that the regulated individuals/ entities are not trusted and

would tend to destroy, violate and breach all norms and conditions unless we firmly advise and monitor them on the correct manner. As we will see in the findings later on in the chapter that this culture is manifested in how the CBB's inspectors carried themselves and deal with the bankers during their routine visits to the banks, as one interviewer described them as “police which looks so jaded to prove the presumption that we did something wrong”. Naturally, if a regulator's culture that the regulated individuals and entities are not trusted worthy, the regulator would follow a rule-based approach to regulation. In this approach, the regulator prescribes in detail the requirements leaving minimum or no room for the regulated to interpret their own understanding of the requirements.

#### ***4.1.2 Scope of data and the research questions***

In Chapter 1, I indicated that to understand the framework of banking regulations for the purpose of this study, we needed to pose several fundamental questions about banking regulations and the role of government in their design and implementation. I also mentioned that answering these questions would be important to conceptualizing the motivation of the study, the structure of each chapter, and the research design. The questions we posed included the following: First, what are regulation and supervision? Second, why do we need banking regulations (i.e., what are the government justifications for intervening in the banking industry)? Third, how do governments intervene? Fourth, how can we evaluate whether the adopted regulations meet the specified objectives? Finally, if the regulations do not meet the objectives, how should regulations be redesigned and implemented?

In this chapter, we will discuss the data that address the following research questions:

1. How has Basel II implementation, in the context of the CBB Rulebooks, helped banks with risk management functions and practices? This is covered in the “role and impact of Basel II” theme.
2. How has Basel II implementation, in the context of the CBB Rulebooks, helped banks improve competitive advantage and reputation? This is covered in the “role and impact of Basel II” theme.

3. How has Basel II implementation, in the context of the CBB Rulebooks, helped reduce systemic risk at the local level? This is covered in the “role and impact of Basel II” theme.

Regarding the questions “*How can we evaluate whether the adopted regulations meet the specified objectives?*” and “*If the regulations do not meet the objectives, how should regulations be redesigned and implemented?*”, we have found that the CBB intervenes in banking regulation through restricted entry requirements and the adoption of an international tool, Basel II. I will discuss how the CBB carried out the regulation and supervision of these accords, and how the surveyed and interviewed bankers viewed the effectiveness of its regulatory and supervisory activities. In particular, in this chapter we will discuss the following additional three questions:

1. How effective is the CBB in implementing Basel II in its banking system about the design of its regulation policies and supervisory program? This is covered in the “competence and role of the CBB” theme.

2. Is the current CBB implementation of Basel II the optimal regulation system for the Bahraini banking system? This is covered in the “competence and role of the CBB” theme.

3. Has the CBB achieved its objectives in implementing Basel II, and did the banks approve these objectives? This is covered in the “competence and role of the CBB” and the “banks’ management practices and familiarities” themes.

#### ***4.1.3 Data and methodology***

To gather data, I distributed a questionnaire to bankers and held 26 interviews. I adopted the semi-structured interviews for this research because semi-structured interviews as defined by Burgess (1982) is are “an opportunity for the researcher to probe deeply to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate, inclusive accounts that are based on personal experience.” This technique allowed maximum flexibility in pursuing issues that came up during the discussions and allowed the respondents to clarify

some of the concepts underlying the concept whenever they will be unclear. The interviews' length varied depending on the interviewees' interest, time availability, and knowledge of the subject. Table 4.1 illustrates the time spent in each interview and the statistics of this time.

Interviewee	Time ( Minutes)	Interviewee	Time (Minutes)	Statistics
Interviewee 1	100	Interviewee 14	125	Mean = 85 minutes Standard Deviation = 23 minutes Range = 80 minutes
Interviewee 2	45	Interviewee 15	115	
Interviewee 3	90	Interviewee 16	90	
Interviewee 4	95	Interviewee 17	75	
Interviewee 5	115	Interviewee 18	45	
Interviewee 6	105	Interviewee 19	90	
Interviewee 7	85	Interviewee 20	95	
Interviewee 8	45	Interviewee 21	120	
Interviewee 9	70	Interviewee 22	95	
Interviewee 10	85	Interviewee 23	45	
Interviewee 11	120	Interviewee 24	70	
Interviewee 12	80	Interviewee 25	65	
Interviewee 13	60	Interviewee 26	85	

Table 4.1 Time Spent in Each Interview with Statistics

I commenced the interviews by explaining my background and reasons for pursuing the topic and then moved on to the questions. Open-ended questions were used to expand on the concepts already generated from the literature and to specifically answer the research questions. I adopted an open-ended technique because it 'allows interviewees to respond freely and to build on their ideas' (Churchill, 2000: 83). I transcribed each of the 26 interviews for further analysis. As part of Munhall's (2007) phenomenological method, I read the interviews repeatedly to extract particular themes from the narrative.

The minimum duration of the interviews was 45 minutes and the maximum time was about 2 hours. The 45 minutes interviews were with four risk managers of the 26 interviewees; the meeting with them, independent of each other, were much shorter than the rest because the discussions with them were futile; they seemed to be not aware of any particular details about Basel II regulations and its implications. This is based on my evaluation as a market practitioner. This is an interesting finding; these people are Heads of Risk Management Departments, and each one of them holds a Chartered Accountant (CA), which is a renowned accounting designation, yet they were unable to comment or differentiate between methods in Basel II, and they were not aware of concepts such as systemic risk or risk profile. Three

of these four Heads are from conventional banks, and the fourth is from an Islamic Bank and all of them are expatriates. The four were extremely self-conscious; they were too afraid to discuss CBB [the regulator], and even without context praised the CBB unabashedly. There are four possible explanations to their self-consciousness. First, lack of trust. It is possible that although I confirmed to them that none of our discussion and personal identity of the interviewee would be shared with any party, particularly the CBB; they still could not trust that I would honor this confirmation. Second, insecurity from lack of subject matter knowledge. It is probable that they were not fully adept of the subject matter of the discussions to the extent that enable them to critique or have another perspective of the Basel II regulations and the issues of implementation, they tended to praise anything that the CBB does. Third, the anxiety of the CBB. This might be related also to the first explanation, the trust. The concern here is that when the Executive Director and the Directors of the banking supervisor at the CBB knew that they were criticized, from the perspective of the interviewees that might affect their employment at the bank because I explained above that appointment of Heads of Risk Management departments are subject to the CBB's approval. This has become very important characteristic of the corporate politics in the country that left its impact on the economy as well as other gulf countries as a whole. Banks and other corporates in the country *prefer* expatriates in key positions for the very conduct or attitude displayed by these four interviewees. The preference is because some expatriates focus is on job security and maintaining the relatively higher fringe benefits compared to local people in the same posts. Some of these expatriates are and in order to maintain their status do not tend to negate, criticism of voice their opinion, especially if it contradicts with the decisions makers such as members of the boards or the senior executives such as the Chief Executive officers. They do not criticize or offer unsolicited recommendations or suggestion. Some of the Local people, on the other hand, are being looked at as "opinionated" who may argue and or challenge instructions; they give suggestions, probe into irregularities and have curiosity. These characteristics are not welcome in the political and economic setup in Bahrain or countries in the GCC. Fourth, do not want to share knowledge. This also is not an odd phenomenon in the industry. I interpret it to be a sign of competence insecurity and lack of trust in an industry where the competition is fierce among expatriates themselves and between the expatriates and the locals. Apart from these four, the rest of the interviewees were all forthcoming, and elaborate; they discussed with ease about their wish to send many

messages to the CBB. These four interviews, however, were not excluded from the data and analysis because they help us see another aspect of bankers in the country who have different views based on different grounds. Table 4.2 gives a brief background of these four interviewees.

Interviewee	Age	Experience	Qualifications	Nationality	Sex
Interviewee 2	40-50 years	15 years	Baccalaureate and Chartered Accountant	Indian	Male
Interviewee 8	45-55 years	20 years	Baccalaureate and Chartered Accountant	Indian	Male
Interviewee 18	45-55 years	18 years	Baccalaureate and Chartered Accountant	Pakistani	Male
Interviewee 23	45-55 years	25 years	Baccalaureate and Chartered Accountant	Indian	Male

Table 4.2 Background of interviewees who were not useful

Table 4.2 shows that the four risk managers have a lot of experience and an adequate level of education. The observed lack of sufficient knowledge, from my assessment, indicates that there was no enough diligence of hiring at some banks, as well as at the CBB, for such important posts such as the CRO. The CBB interviews every CRO before he/she is hired or accepted by the bank. The CBB does not disclose their criteria for approving such posts to the bank neither do the banks disclose such criteria in their annual reports.

I sought to meet Risk Managers, Compliance Officers, and Finance Controllers. Except for two banks, every bank in Bahrain has an expatriate Risk Manager and Finance Controller. The work experience of these people are, as mentioned in their resume, above ten years, and they all held similar positions in the past. All of them have Baccalaureate degrees, and all of them hold at least one professional qualification (e.g., Chartered Accountant [CA], Professional Risk Manager [PRM], and Certified Public Accountant [CPA]). They come from different nationalities but mostly from India, Pakistan and European countries. Interviewees from the CBB were very challenging. I met with five people, and they all had Baccalaureate degrees while some of them had professional qualification designations such as CPA, PRM, CA, etc. They reluctantly accepted to meet for the interviews and to discuss anything related to their work; they were very much obsessed with the confidentiality issues even if it means discussing their own views without disclosing anything related to their work. None of the interviewees accepted video and audio recording. From the beginning of the meetings, all interviewees asked for a “gentlemen conformation” not to disclose names of individuals, names of organizations and they requested that any answer if quoted in the

thesis, would not give an indication of the source; i.e. cannot be traced back to anyone. They were very cautious. Almost all of them became more comfortable after ten minutes of the interviews. I took notes as they spoke.

From both, the bankers and the CBB staff, there was an astonishing sense of fear, mistrust, and caution. The bankers were afraid that the CBB knew that they voiced their opinions about the CBB and the CBB staff were scared that their senior officials might find out that they shared remarks that might contradict with what the officials wanted to be disclosed. This sense of fear stems from the culture in the country and its institutions. Despite the fact that risk management, finance, internal audit, and compliance are departments dominantly headed by expatriates, some from developed countries, one notices that they succumb to the force of the culture in the country. The culture is largely characterized by hiding problems from outsiders and solving them with minimum or no disclosure. Malfunctions or lack of diligence and competence or weakness in processes are hidden and not allowed to be shared with external parties. Sharing, highlighting or discussing them resembles direct criticism of those officials in charge of these processes. Criticism, in any form, or voicing a concern or point of view on how the banking or financial sectors are managed are not tolerated by the CBB's top officials. Even when asking about the immaterial information that might be already disclosed in their annual reports, they become very scared or cautious to discuss it or share it in person. Expatriate senior officials at banks are handsomely compensated; they are hired because the CBB reviewed their resumes and interviewed them. The CBB has this rule of approving any person filling the above-mentioned posts. This explains why interviewees are very cautious not to be known for their criticism or voicing their opinion. Hamad (2014), a senior CBB's official indicated that expatriates are being hired into the above posts because they are seen more experienced and qualified in the field of banking and financial markets since they come from developed countries compared to local people.

This attitude toward the expatriate is deeply entrenched in all the country's institutions, both banking and non-banking. I deduced from the interviews with the CBB staff and bankers that expatriates, although expensive, are generally being viewed as trustworthy, qualified, professional, punctual, and honest compared to locals. All of the interviewees as well as the CBB staff, however, shared a common view that these attributes, which make a comparative

advantage over the local people, are not scientifically substantiated; yet, it is still an attitude amongst practitioners in the market. Except for a couple of risk managers who have shown the dazzling wealth of knowledge and insights, we have not found indications of these exceptionally preferred traits during my interviews.

#### ***4.1.4 Summary of the findings***

I observed a dissatisfaction amongst interviewees toward the CBB; every one of the interviewees shared the unpleasant experience with the CBB and illuminated a history of dissatisfying relationship in various facets such as the inspections visits, CBB's staff competence, and reporting processes. Interviewee 19, for instance, complained about the reporting process of the quarterly prudential reports. He stated that he sent an official letter to the CBB explaining how the current form of the report that his bank is expected to adhere to on a quarterly basis, in the majority of its content, is not applicable to his bank's business model. Yet, the CBB has not responded to his correspondence and has received no indication that his remarks have been acknowledged. Interviewee 22 criticized the competence of CBB staff:

*“Unfortunately, the CBB staff do not exert an effort to be on par with the banks in terms of knowledge; they send young guys who lack experience and the required knowledge in Basel II let alone another area. Yet, we find these young people arrogant and act as police, which looks so jaded to find a score against us rather than help us.*

I found that some interviewees shared the same remark made by interviewee 22 about adding value and helping banks. Interviewee 17, for instance, stated the following:

*“The CBB has an objective that all the banks adhere to the requirements of Basel II; we also have the same objective. Every banker wishes that his/ her bank applied the international best practices in banking. What we all want is a regulator that works with us, adds value to us by sharing with our options and alternatives and above all understanding of our conditions of what we can and cannot apply the requirements.”*

In summary, the data from the questionnaires and the interviews showed the following:

- There is low recognition of the positive impact of Basel II implementation on banks' risk management and practice, competitive advantage or reputation

- There is a very low level of satisfaction of the appropriateness of Basel II methods, as imposed by the regulator, of the banks' business and risk profile.
- There is a low level of respect amongst bankers of the CBB's staff competencies and the CBB's role in regulation and supervision.
- There are considerable variations in the banks' institutional characteristics in relation to familiarities to Basel II role and implications on the institutions as a whole.

#### 4.2 Demographics and descriptive statistics

With regard to the survey, before we present the results, we explain how we determined the sample size, present the sample's statistics, and analyze the response rate. Afterward, we show the survey respondents' demographic attributes.

There are 116 banks in Bahrain (23 retail and 69 wholesale conventional banks; 6 retail and 18 wholesale Islamic banks). The questionnaire was targeted to the risk manager, internal auditor, and finance manager at each bank. Thus, the total population was 348 (116 × 3) bankers. The sample size was determined such that there were 183 respondents at a 95% confidence interval and with a 5% margin of error according to the following formula:

$$\frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

where:

N=Population size

E=margin of error

Z=Confidence value as in Z-Score

P= percentage value (0.5)

I distributed 305 questionnaires based on the assumption of a response rate of at least 60% and a target sample size of 183. The actual response rate was 65.5% (120 out of the 183 questionnaires distributed).

**4.2.1 Respondents years of service**

Table 4.3 illustrates the percentage of responses to total responses to the question “*how long you haven been with the bank?*” Table 4.3 indicates that the majority (61%) of the respondents have been in their current role for more than five years. The implication of this result is that responses shared from these respondents give comfort that they were at their current role long enough to give an informed opinion based on reasonable years of experience.

Percentage of total responses	Respondent years of service in their current role
13%	1-3 year
26%	3-5 years
45%	5-10 years
14%	10-15 years
2%	More than15 years

Table 4.3 Percentage of respondents’ years of service in their current role

Meanwhile, table 4.4 shows the percentage of responses in relation to the question “*What is your title or current post?*” The compliance department had the fewest number of respondents out of all the other departments. This result is understandable owing to the structure and size of compliance departments. A compliance department is a separate department required by the CBB to be established by every bank, and that has a very limited role and does not require large numbers of staff. The main mandate of the department is to ensure the compliance with the CBB Rules and regulations of the other departments. The risk management and financial control departments in every bank undertake Basel II requirements, particularly those related to the quantitative part and the reporting to the CBB in addition to the matters related to policies. That explains why these two departments were the majority amongst respondents.

Percentage of total responses	Type of Department
40%	Risk Management staff
34%	Financial control staff
18%	Internal Auditor
8%	Compliance staff

Table 4.4 Response rate by respondents’ departments

Table 4.5 shows the results related to the question “*what is the type of your bank’s license?*” The results show that there were 10% more respondents from conventional banks than

respondents from Islamic banks. In addition, the heads of risk management and finance departments in conventional retail banks are the least responsive.

Percentage of total responses	Type of Bank
17.5%	Islamic Retail Bank
26.7%	Islamic Wholesale Bank
28.3%	Conventional Retail Bank
27.5%	Conventional Wholesale Bank

Table 4.5 Response rate by type of banks

#### 4.2.2 Respondents education

With regard to the qualifications and education levels of the survey respondents, we asked respondents “*What is your academic background?*” Table 4.6 illustrates the level of education of the respondents. It indicates that 93% of the respondents are highly educated which typically indicates, when combined with the years of experience as illustrated in Table 4.3, informed and experienced respondents who are well positioned to form an opinion and judgment about the subject of regulations and supervision.

	Islamic Banks	Conventional banks	Percentage of total responses
Undergraduate	6	2	7%
Baccalaureate	34	48	68%
Master /MBA	10	17	23%
PhD	3	0	3%

Table 4.6 Education level of the survey respondents

The data inform us that respondents are well educated and experienced. This gives us comfort that there is no possible lack of knowledge of understanding the subject matter of the questions or their implications.

#### 4.3 The role and impact of Basel II

As we discussed in Chapter One, there are three main tools a banking regulator may adopt: licensing requirements, activity restrictions, and capital requirements. A banking regulator may adopt Basel II, which has capital-based requirements, to help improve risk management, reduce systemic risk, and prevent financial crises. In the case of Bahrain, Article 3 of the CBB Law defines the objective of the CBB regulatory mandate as follows:

1. Set and implement monetary, credit and other financial sector policies in the Kingdom of Bahrain;
2. Provide effective central banking services to the government and financial sector of the Kingdom
3. Develop the financial sector and enhance confidence therein; and
4. Protect the interests of depositors and customers of financial institutions, and enhance the Kingdom's credibility as an international financial center. (CBB, 2015)

In this section, I discuss Basel II as a regulatory tool from two perspectives: analysis of its implementation's objectives and examination of its quantitative requirements (i.e., its methodological calculations). As indicated in Chapter 1, 2, and 3 the objectives of Basel II implementation by banking regulators are to: I) enhance risk management, II) reduce systemic risk, and III) reduce the possibility of financial crisis.

In rule-based regulations, the regulator prescribes all of the detailed rules that regulate behavior in advance. During the process of implementing the regulations and conducting the supervision programs to ensure the regulations are adhered to, the regulated bank's concern is solely focused on complying with the rules. When asked about whether the CBB share with banks the objectives of its Basel II implementation plans and how this implementation would lead to the enhanced reputation of their institutions, the interviewees unanimously asserted that they do not receive such communication from the CBB. I have contacted the CBB to enquire about the reasons behind not sharing the objectives of implementation, and the Interviewee 1-CBB replied: [with an angry tone]:

*“We are the regulator...we work for the best of the financial and banking system of the country. It does not work this way... we cannot enlist our objectives for every single initiative, rules or regulations we issue and send this list across to the bankers. Everyone does his part in the system. We are entrusted to make sure that everything is run well, and the bank's role is to work to make a profit for their shareholders and make the system well. In addition, I do not think there is any regulator in the world who would send the banks objectives for everything they do. Basel II is an international practice and has been implemented by developed countries ... so we are not imposing a haphazard regime!”*

While Interviewee 1-CBB'S statement that no country in a world shares its objectives with the regulated entities might be correct, in a way, but that is not what the practitioners expect

either. Bankers do not expect the CBB to send them a list of the strategic objectives on a periodic basis. What they are expecting and complaining about is that they want to be intrinsically active part of the system rather passive one. Given the political and organizational setup in the country and at the CBB, and as highlighted at the beginning of this chapter that the ...they are expecting a mechanism, system, and culture through which they can be heard and participate in shaping the financial system.

#### ***4.3.1 Basel II and Risk Management***

This subsection discusses and analyzes the relationship between risk management at banks and Basel II implementation. In particular, the aim of this subsection is to answer the research question *“How has Basel II implementation, in the context of the CBB Rulebooks, helped banks with risk management function and practice?”* It is useful prior to delving into the findings from the questionnaires, and the interviews illuminate the context of the particular relationship between the risk management and Basel II. It is equally useful to define briefly the concept of risk management amongst practitioners. The question in the questionnaire was *“Do you think that Basel II implementation, in the context of the CBB Rulebooks, helped to improve your bank risk management function and practices?”*

In the academic literature the discussion is confined to certain parameters of credit risk such as the impact of CAR on attitudes towards accepting more risk (Blum, 1998), the impact of minimum threshold and risk taking or the relationship of capital to the tools for measuring market risk (McAleer et al., 2013). In addition, there is a general discussion of the status of risk management at banks without reference to Basel II (Jassim, 2012). In the literature, I could not find a single study that explained or theorized the relationship between Basel II and risk management from the perspective I discuss in this study, in a wider scope. A scope that addresses Basel II’s role in risk management set up in the bank as a department, how this department is integrated with other departments, and how risk management is installed in a bank as a culture and strategic driver.

In the questionnaire, I found that, as illustrated in Table 4.7, approximately 70% of respondents asserted that Basel II implementation at their banks did not contribute to any

improvements in the risk management function and practices at their bank. Table 4.7 shows the responses on the perceived benefits of Basel II implementation with regard to the banks' risk management. The survey asked if the bankers perceived any correlation between Basel II implementation at their banks and any improvement in the risk management function and practices at their banks. By correlation between Basel II implementation and risk management, I meant to understand if there are benefits or costs perceived to occur in a bank's risk management because of Basel II implementation, *ceteris paribus*. Risk management practices, amongst bankers, is known to refer to the existence of a risk management department that is well resourced with policies and procedures to govern its conduct. Some 50% of the respondents did not perceive such a correlation at their banks, while 19.2% found no difference before and after Basel II implementation in how they perform their risk management tasks in the loan and investment process.

Assessment	Islamic banks	Conventional banks
Yes, we find strong positive correlation between Basel II implementation and risk management practices at our bank	21%	6%
Yes, but the improvement in risk management is not as per our expectations	23%	9%
Indifferent to whether it helped or did not help to improve your bank risk management function and practices	4%	3%
No, we find no differences in risk management practices after or before Basel II implementation	17%	21%
No, we find no correlation between Basel II implementation and our bank's risk management practices	36%	61%

Table 4.7 Basel II implementation and risk management at banks (by business model)

Table 4.7 raise an important question: why do conventional banks are more than Islamic bank in not finding benefits of Basel II implementation. This could be explained by the fact that conventional banks were established more than the Islamic banks in terms of processes and operations. Therefore, we can say that conventional banks are more mature and the risk management set up were gradually built by themselves through the experience of the staff, lesson learned from the current practice as well as the Basel I. To augment the finding from the survey, we held interviews with bankers, and we posed an open-ended question on the association between Basel II implementation and the risk management functions and practices at banks in an attempt to get the interviewees to elaborate on their survey responses. The question was *“How would you explain the role and implication of Basel II*

*implementation at your bank to the improvement in the risk management function and practices?”* Because I wanted to make sure that the interviewees’ perception of the definition of risk management is similar to what I intend to gauge in the interview, and because I wanted to understand how risk management operated at their respective institutions, I portrayed a risk management taxonomy and showed it to the interviewees. At the beginning of our discussions about the correlation between Basel II implementation and the risk management at their institutions, I outlined the risk management taxonomy and found that risk management at banks has three facets. First, risk management, as a department, operates as a fully-fledged entity that is responsible for the ways that various risks the bank is exposed to are undertaken, mitigated, and monitored. This entails the staff of the department, operational manual of the department, and an IT infrastructure necessary to aggregate, monitor and report on these risks. The second aspect of risk management is organizational attitude, namely the risk culture that the board and executive management instill into the enterprise or third, how the risk culture and board executive and board attitude toward risk leave to improvement in risk management in the whole enterprise. This means identifying all of the risks that the bank is exposed to as well as measuring it, managing it, monitoring and reporting on it. This includes ensuring that the actions are taken to accept the risk, and the measures adopted to mitigate it are within the bank’s risk appetite. Basel II regulations are only one aspect of risk management.

Response	Islamic Banks	Conventional Banks
Yes, we find strong positive correlation between Basel II implementation and risk management practices at our bank	21%	6%
Yes, but the improvement in risk management is not as per our expectations	23%	9%
Indifferent	4%	3%
No, we find no differences in risk management practices after or before Basel II implementation	17%	21%
No, we find no correlation between Basel II implementation and our bank's risk management practices	36%	61%

Table 4.8 Basel II implementation and risk management at banks (by bank type)

Interviewees’ responses were split into two groups. One group upon listening to my description of the question and having been shown the taxonomy strongly refuted the idea

that Basel II implementations at their bank helped them improve any facet of the risk management taxonomy.

Number of interviews	Basel II implementation improves risks management functions and practices at your bank
3	Yes
23	No

Table 4.9 Interviewees’ responses to whether Basel II improves risk management

They attributed this stance to the CBB’s implementation of Basel II, which have been very simplistic and superfluous. It only focused on Pillar I and totally ignored Pillar 2. Thus, this set of respondents felt that Basel II merely entailed a calculation of a ratio, and as long as they were above the minimum threshold, then the CBB would be satisfied. The second group of interviewees was cognizant of the fact that the CBB has not addressed risk management properly, but they ascribed the improvement in their risk management functions and practices to Basel II. That is because they saw that it indirectly helped them realize that risk management should not be looked at as merely a cost center or a regulatory “box ticking” requirement; Basel II was a driving force to improve rather than a requirement per se. Interviewee 3, for instance, indicated the following:

*“ maybe it is true that despite all the effort made by the CBB to implement Basel II they still have some shortages but I would frankly say that if the CBB did not implement Basel II some banks, especially those which are of same size and business model like ours, would not have invested at all in their risk management function.*

*Interviewer: why do you think they would not have invested in that?*

*Interviewee 3: because let us face it, there are many bankers, management, and board of directors, they would not do anything if not asked or forced to do. In my opinion, few banks would do something [related to regulations] without being forced.*

*Interviewer: can you please pinpoint what specific areas you have managed to improve, indirectly, because of Basel II implementations?*

*Interviewee 3: the most important of all is the risk management systems. We have now invested in buying the systems to calculate the capital adequacy for the Pillar 1 of Basel II and hired a firm to make gap analysis of our risk management conduct as the gap in our policies and procedures.*

More than 95% of the respondents asserted that none of the areas of risk management practices, functions and frameworks were improved directly by the implementation of Basel II in Bahrain. This is attributed to the following reasons: The first reason is that the CBB implementation of Basel II is only confined to the Pillar 1, which talks about capital adequacy calculation only. Interviewee 4 for instance, stated:

*“There are risk management circulars [rules, guidance, and regulation circulated by the central bank to the banks for implementation] on risk management that goes into the details of how we should build our departments. Yes, there are some “pushes” here and there but not structured,”*

Another reason is that the CBB’s literature (i.e., rules, regulations, and guidance) along with its practices, even in the confined implementation of Pillar 1, do not contextualize the implementation of Basel II as an adding value tool to the banks that would improve their risk management function. This means that banks are not motivated to implement Basel II to improve their practice but merely to adhere to a regulator’s requirements. The CBB rulebook explicitly states that all banks must have a risk manager, and thus banks found themselves obliged to have a risk management department in order to satisfy the CBB. The methods that are adopted by the country are all standardized, and the CBB did not show any interest in moving forward towards advanced approaches. Interviewee 11 describes this point as follows:

*“As a risk manager, I do not remember that I have participated in any discussions with the CBB that involves how I should or could improve my department. Any anytime they come to our department for inspection or when we go to their offices for the prudential meeting [a meeting that is held at least annually between the CBB and every bank’s management to discuss various matters chief amongst them is Basel II adherence] I see the focus is on whether we are doing a good job in the implementation of pillar 1. The discussions go to the details of how to implement Pillar 1 but very limited on Pillar 2”,*

A third reason is that Basel II does not define risk management succinctly to prevent any possible disconnect between what is written in the rules and regulations and what the practitioners construe as a meaning of risk management at their banks. This might explain the reason for why central banks and Basel II accord deems the accord helpful to risk management improvement and why bankers in Bahrain do not share the same conclusion. Interviewee 3, for instance, when asked about the definition of risk management, focused his

main arguments on systems and how well resourced the department is while interviewee 6 addresses corporate governance and compliance in his discussions of risk management. The implications of all these ramifications of the reasons for why Basel II does not, directly, help banks improve risk management are the following : a) definitions of the underlying objectives of the regulations should be clearly understood by the regulator and the regulated, b) regulators imposing Basel II should first seek to understand what was the level of the risk management practices of the banks prior to the implementation of Basel II, by this regulators could measure effectively how the implemented rules helped banks and then to assess and argue with the bankers if they do not seem to appreciate these regulations or do not consider it as value adding to them. c) When CBB inspectors visit banks, they are not focused on risk but are instead focused on compliance. Every interviewee agreed to this point that the primary focus is compliance more than anything else. Interviewee 12 said, for instance, that:

*“I was really surprised to see during the last inspection of our bank that an inspector came to ask about line by line adherence to the rules and regulations of the rulebook. When I asserted to him that the articles of regulations here are referring to is not applicable to our bank’s business model the inspector seemed not care or believe my statement. He did not pay attention to all the positive assertions I shared with him about the progress made in terms of policies and procedures of risk management and corporate governance we achieved in the previous years. To him, our lack of compliance with the rules and regulations, even if not applicable, is his main source of concern!”*

d) under Basel II banks are not treated by the regulator based on how successful they are in advancing their risk management functions and practices; they are not incentivized or penalized based on their proximity to ideal risk management. Rather, Basel II regulations are implemented across the board irrespective of how advanced or backward the existing risk management practices are at the banks. I have asked every interviewee: *“has the central bank conducted any assessment on the banks, prior to implementing Basel II in the year 2007, to gauge bank’s readiness for the new regulations and whether their risk management departments are ready to embark on this project.”* The unanimous answers were that the CBB did not make such pre- assessment. Every single bank is required to adhere to the same limits and thresholds irrespective of their business model, the sophistication of their risk management departments, etc. This means that although risk management is like a mantra filling the air of every prudential meeting and inspections visit, the results show that all the work carried out are not actually focused or guided by risk management.

Lastly, interviewee 1 indicated an interesting for why bankers do not seem to appreciate the contribution of Basel II implementation to the improvement of risk management at banks.

He explained the following:

*Bank management and staff are well attuned to the developments and changes in the international banking system, specifically those related to risk management. This exposure to international practices led to a given bank's adoption of practices that best fit their operations. Banks are in many instances in risk management are ahead of the CBB. For instance, some banks in Bahrain had designed stress-testing frameworks and generated idiosyncratic scenarios and results before the CBB issued any circulars or advised banks to conduct stress-testing exercises.*

The conclusion we derive from the above is that the CBB has focused solely on the calculation of CAR. The CBB does not have anything on pillar 2 of Basel II. As we expounded in previous chapters, the Pillar 2 of Basel II is where risk management is primarily addressed. Specifically, Pillar 2 addresses the communication between the bank regulator and banks about how they identify, measure, monitor, and report various types of risk such as reputation, strategic, liquidity, concentration, etc. Thus, if the CBB confines itself to the CAR only (as in Pillar I) and does not address risk management issues in its rulebook, inspections, and off-site supervision, then banks would have a very little association between Basel implementation and risk management.

#### 4.3.1.2 Basel II, Risk Management and risk-based supervision

There is a mantra that the CBB inspection and the supervision are risk-based (CBB, 2015), but how have those been designed and implemented and how to have bankers in Bahrain perceived them to be taking place do not seem to be understood or manifested. This is due to a misconception between risk-based regulation or supervision and the power and influence of regulation in risk management functions. When we interviewed the CBB officials, we asked each one of them the following questions, “*How do you define risk-based regulation and how do you see the current practice of the CBB in that context? Do you find the practice in line*

with your perception or with is theorized in the CBB's announcements? Interviewee 1-CBB replied:

*Interviewee 1-CBB: "risk-based regulation is when we put a regulation that drives banks to be careful about risk at their banks."*

*Interviewer: do you find the CBB practice is in line with your definition?*

*Interviewee 1-CBB: of course. That is what we all do every day. When we talk to the banks, we always tell them to focus on risk management and try to benefit from Basel II implementation at their banks. we always push banks to be good in risk management.*

Interviewee 2-CBB shared his definition of risk-based regulation as follows:

*Interviewee 2-CBB: risk-based regulation is when the CBB puts the regulation lead to the improvement of risk management practices and culture at the banks.*

*Interviewer: do you find the CBB practice is in line with your definition?*

*Interviewee 2-CBB: definitely. If you look at the agenda items of every prudential meeting, we hold with the banks you will see that almost all the items are related to how banks manage their risk. In addition, in order to make sure that even the board of director are also aware of the risks we made it compulsory for every bank to invite at least one member of their Audit Committee to attend the prudential meetings*

It is obvious from the above two examples that these two senior officials at the CBB have different perceptions about risk-based regulations that are both different from the perceptions amongst practitioners. There is a difference between risk-based regulation and the impact of regulation in advancing risk management functions at the regulated entities; risk-based regulation means the prioritization of the regulator's actions towards the regulated entities in accordance with a pre-defined parametric analysis of these entities' peculiar characteristics. In banks, these characteristics include the nature of the portfolio of assets, the source of bank funding, the availability of contingency funding plans, the size of capital, etc. On the other hand, how regulations advance or limit risk management functions as a function or discipline within an organization is very rarely discussed in the literature. I have not found any studies that addressed the impact of regulation on the risk management function at the regulated entities. From a practical perspective, a definition of risk management at financial institutions refers to the comprehensive framework of managing credit, market, liquidity, strategy,

reputation, compliance, governance, and other risks. This suggested framework is defined by the existing policies and procedures (i.e., those currently in place to manage the abovementioned risks) as well as the organization's risk environment, risk appetite, and risk culture.

In the interviews, I expounded upon this definition to the interviewees and asked if they were in agreement with it or if they find it necessary to be augmented with another aspect or processes. I found that the interviewees had the same perception of risk management that we did. Interviewee 22 explained that the:

*"... Risk management function [at my bank] will only be advanced if the CBB adopts a risk-based supervision and inspection of our bank. So far all I see is the CBB worrying about whether or not our bank is compliant with the CAR minimum threshold."*

Interviewee 1 explained the following:

*"Basel II was not designed to be a risk management tool. It is merely an attempt to regulate banks that may eventually lead to better risk management at banks, but that claim [the claim that Basel II help to advance risk management at banks] by Basel II was never validated neither by BCBS nor by CBB."*

On the contrary, when we met with the CBB officials who are in charge of supervision and regulation, the definition of risk management did not appear to be aligned with the practitioners. Interviewee 1-CBB, for instance, defines risk management as:

*"Having a good risk management department headed by a qualified and experienced staff reporting to the Board Risk Committee."*

While interviewee 3-CBB defines it as:

*"The independent body that is in charge of checks and balances in the bank; I look at this body as our [the regulator] eyes inside the bank."*

I can see from two examples that the perception of risk management is confined to it being a department rather than a culture or a function that is integrated within the whole bank's areas. They do not look at risk management as an integrated framework, but rather as a silo of risks that should be governed by policies and procedures. I asked the CBB officials *"which risks*

*do you consider the most important of all these facing banks in Bahrain and how do you envisage that should be handled.” Interviewee 4-CBB considers:*

*Interviewee 4-CBB “[actually] credit risk is the most important risk that is worrying every regulatory in my opinion. Banking is about loans; if any bank working in our country fails to do a good job in that then we have to do something*

*Interviewer: what do you mean precisely by “good job” can you please indicate what is considered good job from the CBB perspective?*

*Interviewee 4-CBB: good job means making proper analysis before giving loans and taking the most secure collateral possible from their clients. This is the ABCs of banking in my opinion.*

*Interviewer: how do you think that could be handled and out in place*

*Interviewee 4-CBB: by having two things, first having very good credit policy and procedures and second having very active credit administration department which.*

Some of the CBB interviewees look at risk management from a compliance and credit risk perspective, while others perceive it to be primarily an issue of credit management. In relation to the risk management but from the angle of risk appetite and risk culture, we have asked the CBB officials the following questions about risk appetite and risk culture. “*How do you define banks’ risk appetite framework,*” “*how do you assess the banks’ work on the risk appetite framework*” and “*what the CBB is doing in the context of risk appetite.*”

Interviewee1-CBB shared the following response:

*Interviewee1-CBB: banks risk appetite is how much risk they can take*

*Interviewer: how do you assess the banks’ work on the risk appetite framework?”*

*Interviewee1-CBB: we ask the banks if they have prepared the risk appetite for their work and most importantly if their board of directors approves it.*

*Interviewer: what the CBB is doing in the context of risk appetite*

*Interviewee1-CBB: We follow up to see if the banks have prepared their risk appetite*

*Interviewer: but the CBB has no such requirements so far in its rulebook. So according to which requirement are you following with the banks in this respect?*

*Interviewee 1-CBB: by the international best practice!*

Interviewee 3-CBB’s response to the same questions above was as follows:

*Interviewee 3-CBB: risk appetite is how big a bank desires its loan portfolio to be. If they want to be a market leader in any product, they will have to have a bigger appetite than if they wish to play small!*

*Interviewer: what the CBB is doing in the context of risk appetite? Does the CBB play a role in relation to that desire of the size of the credit portfolio?*

*Interviewee 3-CBB: definitely! We supervise their credit portfolio through the periodic reporting we solicit from the banks on a timely basis.*

This clearly shows that the concepts of risk appetite and risk culture do not seem to be adequately contextualized by these officials. The implications of this misconception of risk appetite from the regulators are that if the regulators are not certain about the concept of the risk appetite or they do not define it as it is defined in the industry’s literature there would be miscommunications between the regulators and the bankers on the subject. This miscommunication is manifested by the fact that the regulators cannot assess what the banks produce in terms of risk management policies in order to determine if these banks are operating according to their limits. In addition, in Basel II accord there are stipulations that refer to having “an appropriate risk appetite of the institutions” about the type of approach used to quantify the capital requirements. Because of this misconception, the regulators believe that the CBB is already giving banks the guidance and the requirements needed to build an appropriate risk appetite framework as stated in the above two quotations. When we, however, asked banks “*how frequently and in which way does the CBB ask for the risk profile, appetite and strategy of your bank?*” 65% of the respondents, as illustrated in the table below said that the CBB has never asked them about their risk profile, appetite or strategy. That is in spite of the fact that 55% of the respondents affirmed that they have an updated risk profile, appetite, and strategy, as shown in Table 4.10

Responses	Response Percent
Annually, in the prudential meeting	28.6%
Semi-annually, in the prudential meeting	2.5%
Quarterly	2.5%
During the Inspection visits only	1.7%
The CBB never asked us about a risk profile and appetite document	64.7%

Table 4.10 CBB regulation and banks' risk appetite framework

Responses	Response Percent
Yes, and it is adequately integrated with our strategic planning and capital allocation	20.2%
Yes, but it is not adequately integrated into our strategic planning and capital allocation	35.3%
Indifferent	19.3%
No, we do not have an updated risk appetite and profile	21.0%
No, we have not yet developed a risk appetite and risk profile for our bank	4.2%

Table 4.11 Banks' risk appetite framework.

The above two tables clearly show an evidence of the gap that the regulators assert that they have the necessary checks and balances to monitor risk appetite at banks while 65% of the banks indicate that the regulators have never asked them about their risk appetite, profile, and strategy. I have examined the annual reports of all the banks we interviewed their staff, and we found that there is a reference to the risk appetite and profile, albeit in varying degree of details, but banks mentioned in these reports that they recognize the importance of risk appetite and they are operating according to that.

Lastly, we have asked bankers in the survey if they would have adopted the risk management practices, tools, etc. that they are adopting now even if Basel II was not yet implemented in the country. The purpose of the question was to discover from another angle how much attributions do bankers ascribe to Basel II for the status of their risk management practices at their institutions. The response is illustrated in Table 4.12:

Response	Response Percentage
No, if Basel II was not imposed by the CBB we would not have applied the risk management tools we are currently applying	5%
No, but we might eventually apply to be at par with the international best practices	9%
Indifferent	3%
Yes, but not in the same level of scale and sophistication	25%
Yes, we would have implemented all the risk management international practices and standards even if Basel II was not imposed by the CBB	58%

Table 4.12 Risk Management Practices and the Impact of Basel II

83% responded positively that they would have adopted the risk management practices that they are currently adopting even if the CBB chose not to impose Basel II in the country's banking system.

To understand why such a big percentage of respondents in the survey do not plainly give a regard to the contributions of Basel II to their risk management practices, we asked some bankers about their opinion.

*Interviewer 7: I guess this is because risk management practices are an evolving art and science start and grow from the practitioners' experience that is why they are called practices. If they are practices and since they evolve from within the banking systems then they are on the constant move for improvement. Every party, developed or developing countries, small or big banks domestic or internationally active banks they all contribute to the practice by their success and lessons from their failures. Take for example Value at Risk (VaR) [the most famous measure of risk in the banking system] ... VaR is invented by bankers [JP Morgan]; it proves its credibility and the art and science in it so that regulators put requirements to ensure proper adherence to such measure. Therefore, the practitioners feed the regulators, in my opinion, not the opposite. I am not surprised that you got such a response in the survey... it makes sense.*

The implications of the above are that if the CBB relies on the influence of Basel II implementation in the country to directly or indirectly motivate banks to improve their risk management practices, then this influence is not appreciated by the practitioners. This, in turn, implies the need to set out dedicated comprehensive rules and regulations for risk management. I learned from the above data that risk management at banks is dynamic and proactive. Practitioners do not wait for the regulator to motivate them to improve and instill the risk management practices that are appropriate for their needs.

#### **4.3.2 Basel II and financial crises**

In this subsection, we discuss the results of the survey and the interviews in relations to the questions on the impact of Basel II implementation and the financial crises, particularly the crisis that erupted in 2007. The aim of this and the following two subsections is to answer the research question “*Has the CBB achieved its objectives of implementing Basel II and did the banks approve of these objectives?*”

A direct impact of the financial crisis of 2007 may have resulted from direct exposure to “toxic assets”<sup>59</sup> or to institutions that face problems in their liquidity and capital. Banks in Bahrain that suffered directly and significantly from the 2007 financial crisis were limited to wholesale conventional banks because they invested in subprime securities. Islamic banks did not suffer from direct exposures to toxic assets because Islamic banks are prohibited from transacting in such assets, as their structure is considered a breach of Islamic rules (Hidayat and Abduh, 2012). The indirect impact of such a crisis, on the other hand, can result from a lack of liquidity, lower credit growth, a high amount of non-performing loans, shortage of funding sources (e.g., bonds, commercial paper), lower profitability, decreasing prices of physical assets and investments (e.g. real estates). These collective factors can affect the domestic market as well as international markets. The question that should be raised here is whether Basel II implementation helped banks in Bahrain to withstand or survive the crisis. I illustrate below the data that show how banks and the CBB responded to the above questions.

Before we address the responses from bankers as to whether or not they believe that Basel II implementation helped them survive the crisis, we should first measure whether or not the interviewee’s bank was impacted by the crisis. Then, if we establish that they were impacted by the crisis, we proceed to see whether Basel II implementation helped them survive the crisis. By “survive the crisis,” we mean whether their loss would have been larger if Basel II had not been implemented. This, in turn, triggers a question about the capabilities of Basel II to do that. Did Basel II claim that it could achieve that? From the literature, Caruana and Narain (2008) predicted that its full implementation could prevent the financial crisis from occurring. One problem with this statement is that it was not backed by references to statistical analyses or examination of a case study in which Basel II was fully implemented in a country where that country withstood a financial crisis. Wellink (2008) agreed with Caruana and Narain (2008) that a financial crisis could have been prevented or at least its negative consequences alleviated had the accord been implemented earlier in the impacted countries. Wellink (2008) argued, “It was a misunderstanding to say that Basel II would have allowed the risky practices among banks that triggered the crunch.”

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<sup>59</sup> Toxic assets are assets that have lost a significant amount of value and are considered illiquid (i.e., there is no market for them). This term became popular during and after the 2007 crisis. An example of toxic assets from the crisis are structured products such as Collateralized Debt Obligations

Having provided a context for the discussion of the literature we now turn to discuss the results shown in the survey and the interviews with the bankers and regulators. I asked the bankers in the survey if their bank has been impacted by the financial crisis in 2007. Table 4.13 illustrates their responses.

Responses	Response Percent
Yes, our bank was hugely impacted by the crisis	22.5%
Yes, our bank was considerably impacted by the crisis	46.7%
Indifferent	6.7%
Yes, our bank was insignificantly impacted by the crisis	15.8%
No, our bank was not impacted by the crisis at all	8.3%

Table 4.13 Impact of the 2007 crisis on banks

16% of the respondents asserted that their banks were insignificantly impacted; on the other hand, 69% said that their banks were impacted, and 23% of whom said the impact was huge.

I asked bankers about their thoughts on why some bankers might have responded indifferently and whether or not is it possible that some banks were not impacted by the crisis at all.

*Interviewer: in your assessment, how do you assess the impact the crisis of 2007 had on the banks in the country?*

*Interviewee 5: banks were hugely impacted by the liquidity...those who have a shortage of funds, whether financial and non-financial institutions were not able to access the funds required for their go on in their operations.*

*Interviewer: what causes this shortage of liquidity?*

*Interviewee 5: mainly due to trust...confidence in the banking system*

*Interviewer: has your bank been impacted by the crisis due to the same reason?*

*Interviewee 5: our bank was impacted because it had many investments in the real estate...as you know...in times of crisis, the prices in the market plummet, and real estates are not an exception to that.*

*Interviewer: do you think the fact that your bank is Basel II compliant helped you in the crisis to quell the crisis negativities? Can you talk me through the benefits you might ascribe of being Basel II compliant in times of crisis?*

*Interviewee 5: prices of real estate plummeted because of huge supply and low demand. Low demand is caused by liquidity crunch...everyone is holding his funds dear. Therefore, if we have investments in these properties, directly or indirectly, our accounting books should reflect that loss in value... Basel II has nothing to offer to help in this case...accounting entries of the impairment of assets value have to be passed anyway whether you are following Basel II or not.*

Interviewee 7 shared his response to the above questions as follows:

*Interviewee 7: our bank was considerably impacted by the crisis... the causes of our loss are from international markets...we had investments such equities and derivatives products in the United States and Europe...at the time of the crisis the prices of these investments went down, and the bottom line [net income/loss] of our bank got hit... We had to invest internationally because we have a huge volume of liquidity [deposits] that had to be utilized...the Bahrain Market is very narrow [opportunities are limited]. If we did not invest in these markets, we would have ended up just giving loans, which is not an optimal thing to do.*

*Interviewer: how has the fact that your bank is Basel II compliant helped your bank in the crisis?*

*Interviewee 7: [with a smirk] Basel II did not help us because there is no relationship at all between Basel II and our case... Basel II is about CAR [Capital Adequacy Ratio] calculation and our case in a reduction in value... do not forget the important fact that USA is only implementing Basel II on its big banks while the small banks are still in Basel I ...also, the crisis hugely driven by the big boys implementing Basel II in the United States and Europe...So, if it would have helped me it would have helped these guys in the first place [laughing].*

The above two examples of bankers show that practitioners during the crisis did not see benefits of Basel II implementation in their banks to quell the negativities of the crisis or reduce the negative impact on their net income/loss. Interviewee 9 made intriguing remarks when we asked him how Basel II helped his bank survive or withstand the crisis:

*Interviewee 9: I will answer this question only if you tell me exactly which part of Basel II could do that!*

*Interviewer: my question is based on the regulator's literature that capital regulations in general and Basel II regulations, in particular, helps banks in times of crisis so that I wanted to see how you could reflect on that from your experience back in 2007 and 2008.*

*Interviewee 9: Fair enough, ...my knowledge and experience say that there is nothing in Basel II, I mean in the form of measure or ratio or threshold or any kind of preventive measures that could help banks either during or before the crisis. In fact, if Basel Committee or the CBB are claiming so then they are contradicting themselves because one of the reasons why they moved from Basel II to Basel III is that*

*Basel II does not have such preventive measures. Therefore, my final advice to you is that any claim that Basel II helps us in any way in times of crisis is just marketing statement to sell the concept of Basel II.*

Interviewee 10’s response to these questions was the most comprehensive:

*“I think what makes BCBS of the CBB so overly excited on [the relationship between Basel II implementation and financial crisis] is the myth that has been perpetuated in the banking sector all over the world, which is that of ‘international practices.’ They designed Basel II as solutions to the problems faced in the West. Other countries have followed suit because they did not have one decent regulation system in their own countries, for various reasons that might be economic, political, or cultural. Use of this accord has eventually been tagged as ‘international best practice,’ and of course, anything that carries the name international best practice is expected to have the preventive power to push back the negative impact of any crisis.”*

*Interviewer: in your opinion, what regulation design is capable of preventing or circumventing a financial crisis’s impacts facing a bank?*

*Interviewer 10: a regulation that stems from within the banking system and its constituencies, that address the cultural aspect when implementing the regulation and above all takes into consideration the idiosyncratic characteristics of the constituencies.*

I asked respondents in the questionnaire “do you believe that Basel II implementation at your bank, along with the CBB guidance, helped your bank survive the crisis of 2007?” 73% of the respondents responded negatively, as is shown in the Table 4.14.

Response	Response Percent
Yes, but our bank was also impacted by risks not addressed in the CBB Basel II implementation	11.7%
Indifferent	14.2%
No, because banks were impacted by risks other than those calculated in Basel II Capital Adequacy Ratio(CAR)	48.3%
No, because banks in Bahrain were not impacted by this crisis	25.0%

Table 4.14 Base II implementation and the crisis of 2007

On the other hand, the data shows interesting results. Approximately 14% of the questionnaire respondents are indifferent about whether or not banks were impacted by the financial crisis. Furthermore, 25% of respondents do not agree that their banks were impacted by the financial crisis of 2007. It should be noted that most of these respondents

were Islamic bankers. Some Islamic bankers look at the financial crisis more from an ideological perspective than a technical, realistic perspective. This means that their perception is that since an Islamic bank is not an interest-based bank and by-laws are not permitted to deal in derivatives or structured products (which were the milestone causes of the crisis in 2007), then they are immune from the crisis.

I asked some interviewees about their opinion of why some Islamic bankers would tend to believe that they were immune to the crisis of 2007. Interviewee 16 opined:

*“This stance has a merit of course. An Islamic bank business model with no interest and lending are backed by assets in addition to not transacting in the hedging instruments surely immunize them from exposure to some risks, but they definitely will not immunize them from market or liquidity risk because they are part of the system. For example, if the international interest rate level were rising, Islamic banks would inevitably raise eventually their interest rate on the lending portfolio because the borrowing has become an expense for them. As you know if you want to be an Islamic bank that does not mean that you expect your depositors or funds providers to disregard the higher interest rate paid by other banks.*

This point means that in reality, even though they do not deal with such sharia-prohibited products, they are essential players in a market that are surrounded and governed by conventional banking (i.e., non-Islamic). The interest rate level in the domestic and international markets are benchmarked to the London Interbank Offered Rate (LIBOR) and the Prime Rate<sup>60</sup>, and the capital of the banks are kept with the international banks such as JP Morgan. In addition, the placement of their funds are with conventional banks; so, to say that they are not impacted is not true. In Bahrain, for instance, some Islamic financial institutions had to merge in order to face the stringent market conditions in the market. Otherwise, they would not be able to survive. In order to claim that Basel II helps prevent financial crises, one needs to understand at the beginning how any regulation could prevent a crisis or quell its repercussions.

I cite interviewee 26's response, as an example:

*Regulations help regulated banks survive a crisis if they are designed to be proactive and take into consideration the differences amongst constituents. For banks, these differences are size of capital, size of assets, quality of assets, market niche (i.e., corporate or retail), sector niche (e.g.,*

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<sup>60</sup> Prime rate: an interest rate applied by banks to their high credit worthiness customers.

*manufacturing, service sector, etc.), and business model (Islamic or non-Islamic license. It is only through a clear understanding of the differences in these parameters and a corresponding customization of supervisory and regulatory activities for each category of the bank that a regulator might claim that certain regulations would help all banks survive a crisis. A blanket [one size fits all] approach of regulation and supervision obviously does not take the peculiar characteristics of each bank into consideration, and if such uniqueness is not observed, then a claim would be difficult to substantiate.*

Interviewee 10's take on the above question was the following:

*"A financial crisis is difficult to be predicted or stopped. During a crisis, there is minimum work that banks or their regulator can do to withstand the crisis apart from the traditional procedures like slowing down the business, holding dear your liquidity and being selective in your credit lending. Thus, if there any regulation to be designed specifically for crises and it must be set out to be implemented and monitored on a continuous basis."*

The implication of the above data is that to help banks prepare for or withstand crises; there is a need for a congruent dedicated set of regulations for this purpose. This set of regulations acknowledge the idiosyncrasies of the banks' parameters (e.g. capital size, assets complexities, and risk profile) and guide the regulator to monitor the performance and interconnectedness. In the literature, we could not find a reference to such set of regulations. In addition, we have examined the banking regulations of some developed countries such as Hong Kong, United Kingdom, USA, Singapore and Australia but we could not find that they have addressed this regulation yet.

#### ***4.3.3 Basel II and Competitive Advantage***

In this sub-section, we seek to examine if there is any benefit of Basel II perceived by bankers in relation to their international competitiveness.

In a banking system, banks (both foreign and domestic) compete amongst each other to attract depositors' money, extend credit facilities to retail and corporate clients, and manage clients' wealth and investments. Success and the ability to attract clients and depositors depends on factors like the size of the bank's capital, the strength of its liquidity and profitability, the competence of its management, its corporate governance and transparency,

etc. Basel II implementation via the CAR indicates the bank's level of capitalization to debtors and investors. The higher the level of capitalization (i.e., the higher the bank's equity capital relative to the size of its risk-weighted assets), the higher the creditworthiness of a bank, ceteris paribus. From this aspect, Basel II implementation in a bank may be perceived as a comforting sign to debtors and investors. It might also be perceived as a competitive advantage in an international and domestic banking system. Table 4.6 informs us that 34% of banks in the country do not see that there is a relationship between adherence to Basel II requirements and competitive advantage, while 9% felt that Basel II implementation at their banks did not enhance their international competitiveness. Interviewee 2 explains the reason as follows:

*Interviewer: why would you think that bankers do not consider adherence to Basel II is a boost to their international competitiveness?*

*Interviewee 2: all banks in the country are working inside the country. This means that their loans and source of funds are all generated either in the countries or from the countries in the gulf. The international transactions in these banks are limited to the correspondence banking relationship. Thus, they do not realize how Basel II can make them known or string in the eyes of banks in the international markets. Other banks, however, such as private equity focused banks, which are limited in number in the countries, they might feel it [the adherence to Basel II] from the perspective of credit rating only, I guess.*

What we get from the survey results and the above example of interviews is that even though Basel II might boost or enhance the international competitiveness of some banks that are internationally active, it does not help other banks who are locally focused in their business. This implies that there is no definite causation relationship between Basel II and international competitiveness of banks.

#### **4.3.4 Basel II and Systemic risk**

As we explained in Chapter 1, we dedicate a section to systemic risk because BCBS (2011) explicitly mentioned that one objective of Basel II is to reduce systemic risk in countries implementing the accord. Thus, we sought to examine the impact of Basel II

implementations in Bahrain on systemic risk from the point of view of bankers' perceptions of systemic risk. I asked the questionnaire's respondent "In your view, could Basel II implementation in Bahrain reduce the systemic risk?"

Table 4.15 shows that bankers were divided about whether Basel II could help reduce the systemic risk in the country. About 44% of the respondents did not agree Basel II could reduce the systemic risk while 37.8% thought it could. Approximately 31% of questionnaire respondents do not see a relationship between systemic risk and Basel II implementation in Bahrain. Table 4.8 suggests two interesting points. First, about 14% of the surveyed bankers were not sure about the impact of Basel II implementation on the banking system as a whole.

I asked interviewees about how 14% of the survey respondents could not be sure if there is a relationship between Basel II and systemic. I cite two examples of the interviewees' responses below:

*"Interviewee 5: there are bankers, I mean on all levels whether board executive or senior management, if they do not find the CBB after something they tend to ignore it..or let us say do not pay attention to it and since the CBB is silent about systemic risk I guess that is why some banks could not see a relationship"*

Since the management of systemic risk is initiated and administered by the banking regulator, there is no mention of that risk in the banks' annual reports. I have examined the CBB's Rulebooks (for the Islamic and the conventional banks), but we did not find any reference to that risk in the CBB's guidance. I also asked the interviewees if the CBB illuminated on this risk during the inspection visits or the prudential meetings with the banks. All the respondents agreed that the CBB did not illuminate in these platforms. In this regard, there are two questions that should be raised having read this data: why would the CBB not address systemic risk and how can it be managed? I had answered the first question when we cited the responses of the CBB officials who said that the CBB currently does not give systemic risk a priority. Now, we will answer the question about how this risk should be handled. I found that the five CBB officials were not able to envisage the way this risk could be measured and monitored. Therefore, we turned to the banks to solicit their responses.

*Interviewee 15: I guess the only way to measure this risk is through gathering all the relevant information from banks about the interconnectedness amongst banks. Once you quantify the interconnectedness, you will be able to forecast how financial difficulties faced by one can be*

*transmuted to another. The second point is that the CBB should not allow any bank to growth to reach a stage of too big to fail. One proxy [criteria] that the CBB may adopt in this regard is the assets size.*

None of the interviewees, however, shared more factors than the ones cited above, i.e., they all agree that the assets size is a good proxy to use for systemic risk and the procedure that should be followed by the CBB is the aggregation and analysis of the level of interconnectedness amongst banks in the banking system. The implications of this are that the CBB would need to first design a set of regulations, then develop reporting templates, and finally set deadlines for this reporting.

Second, about 13% of the respondents asserted that the CBB had provided them with memos about the association between Basel II and systemic risk, even though the CBB did not have information with regard to systemic risk in its Rulebook or ad hoc circulars.

Response	Response Percentage
Yes, and the CBB has shared with the banks the relationship between Basel II implementation and systemic risk	5.0%
Yes, but the CBB did not share with the banks how could Basel II implementation reduce systemic risk	37.8%
Do not know	13.4%
No, but the CBB has shared with the banks the relationship between Basel II implementation and systemic risk	12.6%
No, I do not see a relationship between Basel II implementation and systemic risk	31.1%

Table 4.15 Basel II implementation and systemic risk (all banks)

I asked interviewees about their explanation for why 31% of the questionnaire respondents did not find a relationship between Basel II implementation and the systemic risk.

Interviewee 19, for instance, stated:

*Interviewee 19: The CBB does not address systemic risk in its rulebooks, and has never issued directions to banks in the context of its supervisory role. The CCB has not attributed the objective of the imposition of any rule to reducing systemic risk, nor has it highlighted this risk during its inspections visits, prudential meetings, and offsite examinations. Systemic risk has never been the subject of discussion between the CBB and Bahraini banks during the course of its inspections or while overseeing Basel II implementation. Even when the CBB announced that it would implement Basel III in 2015, the CBB has so far maintained silence about the CCB; thus far, the CBB has shown interest in*

*the parts of Basel III that do not pertain to systemic risk. This explains why bankers do not associate Basel II implementation with a reduction in systemic risk.*

Interviewee 8 summarized this stance by stating that

*“One will never find systemic risk in any of the CBB internal checklists or to-do lists.”*

This leads us to question why the CBB chose to ignore the subject of systemic risk, which might lead to a second important question that if the CBB chose to ignore systemic risk, then how can they claim that Basel II implementation in the country reduces systemic risk?

I met Interviewee –CBB 3, to examine why The CBB had not given its attention to the systemic risk.

*Interviewee –CBB 3: The CBB does not consider handling systemic risk a priority for the time being... because we are of a view that we should focus on the financial resilience of each bank, i.e. working on micro-prudential kind of a plan then eventually we might move on to think on macro-level.*

*Interviewer: any explanation of why would the CBB take that stance even though Basel II highlights the importance of addressing the systemic risk and Bahrain is Basel II-compliant country.*

*Interviewee-CBB 3: I see your point, but both of the banks and us are not ready to move on to the Macro-prudential regulation. After almost seven years of implementing Basel II in the country, we still have some pending issues with some financial institutions about capital adequacy, credit exposures, etc. I believe the banks are not yet mature enough for Basel II Pillar 1 requirements yet.*

*Interviewer: that is an interesting remark because if the CBB does not find banks mature enough on Basel II then why are you imposing Basel III*

*Interviewee-CBB 3: we have to embrace Basel III for the sake of rating of the country.*

Interviewee 13, on the other hand, attributed the CBB’s stance to a lack of competence at the CBB to handle the intricacies of systemic risk. He explains the following:

*“Handling systemic risk requires quantitative analysis; analysis of data and processing it mathematically and statistically to either: 1) design and measure for domestic purposes, or 2) design and benchmark for the measure called for in Basel III. The CBB does not have the competencies to get that done. The CBB has so far shown us that it will shy away from any intricate or quantitative regulations...”*

I learned from the literature that systemic risk is peculiar when compared to other risks. For other risks (such as market risk), if regulators do not give guidance or requirements for a tool

to quantify that particular form of risk, then practitioners tend to innovate and take initiatives to devise measures that help them manage their business and mitigate or speculate their activities. Nevertheless, systemic risk is unique because no individual bank can take the lead to assess systemic risk, and no bank can eventually impose measures to reduce or accelerate the bank's growth or to alter their conduct to protect the whole system from potential risks. This explains why some interviewees, such as interviewee 25 and interviewee 10 call systemic risk "*non-of-bankers-business risk*." What they are referring to is that the bulk of the work of how systemic risk should be managed should be done by the regulator by setting out a clear set of regulation and a process of monitoring and reporting during and post any systemic disruptions.

#### **4.3.5 Conclusion**

The data shows that bankers do not find that Basel II implementation has benefited their risk management function, practice, culture, and enterprise. I also found that there is a huge gap between the perceptions of the definition of risk management at banks compared to the CBB. In addition, there is evidence that bankers and the CBB are not on the same page in terms of risk management and the benefits of Basel II.

The data provided evidence that the answer to the research question, "How has Basel II implementation, in the context of the CBB Rulebooks, helped banks with risk management function and practice?" is that Basel II implementation in the country did not help banks with their risk management function and practice. The reasons behind this are highlighted in the following summary of the findings. First, there is an explanation relevant to the regulatory attitude of the CBB. We learned from this section that the CBB does not find it necessary or beneficial to be transparent and converse with banks regarding its regulatory and supervisory objectives. The CBB perception of its role in the country is that it is the regulator and that it does not have to explain, justify or rationalize its initiatives or decisions. The bankers, on the other hand, perceives that to be a sign of transparency, social and economic coherence. The data revealed that the majority of the bankers do not attribute the improvement in the risk management functions at their banks to the implementation of Basel II or Basel III. They, instead, attributed that to their proactive measures to set their practices as per the practices of other financial institutions worldwide. In addition, the data showed us that 50% of

the banks do not see, in principle, any correlation between the implementation of Basel II and risk management. Second, there was a problem of the scope of the project outlined by the CBB. According to the CBB, their perception of Basel II implication in the country to focus only on the adequacy of the capital and the adherence of the bank to the minimum threshold. In terms of the two main categories of banks in the country, the data informed us that conventional bankers are more the least bankers who realized the contribution of Basel II implication to the advancement of risk management functions. Even when the advanced approaches of Basel II were, hypothetically, implemented by the CBB, they bankers in the conventional banks attributed that to be due to the advancement in the quantitative finance (i.e. credit modeling) and the Basel II in this particular field was a follower rather than the leader. Islamic banks, due to their relative recency in the banking sector in the country attributed some advantages of implementation of Basel II to risk management functions at their banks. Third, there is an issue of understanding and knowledge of risk management at the CBB. Interviews taught us that there is no clear understanding of the concept of risk management amongst bankers in Bahrain. Some bankers perceive risk management as merely a department that has its own organization structure headed by a senior official, resourced with advanced IT systems, documented policies and procedures, and the appointment of it ahead has to be approved by the CBB and the board of directors. Furthermore, the absence of this department is an absolute breach of the CBB requirements.

One of the main reasons that bankers do not see the Basel II helps them in risk management is the reluctance of implementing Pillar 2 of Basel II and III. The CBB has not yet enforced the proper implementation of Pillar 2. Hence, banks saw only the CAR as enforced and followed on by the CBB.

The data revealed that there are banks, from both Islamic and conventional banks category, will only implement those that are directly asked by the CBB and would not invest in any improvement of developments either in their risk management or in corporate governance framework unless imposed by the CBB. The organization culture as manifested by the board of directors and the management styles persuaded this attitude.

The CBB does not contextualize risk management in its regulatory policies and supervision procedures as a culture, but instead, it promotes it as a must-have department, which leads banks to believe or treat it as such, as a ticking box exercise rather than a benefit. That attitude

of the CBB blurred the bank's vision of seeing the benefits of Basel ii in advancing their risk management frameworks. Bankers indicated that their periodic dialogues with the CBB are focused mainly on the capital adequacy figures and the overall organization that encompasses a risk management department.

The CBB does not conduct due diligence or carry out a gap analysis between what it aim to launch and the existing conditions of the banks neither does it distinguish, while setting the scope of the implementation of the proposed regulations, between banks in terms of considerable differences among them in sets size, capitalisation level, market share, complexities of assets compositions and quality of loans portfolio. The CBB uses a “ blanket approach; one size fits all regulations and implementation of risk management and Basel II. Banks are ahead of the CBB in discovering, adopting coping with the advancements in the risk management practices worldwide.

The data shows that the CBB officials are not cognizant of the practical definition of risk management and do not share the same perception of the contribution of it to a department of a function within the bank. The concept of risk management culture is not well understood by the CBB officials neither is it taken into considerations. Furthermore, the CBB examiners and inspectors do not consider those in carrying out their duties.

It is found that the CBB officials confuse the term compliance with risk management, which is another reason why they insist that Basel II implementation helps risk management. What Basel II is doing, according to their definition is that it helps improve the compliance framework. The CBB officials do not understand the concept of risk appetite and have not shown clarity of the project of setting regulation and monitoring of risk appetite can be the approach. This is manifested in how 70% of the banks do not find the CBB asking about risk appetite at all in its communication with the banks. Banks are either cannot define it succinctly or have it as a document instead of integrating it in their strategies or do not have it at all.

In regarding the financial crisis, the data shows that banks in Bahrain suffered from the financial crisis of 2007 and that effect would not have been lowered or quelled if Basel II I, for implemented. Banks did not find Basel II implementation helpful in reducing the impact

of the crisis because what caused losses to banks was something that was not captured by the capital adequacy of the Basel II. The quality of the loans in the loans portfolio, real estate plummeting prices, confidence in the market, shrinkage of liquidity in the market, lack of having proper geographical or product line concentrations, availability if risk appetite, proper monitoring of the banks by the board, lack of asking the good questions by the board were the drivers for the losses incurred. These were the real contributors of the suffering of the banks in the country because of the crisis of 2007, and none of them is addressed in the CBB's work o Basel II implementation. Bankers in Bahrain questioned the ability of Basel II or Basel III to detect, prevent or current financial crisis. The majority of the bankers refused and refuted the claimed relationship between Basel II and financial crisis and they refuse to call Basel II and Basel III an international best practice.

With regard to the international competitiveness, the data informed us that even though Basel II might boost or enhance the international competitiveness of some banks that are internationally active, it does not help other banks who are locally focused in their business, such as the banks in Bahrain. This implies that there is no definite causal relationship between Basel II and the international competitiveness of banks.

Lastly, some risk managers at banks in Bahrain could accurately define systemic risk, hence could not form an opinion about the relationship between Basel II and the reduction of the systemic risk. The data shows that the CBB has totally ignored the systemic risk and address its calamity neither in its regulatory policies nor in its supervisory conducts or periodic reporting and communications with the banks. Bankers in Bahrain do not find that Basel II could help them prepare for or withstand systemic risk. I also found that the CBB does not consider that addressing systemic risk is a priority and plans to stick closely to monitoring the financial resilience of each bank on a micro level.

#### **4.4 The appropriateness of the techniques and methods of Basel II**

In this section, we discuss the results in relation to how appropriate Basel II requirements were to the banks in the country. I examine the appropriateness of Basel II requirements to the banks as another aspect of examining Basel II as a whole after discussing the acclaimed benefits of its adoption in the preceding section.

#### 4.4.1 Operational risk

In this subsection, we examine the appropriateness of the methods of Basel II imposed by the CBB to cater for operational risk.

I start with the Basic Indicator Approach (BIA) that is considered the most straightforward method for calculating the Operational Risk Weighted Assets (ORWA) out of the three approaches recommended in Basel II. According to this approach, the ORWA is calculated by taking the arithmetic average of the current and past two years of gross income. I asked the respondents in the survey “Does the Basic indicator Approach of calculating the operational risk-weighted assets reflect the essential operational risk your bank is exposed to?” Table 4.11 shows that 90% of the bankers found the capital requirement as calculated by the BIA is not reflective of the essential operational risk to which their banks were exposed. 77% of the bankers considered the AMA as the most reflective approach for assessing the operational risk loss events to which they are exposed.

Response	Response Percentage
Yes, and our bank does not need to consider another approach	1%
Yes, but our bank needs to show more robust capital allocation for operational risk in its ICAAP	7%
Indifferent	3%
No, and the CBB relies on the bank's ICAAP for the adequacy of capital for the bank's operational risk	10%
No, and our bank should adopt advanced approaches for operational risk	80%

Table 4.16 Assessment of BIA for ORWA calculation (All banks)

I met with Interviewee 12, who considered himself an expert in operational risk management, having written papers and given lectures and presentations on the subject. Although he was welcoming during the arrangement of the interview date and time, he was very agitated right from the beginning of the interview. When we reached the discussion on operational risk, it became clear that he was agitated about the CBB:

*Interviewer: How would you describe the appropriateness of the BIA for operational risk in Bahraini banks? How did it or did it not help you?*

*Interviewee 12: I am telling you, this issue is way over the CBB's head. The CBB does not know what it is doing; it just copies and pastes from Basel II papers without really knowing if those [the requirements] are convenient for the banks or not.*

*Interviewer: Can you please limit your discussion to the operational risk, as we will discuss the supervision side of the CBB in more detail later? [We made this necessary interruption to gain remarks that are more useful in the limited remaining time, as the interviewer hinted that he had another important meeting to go to.]*

*Interviewee 12: Apart from the operational risk, Basel II was not made for us; it was not designed to be implemented in all banks irrespective of their business models. Even the operational risk methods for calculation cannot be implemented in commercial or retail banks with the same scope as that of wholesale banks. For our bank, which has a very limited number of transactions since it is a private equity-based bank and limited numbers of staff compared to retail banks, which means it has fewer operational loss events, why would it need to keep a capital charge of the size suggested by the BIA? Therefore, we see that the calculations produced by the method bear no meaning to us and I assume that it bears nothing to the CBB except ticking the box that we have adhered to Basel II requirements and we are Basel II compliant.*

BIA is considered the most simple and straightforward method of the three approaches offered in Basel II to quantify the ORWA. Table 4.9 shows that 88% of the banks in the study find that the capital requirement as calculated by the BIA does not reflect the essential operational risk to which their banks are exposed. I asked bankers in the survey, “*Which method when implemented do you think would mostly reflect your banks; actual operational risk?*” Table 4.10 shows that 77% of banks believe that AMA is the approach that best reflects the operational risk loss events to which they are exposed. This consensus is explained by the following observations on BIA. Capital requirements calculated according to the BIA could result in an underestimation of the ORWA as well as misalignment of the ORWA concept with the CAR. Exclusion of net losses, according to the BIA, means the average GI is divided by a lower number (i.e., the number of positive GI years only), which results in a higher CAR. The misalignment is that a bank generates a negative GI ends up with higher CAR than an identical bank, ceteris paribus. I enquired Interviewee 3 about his opinion regarding this:

*Interviewer: which factors do you think should be taken into considerations? Do you have a suggestion of the model to quantify operational risk?*

*Interviewee 3: the first factor that the CBB ponder on before thinking of charging in capital requirements for operational risk does a bank in question really how an operational risk*

*Interviewer: and how would you know that for sure if you were on the regulator shoes?*

*Interviewee 3: that is easy. If there are operational loss events recorded, reported, discussed with the board or the executive management then these reports must be available somewhere at the bank on a system dedicated either to this purpose or on the bank's server. In all cases, the CBB has access to these reports. The CBB should then study these reports and assess how much capital is required to charge against the bank in light of this size and severity of the operational losses reported.*

If banks find that the BIA is not appropriate and irrelevant to the essential operational risk, they are exposed to, and they demand that the CBB has a capital requirement to address their essential operational risk then this stance begs some questions for the banks. First, if banks demand method other than the BIA, then they must have an operational risk management framework that produces valid and reliable reporting of all the operational losses faced by the bank. This is necessary because if work has to be done to avoid the given standardized methods requirements as given by Basel II (in this case the BIA), then there must be input data available to enable quantifications of the operational risk. To investigate whether or not banks have this framework in place we examined the annual reports of the banks for the past five years to see if they have disclosed anything in that regard. Moreover, to see if they disclosed, along with the requirements of BIA, information about a quantitative method used other than that the BIA, we found the following:

<b>Bank</b>	<b>OR Policy&amp; Procedures</b>	<b>Loss events reporting</b>	<b>Bank Database</b>	<b>Since</b>
Bank 1	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2008
Bank 2	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2010
Bank 3	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2008
Bank 4	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2011
Bank 5	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2010

Bank 6	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2011
Bank 7	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2010
Bank 8	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2009
Bank 9	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2008
Bank 10	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2010
Bank 11	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2013
Bank 12	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2012
Bank 13	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2010
Bank 14	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2013
Bank 15	Approved by the board	A process exists to report the lost events to the risk manager	In place and loss, events are stored in in	2009

Table 4.17 Status of Operational Risk at Bahraini Banks

Table 4.17 shows that the majority (57%) of the interviewed banks have in place a framework for identifying, reporting and monitoring operational risk. This explains why bankers in the survey are against the BIA as a measurement tool for their operational risk. BIA does not distinguish between a bank with one operational loss event and a bank with hundred. This lack of differentiation makes bankers unconvinced of the outcome of the method.

The CBB is cognizant of the shortcomings of the BIA but currently, has no option to rectify them. (Hamad, 2014). According to Hamad, the only viable option available to the CBB is to impose an advanced approach, namely the AMA. There are several prerequisites the CBB and the banks need to satisfy in order to implement the AMA, such as the availability of a robust operational risk management system with validated quantitative measures, robust governance structure, etc. The AMA requires skills in quantitative finance from the banks' side to calculate internally the capital requirements from their own operational risk events and from the CBB in order to validate whether the calculations carried out by these banks are

robust and reflective of the essential operational risks. Hamad opined that none of the banks has yet shown such capabilities, and the CBB is insufficiently resourced, from a human capital and systems perspective, to generate and validate such calculations.

#### 4.4.2 Credit Risk

I here move from the operational risk requirements to the credit risk requirements which is the second component of the Capital Adequacy Ratio (CAR). The Standardized Approach (SA) is the only method for the calculation of the Credit Risk Weighted Assets (CRWA) that is accepted by the CBB. The SA is widely used owing to its simplicity and absence of prerequisites. According to SA, banks should classify their assets into counterparty classifications, and after classifying the exposures, predetermined fixed risk weights should be applied to each exposure. Risk weights are mapped to the rating of the counterparties as given by the external rating agencies. I have asked bankers in the survey “*Does the Standardized Approach of Credit Risk Weighted Assets calculation reflect the essential credit risk in your bank's portfolios?*”

Assessment	Response Percentage
Yes, and our bank does not need to consider another approach or further calculation	7%
Yes, but our bank needs to show more robust capital allocation for credit risk in its ICAAP	8%
Indifferent	3%
No, and the CBB relies on our ICAAP for the adequacy of capital for the bank's credit risk	7%
No, and we think our bank should adopt advanced approaches for credit risk	76%

Table 4.18 Assessment of SA for CRWA calculation (All banks)

Table 4.18 illustrates that 75% of the banks in this study found that the SA did not reflect their bank’s essential credit risk in their credit portfolios. This stance is explained because the predetermined fixed rates in the SA apply to a bank’s clients, which are either commercial corporations or clients in the financial industry such as banks, insurance companies, funds, etc. Not all of these clients seek to be rated. The tendency to seek to rate depends on the environment in which the client operates. In an environment where conclusions about the creditworthiness of the borrowers and lenders are established based on personal interactions,

personal and professional networking, and trust, for instance, these counterparties would not need to seek the opinion of rating agencies on their creditworthiness. Interviewees have emphasized that their corporate clients fall in this category. Interviewer 4, for instance, explained as follows:

*Interviewer: how do you interpret the finding of our survey that the majority of the bankers find that SA not entirely reflective of the essential credit risk in their lending portfolios?*

*Interviewer 4: In order to understand or interpret this finding you have to carefully look at two points: the geographical distribution of the credit portfolios of these banks and the credit rating capabilities at these banks. First, banks in Bahrain only lend to corporates in the local or regional market. By regional market, I mean the GCC [Gulf Cooperation Council] countries. Corporations in these countries are not rated.*

*Interviewer: why?*

*Interviewer 4: the question is why should it be rated? A corporation or even a bank seeks to be rated by credit rating agency if they see value in doing... for example, to solicit international foreign investments, international capital injection, deposits, etc. We as bankers in the country we do not expect these companies to be rated anyway for this reason.*

*Interviewer: can we go back to your analysis, if they are not rated, what are the implications of the adoption of SA.*

*Interviewer 4: the implications is that if they are not rated they would attract a risk weight of 100% even though they might be the best customer you ever want to deal with, they never default, always paying their installment on time, honest, transparent, etc. Therefore, we see it first hand; SA tells us a size of a risk that is very misaligned with what we see from the client by dealing with him.*

On the other hand, the bank's internal assessment of such clients could be correct in some cases, yet they are still required to apply a 100% risk weight when calculating CAR as per the SA. I have received unanimous responses from the interviewees in retail-banking categories are unrated. I have augmented the unanimous response with an examination of the annual reports of these banks to explore the geographical distributions of their credit portfolios. The result of this examination is illustrated in the following Table 4.19:

Bank	Bahrain	GCC	Middle East and North Africa	North America	Europe	East Asia
Bank 1	94%	2%	4%	-	-	-
Bank 2	100%	-	-	-	-	-
Bank 3	93%	7%	-	-	-	-
Bank 4	100%	-	-	-	-	-
Bank 5	100%	-	-	-	-	-
Bank 6	99%	1%	-	-	-	-
Bank 7	100%	-	-	-	-	-
Bank 8	100%	-	-	-	-	-
Bank 9	100%	-	-	-	-	-
Bank 10	96%	1%	3%	-	-	-

Table 4.19 Geographical distribution of Bahraini banks' credit portfolios

Table 4.19 informs us that the entire credit portfolio of banks are in a local or regional market where, as interviewers indicate the clients in this market are not rated.

The summary of the above is that the CBB imposes the method given by Basel II that does not reflect the bank's credit risk and bankers say that their credit risk is different than the one captured by this method. Therefore, this leads us to raise the following questions: how does the CBB satisfy itself that the credit risk in the banks' credit portfolios is acceptable on the individual and aggregate basis? What further analysis does the CBB conduct to augment the credit risk calculations in the SA?

To that effect, the banks prefer to use advanced methods for CRWA that are called advanced approaches, namely the FIRB and AIRB. Table 4.20 informs us that 92% of respondents consider the FIRB and AIRB to be the best options to calculate the capital requirements for credit risk. There are, however, obstacles to the adoption of the advanced approaches from the CBB and the bank's sites such as the regulator's competency to deal with advanced mathematical models, as explained in more detail in interviewee 10's response below.

Assessment	Response percentage
Alternative Standardized Approach	7%
Foundation Internal Rating Approach (FIRB)	35%
Advanced Internal Rating Approach (AIRB)	58%

Table 4.20 Assessment of the best method for CRWA calculation (all banks)

Interviewee (10), although he was very circumspect so as not to disclose confidential information about his bank's credit portfolio and initiatives for calculating the CRWA, he clearly outlined the issues with implementing the SA and advanced approaches for calculating the CRWA. Although other interviewees shared the same stance, we chose to cite this interview in particular because it offered the most comprehensive information in this respect.

*Interviewer: How would you assess the effectiveness of the SA in aligning the capital charge to the banks' credit risk-weighted assets (CRWA)? Moreover, how successful is the SA in doing that at your bank?*

*Interviewee10: To me, the SA is nothing but number crunching to satisfy the CBB. We just multiply figures with the risk weight. We do not agree on these weights and how they have been designed ..., but we cannot object to that; we have to satisfy the CBB.*

*Interviewer: Did you convey this to concern to the CBB?*

*Interviewee10: Yes, of course, in many occasions and in the many letters we write to the CBB in response to its consultation paper. Whenever I find an opportunity, I speak up and say that this is not right.*

*Interviewer: If the SA is nothing but number crunching, why not move to an advanced approach, such as the FIRB and AIRB?*

*Interviewee10: It [doing so] needs a lot of investment in systems; we have no budget for that. In addition, even if we have that, the CBB will not approve it.*

*Interviewer: Why not?*

*Interviewee10: Because using advanced approaches requires the central bank to have the capability to make sure that we are doing the right job.*

*Interviewer: How capable is the CBB of doing that currently, in your opinion?*

*Interviewee10: [Laughing] The CBB will not be ready for advanced approaches in fewer than 10 years. ... It needs data and people.*

*Interviewer: Can you please elaborate on why you think the CBB is not capable of approving your application to use advanced approaches? I would appreciate it if you can please cite some real-life examples.*

*Interviewee10: If you want to apply the advanced approaches to calculate the CRWA, you need to calculate the probabilities of default (PDs). Calculating PDs requires historical data from at least the past seven years about your bank's credit portfolio problems. We do not have these data. Even if we did, the CBB would have to come and monitor us, to make sure itself that we are doing the right calculation and are not underestimating the capital charge for credit risk. Now, you tell me, how can the CBB do that if they do not have someone experienced in data analysis? Will they outsource the task to a consultancy or audit firm, like what they are doing now? It would be an embarrassing situation for them.*

*Interviewer: OK, if we put the issue of the CBB's capability aside, I still do not see why your bank's management could not create a budget for systems that will enable you to correctly calculate your credit portfolios' CRWA. Would you care to explain?*

*Interviewee10: it is because of cost-benefit. We know that if we apply advanced approaches, our CAR might improve somehow, but in order to improve slightly, we would have hundreds of thousands of dollars to get that. So, why spend this money if the CBB is very much happy with the SA! Also, why should spend all this money and get into a hassle of staff training if the CBB itself will not understand what we are doing?*

The excerpt above reveals the impact of the CBB's regulatory and supervisory approach on banks' attitudes toward banking regulations and risk management. Because banks perceived that the CBB's style in Basel II regulations and supervision is to be solely *compliant* to the accord regardless of how applicable or effective is it to them, banks tend to behave similarly; they tend to do things only to satisfy the CBB requirements. Anything that is beyond that, however, useful to them eventually, would be considered by banks as "unnecessary expenses." For instance, even if banks deem IRB superior, in terms of producing lower CRWA, compared to the SA, and provides a framework for better credit risk management, as long as the CBB's focus is only on SA, then banks would not be inclined to invest in the IRB systems. Another factor, as revealed in the excerpt above, is that banks would only invest in advanced systems for risk management and Basel II implementations if they were convinced that the CBB staff is competent to monitor and validate their work. I infer from the above findings that the credit risk of banks remain not accurately or meaningfully quantified for

capital adequacy and stakeholders of the banks, including the CBB as the regulator, are not being informed about this fact. I have examined the annual reports of the banks, and we have not seen evidence that indicates that the SA has been augmented with any other measurement. Therefore, for investors, debtors, creditors, as well as the shareholders themselves how much capital, actually supports the credit risk exposure of the bank is not and cannot be known from the banks' from Basel II calculation. I also infer that the CBB's implementation of the SA is only to satisfy Basel II with no regard given to the intrinsic credit risk in the system.

#### ***4.4.3 Capital Adequacy Ratio***

After discussing operational and credit risk requirements in the CAR, we now discuss the concept of CAR. As we expounded in Chapter One and Two Basel II is a capital-based regulation, i.e., it uses capital size in relation to the riskiness assumed by a bank to determine its financial resilience. In the previous two subsections, we examined the components of the CAR. In this subsection, we aim to examine the concept of CAR as a whole because it is the crux of Basel II, as explained in Chapter One. There is a noticeable difference between the bankers from Islamic banks and those from conventional banks regarding the concept of the CAR as a sufficient indicator of a bank's risks. Table 4.21 shows that approximately 88% of the respondents from conventional banks did not see a relationship between the CAR and the risks input into the CAR calculation. Only 65% of the respondents from Islamic banks shared the above opinion, while another 26% of the respondents from Islamic banks believe that the CAR was the right measure for their banks' risks.

Response	Islamic Banks	Conventional Banks
Yes, CAR is a sufficient indicator of our bank's portfolios risks	8%	1%
Yes, but needs to be enhanced with other indicator or proxy	26%	6%
Indifferent	2%	4%
No, we do not find CAR as we currently calculate a sufficient indicator of our bank's portfolios risks	42%	22%
No, we do not find a relationship between our portfolios risk and the CAR we currently calculate	23%	66%

Table 4.21 Assessment of CAR as sufficient indicator of risk (by bank type)

I asked interviewees about their experience with CAR, including how it is analyzed inside the bank and the impact it has on any process of decision making whether in the investment or lending side of activities. I cite three example of interviewee response as follows:

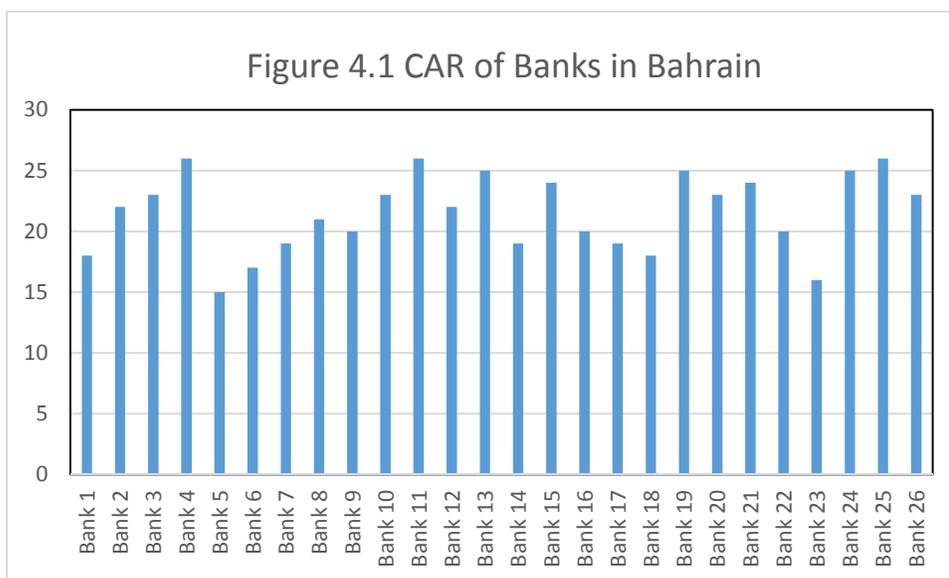
*Interviewee 20: in the area of our treasury and investment, we watch the impact of CAR on the project we are studying so that the CAR does not go below the minimum threshold that is it.*

*Interviewee 16: as secretary of the board risk committee, I here only one comment from the members of the board “are w respecting the CBB ratios,” when I say yes then that is it. That is all that matters, meeting the requirements. As long as are above that, then no one uses that ratio no more.*

*Interviewee 10: CAR is being looked at as regulatory think instead of what is supposed to be looked as guidance for cost of funds, liquidity decisions, etc.*

*Interviewer: do you think the banks have contributed to this attitude?*

*Interviewee 10: to me, both of them [banks and the CBB] are to blame for that. The CBB portrayed as ticking box exercise, and banks know that the CBB would go on hibernating mode as long as we are above the threshold.*



From the literature point of view, the above stances of the practitioners are consistent with the conclusion reached by some academic researchers such as Moosa (2010), Caruana and Narain (2008). Moosa (2010) asserted, “The experience of the financial institutions that

collapsed shows that what matters more than capital are liquidity and leverage” and Caruana and Narain (2008) stated that “the problem in the market goes beyond the ambit of capital adequacy framework.” It might be interpreted that banks are objecting CAR because they are having trouble meeting its minimum threshold. I examined the banks’ annual reports to determine the CAR of banks for the period ending December 2015, as illustrated in Figure 4.1. Figure 4.1 informs us that banks do not have any problem adhering to the minimum threshold per se, as they are all above the minimum threshold of 8%. I infer from the above that they are not objecting CAR because they cannot meet its minimum threshold but because of practical implications. The practical implication of this considerably huge consent among bankers that the CAR does not mean anything to them is two folds. First, from the regulator’s perspective, the CBB does not have the valid basis for decision-making. This means that if the CBB relies on a measure that supposed to inform it about whether a bank has enough capital to absorb the expected losses, and that measure is deemed invalid, then on what basis the CBB takes its decisions in relation to that bank. These decisions refer to, for instance, the level of dividends and remunerations that are authorized to be distributed to the shareholders and the executive management, respectively, the approval for exemptions from large exposure limits, etc. Second, CAR leads banks to neglect disclosure to the stakeholder's other risks that are not included in the CAR such as liquidity and concentration risk. The CBB mandates reporting of CAR on a quarterly basis but never asks for reports on liquidity or concentration risk. I infer, therefore, that a list of risks facing banks are not regulated or supervised by the CBB as long as they are not within the realm of Basel II implementation project. This constitutes considerable vulnerabilities to the banking system. The negative repercussions of these vulnerabilities might not have been envisaged by the CBB yet, but when these vulnerabilities materialize, the onslaught on the system and the reputation of the market would be severely damaged. The literature on the financial crisis of 2007 taught us this lesson and led us to infer the above. Banks who suffered and shut down were compliant with Basel II, and their CARs were well above the minimum threshold. (Moosa, 2010).

#### 4.4.4 Basel II, good or bad regulations

I ended every interview with the heads of credit, risk, compliance, and finance with a close-ended question: Do you think Basel II regulation and supervision in Bahrain are good or bad for the banks? The responses, which were succinct, are summarized in Table 4.22.

Response	Response Rate
Basel II regulation and supervision are bad for the banks.	95%
Basel II regulation is good, but the supervision is bad for the banks.	3%
Indifferent	1%
Basel II regulation and supervision are good for the banks.	1%

Table 4.22 Assessment of Basel II regulation and supervision (all banks)

I cite two example from interviews of banks for explanations, implications, and recommendations from interviewees with regard to CAR of Basel II.

*Interviewer: Do you think Basel II regulation and supervision in Bahrain are good or bad for the banks?*

*Interviewee 10: Basel II is not only bad for banks but also bad for the CBB. It is particularly bad for the CBB because the CBB is not implementing Basel II in its entirety. The CBB is not yet implementing Pillar 2 in its right form. Therefore, we are half-Basel II compliant...*

*Interviewer: I still did not understand how that could be bad.*

*Interviewee 10: let me simplify it for you. If there is a set of rules designed by people working in a banking environment that are very different from yours, for objectives and motivations that are not applicable to your banking environment. You implement this set of rules at face value, yet not all of it just part of it [he is referring to the implementation of Pillar 1 rather than Pillar 2 as we expounded in previous sections and chapters]. Add all that to the fact that the methods imposed are not relevant to the banks then you would definitely end up with a blurred vision of the true risks the banks you are regulating are exposed to. The numbers you get from the banks do not have a lot of meaning. If the set of regulations is bad, then the supervision would inevitably be bad.*

Interviewee 17 agrees that Basel II regulations are bad to the bank in Bahrain, but he ascribed that to the supervision more than the regulations per se.

*Interviewee 17: I am inclined to say that Basel II supervision in Bahrain is worse than the regulations. The regulations by themselves are guidance or recommendations for best practices. What makes regulations good or bad is how they are implemented, which are the supervision and inspection part of*

*the CBB. What we need to improve in the country is the way we choose which regulations to adopt but most importantly, how we implement them.*

*Interviewer: How could that possibly be rectified?*

*Interviewee 17: The CBB would need to change its approach to supervision. It should open up to think locally, in terms of regulations and supervision instead of always striving to implement things that impress the rating agencies or the IMF [International Monetary Fund] or the World Bank. It is time to separate policies from economics. Decisions of banking regulations should be based on the nature of the banks and their capabilities instead of dreams or wishes from some senior people at the CBB. It should work together with the banks instead of order banks. I guess you agree with me that there is a lot of difference in that.*

The practical implications of the above findings in which practitioners deem Basel II as a wrong kind of regulation are huge. Shareholders and board of directors of banks will wrongly get a perception that capital is covering the risks the management assumed, especially if the minimum requirements are achieved. That perception makes them less vigilant to address risks beyond Base II such as leverage and liquidity. Eventually, that perception creates an environment of ticking boxes of compliance while the system is very much burdened with latent risks that are neither identified nor acknowledged.

#### **4.4.5 Conclusion**

The data showed us that 90% of the bankers found that the method imposed by the Basel II regulations and the CBB to quantify operational risk is just a ticking box exercises, not reflective of the essential operational risk faced by the bank. Furthermore, the bankers do not understand how the ORWA calculated by this method should be interpreted. The alternative, which they think more reflective and meaningful to their operational risk, is prohibitively not implementable. Bankers do not have the capacity or infrastructure to implement the CBB is qualified to neither implement nor design it as regulatory policy and the supervisory program in the first place. The inability of the bankers to make sense and use of the outcomes of the ORWA made them realize that Basel II, as shown in the data, is not designed for the banks in the region and they[ bankers] implied that the CBB should not just copy and passed the regulations as they are and implemented them. Bankers believe that if the CBB was qualified enough to handle the operational risk management, they have human capital, and the necessary infrastructure to handle well, it would have been able to augment the superficial result of the BIA with another method that could have given the CBB a clearer and

meaningful picture of the status of operational risk at the banks. The data informed us that there are banks, which shown readiness and ability to have a database of operational loss events that may qualify them to use alternative quantitative approach but the CBB has always blocked those attempts as not to deviate from the Basel II regulations. We learned that the CBB wants to stick to the Basel II regulations regardless of the impracticality in its own jurisdiction. The CBB's inability to cope with the requirements of imposing advanced approaches is the only obstacle.

With regard to the credit risk, the data showed identical result; the majority of the bankers found that the standardized approach for CRWA is not aligned to the intrinsic credit risk in the credit portfolios. Bankers consider the CRWA, especially to the corporate based commercial banking that their CRWA is exuberantly inflating their credit risk with no economic basis. They consider the 100% risk weight for local SMEs and corporate clients are not a risk-based measurement as always been claimed by the Basel II committee or the CBB. the SA is a cyclical approach and relies solely on the rating agencies of the corporate and fixed percentage for retail clients . well also learned that companies in this region do not seek rating and credit risk is better dealt with a good mixture of quantitative and qualitative measurement instead of relying solely on quantifying methods using non-risk-based approach.

Bankers realized that the only method suitable is the internal rating approach, which a lot of banks have shown progress. The only obstacle to implementing this, as per the data is the inability of the CBB to supervise this method because it requires human capital competencies with certain skills in math statistics and business analytics. The CBB is not willing to make such an investment in attracting this human capital to enable it to listen to the banker's request. The CBB might be cognizant of the shortcomings, but they would rather accept the numbers that are not entirely meaningful than not to implement the Basel II or make that required investments.

65% of the bankers do not see the cohesion and correlation between the capital adequacy ratios a percentage and their profitability, risks of loans portfolio, investment strategies, risk appetite, or business analysis. All the CAR represent to the bank's management, and the board of directors is that its regulatory “thing” with a minim number that we should always

operate above and that is. This attitude is shown in the boardrooms and communications with the elusive management. Discussion of capital adequacy takes only a few minutes by the board of directors as far as it's above the minimum threshold to the CBB. It is a concept that is only talked about 4 times a year, and that then shelved until new board meeting. The literature from studies outside the Bahraini market and the data in this study showed the banks have always been above CAR even shortly before they are announced to have trouble down the road. CAR is not a factor in formulating investment strategies risk appetite or board and management remuneration in the banking industry. Remunerations of the executive management are based on the profitability of the bank. if profitability is flourishing while the CAR is stagnated or constant, they none of the management or executive management would be penalized or held accountable for that matter.

Examining Basel II as a full set of regulations, the data informed us there are two groups of bankers, those who think Basel 2 regulations are bad for both bankers and the CBB and those who think Basel II regulations are not bad per se but the CBB's supervision is the inefficient part in the process. On the one hand, to those who think Basel II regulations are bad attributed this assessment to the fact that the Basel II regulations are not one-size-fits-all kind of regulations. It does not take the peculiar characteristics of the national banking system, types of the business model (Islamic or conventional), developed or developing countries, commercial, retail or wholesale banks. It is bad for the CBB as it puts the CBB in the embarrassing situation of not being able to both apply the advanced approaches of implementing it entirely without significant variations. On the other hand, there are bankers who think that Basel II regulations are not deficient per se but how they are implemented or monitored by the CBB is the knot in the thread.

I learned from this section that the Basic Indicator Approach (BIA) does not reflect the essential operational risk faced by banks and it is not a valid and reliable measure for it. I also found that banks in Bahrain have the framework of identifying, measuring, and reporting operational risk loss events, yet they cannot utilize this capability to determine the commensurate capital requirements for this risk as the CBB still imposes the BIA. With regard to the credit risk, we found that banks do not find the Standardized Approach (SA) an appropriate measure of the credit in their lending portfolio given in their portfolio

geographical concentrations and the one-size-fits-all approach in SA. As the crux of Basel II regulations, we learned that banks do not find the Capital Adequacy Ratio (CAR) as a whole, relevant to their operating environment. Finally, banks consider the CBB's Basel II regulations and supervision bad due to the lack of suitability and relevance of the regulations to their environments.

#### **4.5 The competence and the role of the CBB in Basel II implementation**

In this section, we discuss the results related to the competence and the role of the CBB in Basel II implementation. I aim in this section to shed light on how important is the role of the regulator is to the success or failure of Basel II regulations. I segregate the discussions of the findings into two categories: regulations and supervisions. I follow this breakdown because these two categories are the crux of the mandate of every bank regulator.

##### ***4.5.1 Regulation***

In this subsection, we firstly define regulation then examine the regulatory approach adopted by the CBB. I define regulatory approach as the economic and methodological scope of the design and implementation of regulations and supervisions. Within the economic scope, there are either micro-prudential regulations or macro-prudential regulations and supervisions. Within the methodological scope, there is either rules-based regulation or principles-based regulation<sup>61</sup>. The economic and methodological scopes are not mutually exclusive. These approaches can be applied in parallel; a regulator might apply a micro-prudential rules-based regulation or macro-prudential rules-based regulation.

A regulatory approach must be communicated well; the regulator and the regulated entities should be on the same page. If the regulator claims that he is applying a certain regulatory approach while the regulated perceives the regulation as something other than what is perceived by the regulator, then this indicates the following:

- The regulator does not fully understand the regulatory approach,
- The regulated does not know the difference between the approaches, and/or

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<sup>61</sup> BCBS applied the same definition in a number of its papers, such as “Regulatory Consistency Assessment Programme (RCAP) Assessment of Basel III regulations – Switzerland. June 2013

- There has been miscommunication while setting or designing the regulations and requirements, i.e., there has been no dialogue.

This subsection discusses the bankers’ descriptions of the regulatory approach followed by their perceptions of the CBB and its effectiveness. I posed a question in the survey to gauge whether or not the bankers’ perspectives or understanding of the nature of regulation policy in the country were aligned with what was carried out in practice, that is, we wanted to see if the bankers and regulators were on the same page when it came to regulation. Gauging this phenomenon is very important because of communication between the regulator and regulated forms a milestone towards effectiveness in regulation design and efficiency in its implementation. It also reveals the effectiveness and openness of the regulator to sharing information about its regulation and supervision. There was a dichotomy in opinions amongst bankers with regard to this question. In this study, 75% of the bankers perceive the CBB regulatory approach as “rules-based,” but CBB officials and the CBB website are insistent that the CBB approach is not rules-based but instead risk- and principles-based regulation. (Table 4.23). Approximately 40% of the interviewees attribute this magnificent variation between the CBB and bankers’ perceptions of the “lack of knowledge, and laziness in striking difference between the two, by the CBB officials” (Interviewee 7). Thus, the responses of the dominant majority of the surveyed bankers contradicted the CBB’s own description of its regulation approach as ‘focused and principles-based,’ as stated on its website. In addition, Interviewee-CBB 4, who is a senior CBB official, clearly stated the following:

*“We cannot let them [banks] work on a principles-based approach; they would be ruining everything we have built so far. If we operate on a principles-based approach, everyone will do as they wish and like. Bankers in Bahrain should be controlled tight; if we lose our grip on them, we would not be a reputable financial center anymore.”*

Response	Response Percentage
Principles-based approach	0.0%
Rules-based approach	75.0%
Principles and rules- based approach	25.0%

Table 4.23 Bankers perspectives of the CBB regulatory approach

I asked Interviewee 23 about his description of the CBB regulatory approach and the practical explanation of the ramifications amongst bankers and the CBB in that respect.

*Interviewee 23: CBB follows a hard-core rule-based approach for sure. When I meet fellow bankers, we always say the same thing: the CBB sometimes act as a management of the bank more than a regulator.*

*Interviewer: That is interesting. Would you care to throw more light on that?*

*Interviewee 23: look at their recent requirements, and you would know what I mean. The CBB wants to know every person on the management how much they get in salaries, benefits, remunerations, etc. in the appointment; they even went so far to stipulate which specific certificates the head of finance, internal audit or risk manager should take. For example, they ask every CEO [chief Executive Officer] to have a master degree. Why would you Mr. Regulator want the Master degree for a CEO? This is leadership position attained by experience and connections in the markets, not by a master degree.*

*Interviewer: but what is wrong with putting the minimum standard for education and professional qualifications for important posts such as the CEO?*

*Interviewee 23: I am not against the minimum standard; I am against going unnecessarily micro in stipulating the specific certificates. Would it not be more prudent and sensible to ask banks the following “every bank should hire to these posts a high caliber and experienced staff? Do you call naming the certificates and the exact number of years as minimum experience principle or rules based!*

Twenty interviewees shared the same discontent with the approximate wording of interviewee 23 that the CBB regulatory approach is rules-based rather than principles-based.

I should now seek to understand the reasons behind the variation in views between the CBB and the banks then we should understand the implications of this variation in relation to Basel II implementation. For this purpose, we cite the response of interviewee 24 and interviewee 10 as examples.

*Interviewer: how would you explain the variations between the CBB and the banks about the regulatory approach followed in the country?*

*Interviewee 24: I could think of two explanations. First, both parties do not know the difference between the rules-based or principles-based approach [laughing], and the second is there are obvious miscommunications between the two parties, i.e. these people do not talk well to each other.*

*Interviewer: you as a risk manager for a long time in the country and with your bank, which explanation you seem mostly relevant?*

*Interviewee 24: I am frankly inclined to accept the two. Let us start with the second one I mentioned to you. The banking environment here is different compared to, say, London. In London for instance, the banking environment there is like a community. Banking there is built on trust, dialogue.*

*Interviewer: I apologize for interruption, but I really want to understand your point of trust*

*Interviewee 24: By trust, I mean the regulator there, actually not only in the UK, in so many countries as well, does not deal with banks as rogue unless strictly monitored or negligent unless taught and supervised. On the contrary, the relationship is open and transparent. In such environment, the communication would inevitably be optimized in a sense that the regulator and the regulated entities are both on the same page in terms of the regulatory approach, the objectives, etc. the situation here is entirely different. Here, I do not sense from all these years of experience in the bank and the country that the CBB is dealing with us based on trust or even it strives to instill this culture in the system. The CBB I guess opted for the Police kind of mentality, which always assume that you are guilty unless we check, verify, and see if you are innocent and what we say go with no argument.*

*Interviewer: would you be able to relate what you expounded to Basel II implementation in the country and what would you recommend to the CBB in this respect?*

*Interviewee 24: Basel II, as well as all other recommendations issued by Basel Committee, is full of rules as well as general guidance we may call them principles. Even though Basel II embeds many rules but each central bank can still apply national discretion to ameliorate these rules to fit the peculiarities of the banking system they are regulating. I would recommend that the CBB adopts Basel II or any other regulations, but with more emphasis on the spirit of the rules, I mean the principle, rather the mere rules-adherence kind of approach.*

**Interviewee 10 approached the answer from a different angle, as follows:**

*Interviewee 10: I explain the variation due to the marketing impact on the CBB... The CBB wants to market Bahrain as the financial hub not only in the region but also in the whole Middle East. There is a rating of the country; the IMF [International Monetary Fund] is also monitoring and issued a report on the country and its banking system. Therefore, it looks nicer to say that we regulate banks based on*

*principles-based rather than rules-based approach. It conveys to the rating agencies, IMF, etc. that there is maturity amongst the constituencies of the banking system. Both the regulator and the regulated as are competencies and transparent enough to understand each other objectives. Nevertheless, in reality, I truly believe that the CBB very much know that they are not doing it [the regulation] by principles-based because if they are why would we have all these concerns about them. I would also tend to say that from my interactions with both senior and junior CBB officials I do not believe they really know the difference.*

I examined the CBB's Rulebooks to explore if it spells out its regulatory approach in its Modules, but we have not seen a mention to that effect. I only found a mention of it on the website, which says, "CBB requirements are risk-focused and principles-based, as well as tailored to different categories of the licensee and the variable nature of supervisory risks that they pose."(CBB, 2016).

Moving to the regulation design, meaning the parameters or options chosen by the regulator and then given to the banks and the methods for communicating the requirements of the standards in relation to Basel II regulation. Although the CBB adopts Basel II, this accord gives banking regulators like the CBB some discretion and allows them to choose the options that are more relevant to their objectives. In addition, even in areas where Basel II and III do not give the central bank discretion, these accords enable the central bank to modify the rules to fit its environment. As we expounded in Chapter Two, Pillar 1 is quite straightforward given the threshold. It does not require extensive work, unlike Pillar 2. Banks in Bahrain have confirmed to Pillar 1, the CAR calculation because it has been imposed by the CBB since 2007. In addition, both the banks and the CBB disclose the CAR level in their annual and economic reports, respectively. It is only Pillar 2 that we did not find disclosed in the banks' annual reports or in the CBB's literature. I reviewed the CBB Rulebook, for both Islamic banks and conventional banks, and we did not find a specific regulation outlined in it for Pillar 2. Although we discussed Pillar 2's requirements in Chapter Two, we will briefly define it here in order to put the results in perspective. Pillar 2 encompasses the measurement of all risks other than credit, market, and operational risks, as they are already covered under Pillar 1. Further, Pillar 2 includes the banks' measurement methodologies to ensure that the capital requirements calculated in Pillar 2 are reflective of and commensurate with the banks' banking and trading books. All these measurements are detailed in a document called the 'ICAAP.' I wanted to assess the effectiveness and efficiency of the CBB in addressing the

Pillar 2 requirements. I started with liquidity risk management owing to its importance to all banks, and we asked banks whether or not they found the CBB’s design of its regulation and supervision of liquidity risk commensurate with the banks’ business models and reflective of their liquidity risks. Some 86% of the bankers found the CBB ineffective and adopting a one-size-fits-all approach to managing liquidity risk in the banking system in the country. I also found that this view was stronger at conventional banks than Islamic banks; 97% of the respondents from conventional banks perceived that the CBB’s design of its liquidity risk management was not aligned with their banks’ business models, compared to only 71% of the respondents at Islamic banks.

Response	Response Percentage
Yes, we find the CBB’s regulation and supervision of liquidity risk adequate and commensurate with our bank’s risk appetite and profile and thus, should be maintained.	4.2%
Yes, <b>but</b> the CBB needs to improve its reporting requirements for liquidity risk to reflect a bank’s type of license and business model.	7.5%
Indifferent	2.5%
No, the CBB adopts a one-size-fits-all approach to liquidity regulation and supervision for all types of bank licenses.	28.3%
No, the CBB does not currently have formulated regulation and supervision for liquidity risk relevant to our bank’s type of license.	57.5%

Table 4.24 Assessment of the CBB’s design of liquidity risk regulation and supervision (All banks)

Response	Islamic banks	Conventional banks
Yes, we find the CBB’s regulation and supervision of liquidity risk adequate and commensurate with our bank’s risk appetite and profile and thus, should be maintained.	9.4%	0%
Yes, <b>but</b> the CBB needs to improve its reporting requirements for liquidity risk to reflect a bank’s type of license and business model.	13.2%	3%
Indifferent	5.7%	0%
No, the CBB adopts a one-size-fits-all approach to liquidity regulation and supervision for all types of bank licenses.	26.4%	30%
No, the CBB does not currently have formulated regulation and supervision for liquidity risk relevant to our bank’s type of license.	45.3%	67%

Table 4.25 Assessment of the CBB’s design of its liquidity risk regulation and supervision (by bank type)

I now discuss the respondents' assessment of how successful the CBB was in outlining regulations and providing guidance for the ICAAP, the single most important document, for the reasons indicated above. I asked in the survey "*has the CBB given your bank sufficient guidance and utilize ICAAP document.*" As illustrated in Table 4.26, only 7% of the respondents thought that the CBB gave them guidance regarding compliance to the ICAAP, 4% of whom believed that this guidance was not sufficient. The dominant majority found that the CBB failed to provide supervisory guidance for ICAAP compliance. I asked interviewees about their assessment of the CBB's work on ICAAP. I cite findings from Interviewee (23) as an example because it was rather elaborate compared to other responses. Interviewee 23 described the reason behind this failure as follows:

*Interviewer: What is your assessment of the CBB's work on ICAAP regulation and supervision?*

*Interviewee 23: It was minimal. The CBB just sent a circular to all banks asking them to prepare for the ICAAP, and that was it. There was no guidance, no regulation, nothing else.*

*Interviewer: What do you expect the CBB to provide you in this respect?*

*Interviewee 23: I expect them to provide something similar to the module on capital adequacy, such as details of methods to be used and which method is preferred for each risk, for example, why a method is appropriate or not for concentration risk, liquidity risk, and so forth. A regulator who wishes its banks to satisfactorily implement the ICAAP should give them two things—clear directions and qualified people to follow up on the banks. The CBB did not give us clear directions; it did not give us anything on how to quantify risks and how to do stress testing, and they did not send qualified people, who, when they come to inspect us, can add value to our banks or say what is wrong or not in our ICAAP implementation.*

*Interviewer: Why, in your opinion, did the CBB not do those?*

*Interviewee 23: The reason is simple—they are not qualified to do the job. They are not competent to talk about the quantitative measurement of concentration risk and liquidity risk, technical details of stress testing, and economic capital.*

*Interviewer: If the CBB is not competent, then why, in your opinion, is it imposing Pillar 2 of Basel II? Why not implement just Pillar 1?*

*Interviewee 23: The reason, again, is simple—the CBB does not want the country to be seen as that which only partially implemented Basel II. That does not sell well to the rating agencies and the IMF [International Monetary Fund]. It is politics, my friend. Just politics.*

*Interviewer: How would that affect you then? I mean, when you do not receive guidance about how to get the ICAAP done? How do you satisfy the CBB then?*

*Interviewee 23: Banks have two choices—either prepare the ICAAP internally, which, in banks that do not have people with quantitative and conceptual understanding, will be done haphazardly, or ask an audit or consultancy firm to do it for them. In both cases, the document is just prepared and sent to the CBB so that the banks can say that they satisfied the CBB requirement. The CBB does not use it [the document] or does not understand it, and we do not hear back from the CBB after we submit it.*

*Interviewer: What about you? Do you utilize it [the document] internally at your bank?*

*Interviewee 23: Frankly? No one knows or cares what is in it.*

*Interviewer: what I get from your statement is that neither the CBB nor your bank cares about the whole exercise of ICAAP. Is that correct?*

*Interviewee 23: absolutely.*

I examined the annual reports of the banks we interviewed to see if the ICAAP framework has been highlighted and if the banks disclose how they use or design / methodologies of their ICAAP. I found that every single bank of the 26 banks mentioned in their annual report that they have an ICAAP framework in place but none of these banks disclose or give an indication to the methodologies adopted to design the ICAAP framework. I have also noticed in the annual reports that the disclosure about ICAAP is generic in a sense that it focuses on just stating that they have the ICAAP then delve into the definitions of the underlying terms rather than focusing on their peculiar framework. Interviewee 25 explains the reasoning behind this as follows:

*Interviewee 24: it is a dichotomy; banks either develop their ICAAP internally or hire an external auditor and/or consultancy firms to do it for them. If they hire the consultant to do it, then they would not know how it has been done so it would be understandable if they do not disclose enough information about it in the annual report. If they developed internally, then it is considered as confidential because it should, in principle, enlists all the risks they are exposed along with their*

quantifications. Again, it would be understandable not to disclose it that is unless the CBB specifically asks for such disclosure, which currently it does not.

Response	All banks
Yes, the CBB gave us sufficient guidance to formulate our ICAAP.	2.5%
Yes, the CBB gave us guidance, <b>but</b> it was neither sufficient nor precise and did not clarify the requirements.	4.2%
Indifferent	6.7%
No, the CBB required us to prepare an ICAAP without giving us any guidance for the preparation.	22.4%
No, the CBB has not required our bank to prepare an ICAAP.	64.2%

Table 4.26 Assessment of the CBB's design of its ICAAP regulation and supervision (all banks)

In the ICAAP, after calculating the capital charge required for all risks other than those calculated for Pillar 1, a reassessment of those in Pillar 1 leads to an aggregate capital charge called economic capital. I asked interviewees about their definition of economic capital before and discussed with them the findings of the survey and their explanation and interpretation of the matter. I cite three examples of these responses below:

*Interviewee 22: A capital that could absorb all the loss to the extent that the bank can continue its operation without default or bankruptcy.*

*Interviewee 3: a capital calculation that has a wider scope than the scope of the regulatory capital calculated in and for CAR... it is more accurate than the regulatory capital*

*Interviewee 15: it is the bank's internal assessment of every single material risk it is exposed to. It is internally measured by the bank without the imposition of any standard risk weights percentages. It is a capital that is calculated by the management that gives it an idea about the solvency of the bank and how sustainable is its growth rate.*

By these definitions, economic capital as in Basel II accord is the ultimate objective of quantifying, and not the regulatory capital in Pillar 1.

I sought to gather data about the status of the CBB's regulation and supervision of economic capital from the bankers' experience and to find out whether or not they considered the CBB effective or helpful in this respect. Approximately 84% of the respondents, 96% of whom were respondents from conventional banks, did not consider the CBB to be effective in the regulation and supervision of economic capital.

Response	All banks
Yes, we find the CBB's regulation and supervision of the economic capital framework helpful and adequate for our needs.	0.8%
Yes, <b>but</b> the CBB's regulation and supervision of the economic capital framework are not sufficient for our needs.	9.2%
Indifferent	6.7%
No, we do not find the CBB's regulation and supervision of the economic capital framework helpful.	12.5%
No, the CBB does not currently have a regulation, guidance, or supervision program for the economic capital framework and practices.	70.8%

Table 4.27 Assessment of the CBB's design of its economic capital regulation and supervision (all banks)

Response	Islamic Banks	Conventional banks
Yes, we find the CBB's regulation and supervision of the economic capital framework helpful and adequate for our needs.	2%	0%
Yes, <b>but</b> the CBB's regulation and supervision of the economic capital framework are not sufficient for our needs.	17%	3%
Indifferent	13%	1%
No, we do not find the CBB's regulation and supervision of the economic capital framework helpful.	17%	9%
No, the CBB does not currently have a regulation, guidance, or supervision program for the economic capital framework and practices.	51%	87%

Table 4.28 Assessment of the CBB's design of its economic capital regulation and supervision (by bank type)

Another essential part of Pillar 2 is the stress testing, which is a process of identifying plausible relevant worst-case scenarios against which a bank assesses the impact on its credit and investment portfolio's profitability, liquidity, and so forth. The BCBS (2006, P255) specifically states that 'rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank should be performed.' I asked the bankers in the survey if they considered the CBB's design of its stress testing regulation helpful to their banks. Some 97% of the respondents from conventional banks did not consider the CBB's regulation helpful, 87% of whom indicated that the CBB did not have any regulation on stress testing. Interestingly, 15% of the respondents from Islamic banks did not know whether the CBB's design of its stress testing regulation was helpful or not, while another 15% of them found the CBB's design of such regulation helpful. In contrast, 87% of

the respondents from conventional banks thought that the CBB did not have stress testing regulation in the first place and thus, were unable to assess whether it was helpful or not.

Response	Islamic banks	Conventional banks
Yes, we find the CBB’s regulation and supervision of the stress-testing framework helpful and adequate for our needs.	4%	0%
Yes, <b>but</b> the CBB’s regulation and supervision of the stress-testing framework are not sufficient for our needs.	11%	1.5%
Indifferent	15%	1.5%
No, we do not find the CBB’s regulation and supervision of the stress-testing framework helpful.	17%	10.4%
No, the CBB does not currently have a regulation, guidance, or supervision program for the stress-testing framework and practices.	53%	86.6%

Table 4.29 Assessment of the CBB’s design of its stress testing regulation and supervision (by bank type)

The implications of the above findings on stress testing and economic capital are that if the CBB does not have a perception of the worst case scenarios facing banks it supervises it would be caught by surprise if one or more financial institution suddenly faces a financial problem. Caught in the midst of a crisis facing one or more banks could either make the CBB make inappropriate decisions or keep silent for not knowing how to react. The latter is what happened in the crisis of 2007. Interviewee 17 shared with us his experience during the crisis of 2007. He said:

*Interviewee 17: The CBB clearly told us that you are on your own. They called us for a meeting and told us that we are not going to bail out any bank and we are not going to force you to take any action. You manage it [the crisis] on your own. What we want from you is to report to us your liquidity status on a weekly basis.*

*Interviewer: was a surprising stance to you as a bank?*

*Interviewee 17: Not really, for we know that it is a kind of management-by-crisis in the domestic environment. The CBB did not see that crisis coming; that explains why it could not take a stance.*

*Interviewer: Do you think a period stress testing is a helpful tool to order to see or forecast the crisis coming, as you described.*

*Interviewee 17: Of course. Stress testing is a very much helpful tool for us [banks] and the regulator to plan for the worse.*

Finally, in relation to the survey questions in the section ‘regulatory tool’ about whether or not the bankers found the SA and BIA appropriate for their calculations of the CRWA and

ORWA, respectively, we sought the bankers' opinions on the appropriate design of the calculations if they deemed the above approaches inappropriate. Approximately 93% of the bankers recommended opting for advanced approaches, such as the FIRB or AIRB. The respondents from conventional banks seemed more eager to adopt advanced approaches, with 98% recommending such approaches, compared to only 87% of the respondents from Islamic banks recommending the same.

Approach	All banks
Alternative standardized approach (SA)	7%
Foundation internal rating approach (FIRB)	35%
Advanced internal rating approach (AIRB)	58%

Table 4.30 Preferred approach for calculating the CRWA (all banks)

Approach	Islamic banks	Conventional banks
Alternative standardized approach (SA)	13%	1.5%
Foundation internal rating approach (FIRB)	21%	46.3%
Advanced internal rating approach (AIRB)	66%	52.2%

Table 4.31 Preferred approach for calculating the CRWA (by bank type)

#### **4.5.2 Supervision**

I defined supervision in Chapters One and Three as the activities undertaken by the regulator to ensure that the regulations are adhered to. These activities are mainly a) inspection visits by the banking regulator, b) reporting requirements, c) and off-site examination. For our purpose of examining the CBB's supervision of Basel-based regulations, we raised questions in the survey about the processes for the CBB's inspection visits, reporting requirements, and off-site examination.

I start this subsection with the findings on whether or not the CBB takes into its consideration parameters such as business model, stage of bank's growth, a bank's risk appetite, etc. When it designs its supervisory program. A supervisory program encompasses three types of activities, namely the banking regulator's inspection visits, reporting requirements, and off-site examination. I found, as shown in Table 4.32 that 86% of the respondents were not aware of the parameters used by the CBB to design its supervisory program for their banks, 18% of whom believed that the CBB did not use any parameters but rather, adopted a one-size-fits-all approach to supervision. None of the respondents from conventional banks

believed that the CBB followed a customized supervisory program, while 8% of the respondents from Islamic banks believe so.

Responses	All banks
Yes, we find that the CBB's supervisory program for our bank is designed based on these parameters.	3.3%
Yes, we find that the CBB's supervisory program for our bank is designed based on <b>only a few</b> of these parameters.	6.7%
Indifferent	3.3%
No, we find that the CBB uses a standard supervisory program for all banks that does not consider these parameters.	18.3%
No, we are not aware of the parameters the CBB uses in designing the supervisory program for our bank.	68.3%

Table 4.32 Assessment of the CBB's design of its supervisory program (all banks)

Assessment	Islamic banks	Conventional banks
Yes, we find that the CBB's supervisory program for our bank is designed based on these parameters.	8%	0%
Yes, we find that the CBB's supervisory program for our bank is designed based on <b>only a few</b> of these parameters.	9%	4%
Indifferent	6%	1%
No, we find that the CBB uses a standard supervisory program for all banks that does not consider these parameters.	25%	13%
No, we are not aware of the parameters the CBB uses in designing the supervisory program for our bank	53%	81%

Table 4.33 Assessment of the CBB's design of its supervisory program (by bank type)

The regulator's staff carry out the supervisory program. Inspectors conduct on-site visits to examine the bank's control and governance environments, risk management set-up, and compliance with all the rules. These responsibilities require that the regulator's staff are up-to-date with the regulation and sufficiently competent to ensure that the banks adhere to the regulations. I asked the bankers in the survey if they found the CBB staff competent to carry out the supervision tasks, particularly those related to Basel II. Table 4.34 shows that approximately 13% of the respondents found the CBB staff to have the limited competence to carry out such tasks, while 73% of the respondents found the CBB staff incompetent for such tasks. The results of the survey also show that the respondents from conventional banks had a more negative view of the CBB's supervision staff than the respondents from Islamic banks.

Interviewee (17) explains the issue of the CBB’s competence in supervising the banks’ compliance with Basel II regulations.

*Interviewer: What is your assessment of the CBB staff’s competence—and by staff, I mean by staff at all levels, from junior staff to senior staff—in supervising adherence to Basel II regulations?*

*Interviewee 17: There are a short answer and a long answer to this question. The short answer is that they—all of them—are not competent to do the job.*

*Interviewer: Sorry to interrupt you, but can you please clarify what you mean by ‘job’ whether or not you are referring to both junior and senior staff by ‘they’?*

*Interviewee 17: Yes, I mean all of them—they are not competent to do the job. They are not competent to supervise the implementation of Basel II or III because they do not have the skills, do not read, and do not have the experience. There is an issue of education with these people. Imagine, they send me junior staff from their inspection team who cannot distinguish between types of LCs [letters of credit] and argues with me that they have correctly done the calculations for the CAR [capital adequacy ratio]. My question to the CBB is, how can you send inspectors to check on my Basel compliance who did not fully study Basel requirements, who, if you take away their checklists, are totally lost, and who are unable to ask smart questions? You told me that you would not share this with the CBB, right?*

*Interviewer: I confirmed to you that I would not disclose your name, title, bank, or nationality, but the content of what you share with me would be cited in my thesis.*

Interviewee 17: OK, no problem. That is fine, then.

Response	All banks
Yes, we find the CBB’s inspection and examination staff competent to supervise our bank’s compliance.	1.7%
Yes, <b>but</b> the CBB’s inspection and examination staff need to be up-to-date with the changes in the banking environment in order to give applicable and practical recommendations.	5%
Indifferent	7.5%
No, we find the CBB’s inspection and examination staff to have the <b>limited</b> competence to supervise our bank’s compliance.	12.5%
No, we do <b>not</b> find the CBB’s inspection and examination staff competent to supervise our bank’s compliance.	73.3%

Table 4.34 Assessment of the CBB staff’s competence in supervising banks’ Basel compliance (all banks).

Assessment	Islamic banks	Conventional banks
Yes, we find the CBB's inspection and examination staff competent to supervise our bank's compliance.	3.8%	0%
Yes, <b>but</b> the CBB's inspection and examination staff need to be up-to-date with the changes in the banking environment in order to give applicable and practical recommendations.	9.4%	1.5%
Indifferent	11.3%	4.5%
No, we find the CBB's inspection and examination staff to have the <b>limited</b> competence to supervise our bank's compliance.	18.9%	7.5%
No, we do <b>not</b> find the CBB's inspection and examination staff competent to supervise our bank's compliance.	56.6%	86.5%

Table 4.35 Assessment of the CBB staff's competence to supervise banks' Basel compliance (all banks)

Assessment	All banks
Annually, in the prudential meeting	28.3%
Semi-annually, in the prudential meeting	2.5%
Quarterly	2.5%
During the inspection visits only	1.7%
The CBB never asked us about a risk profile and appetite document	65%

Table 436 Assessment of the frequency of the CBB's supervision of banks' risk profile and appetite (all banks)

Assessment	All banks
Yes, we believe that the CBB relies on our ICAAP document in determining the supervision program for our bank.	2.5%
Yes, <b>but</b> the CBB does not significantly rely on our ICAAP document in determining the supervision program for our bank.	4.2%
Indifferent	6.7%
No, we do not believe that the CBB uses our ICAAP document in determining the supervision program for our bank.	16.6%
No, we do not believe that the CBB assesses our ICAAP document.	70%

Table 4.37 Assessment of the CBB's utilization of the ICAAP in determining the supervision program for banks

The last aspect of supervision on which I focused in my data gathering is the reporting side. Reports are the administrative tools of control that the CBB has at its disposal to use on banks. It is their tool for gathering intelligence on banks' financial performance. These reports are given very much attention by the CBB; the CBB rulebook is separated into parts, one for rules and regulations (named Part [A]) and one for the templates and specific requirements for filling in each cell of the templates within the reports. There are deadlines

for each report, and the CBB is obstinate about getting these reports by the deadlines. The report that is most relevant to our discussion is the Prudential Regulation Report (PIR), which contains information about liquidity, income breakdown, CAR, etc., and is used as a supervision tool. In this study, we wanted to gauge banker's perceptions about the usefulness, helpfulness, and relevance of CBB reporting, in particular, Basel-related reports. I found that the reporting process of the CBB is viewed as useless, not helpful, and ineffective. 60% of the respondents agreed that they do not receive any feedback from the CBB on these reports, and 24% believe that the feedback they received is useless and not helpful. Only 2% of the respondents found the CBB feedback and reports useful and helpful.

In the interviews, the banker's opinions and perceptions of the reporting process and how the CBB administers these reports were even harsher than the questionnaire results. The first point of concern in this context is the fact that the CBB reports are designed by an external consultancy firm. This fact is disconcerting to bankers; bankers interpreted this as a sign of inefficiency and lack of competence, and a lack of clarity of purpose and objectives. As a supervisory tool, reporting should connect with the objectives of the regulator; if the administrator of a tool is disconnected from the tool, then the regulated looks at the reporting process as a whole as a bureaucratic procedure (Hood, 1984; Moran 1986). The disconnect between the objectives of the reporting and its design is evident as in the following quote from Interviewee 5:

*The PIR is broken down into many sections ... the most relevant to banks is the CAR and large exposures sheets [each bank is supposed to list the largest 25 exposures with banks and nonbanks] ... the other sections are irrelevant. They are out of our world. Because non-practitioners designed them. We communicated with the CBB that many of these sheets are not applicable, but the CBB still decided to go on with them. Therefore, we have to fill them out for submission purposes.*

Ironically, instead of looking into the merit of the request by banks to make the reports more relevant for the banks' business model, the CBB forced each bank to have the report reviewed by external auditors to ensure that the banks are not filling them out for submission purposes only.

After the report is submitted, typically these reports ought to be acted upon so that banks would receive feedback from the CBB about large exposures, liquidity income distribution, and breakdown, the size of their regulatory capital, etc. However, the CBB only responds

when the CAR approaches the minimum threshold. 60% of the respondents asserted that they do not receive any feedback from the CBB, while 24% indicated that the feedback they received from the CBB is neither useful nor helpful. Lack of responsiveness from the CBB could be interpreted in several ways. It is possible that the CBB treats these reports as a source of control; banks, from the point of view of the CBB, would have to be disciplined to adhere to deadlines even if the submitted reports end up shelved. I found that interviewees were inclined to ascribe this rigidity on the reports' deadlines, yet bankers do not receive useful feedback to the lack of competence from the CBB side to analyze the reports, spot the problems or issues in them and take decisions to return to the bank with corrections actions. What moves us to adopt this interpretation is the rigidity and inflexibility that sometimes approaches irrationality by the CBB to the deadlines for submitting these reports. Financial figures are submitted prior to being audited merely to satisfy the CBB requirement that the report must absolutely be submitted on a specific day. I found that none of the bankers or the CBB official who agreed to meet with us could establish the reason behind these tight deadlines.

I asked the bankers about the benefits of reporting to them and to the CBB itself. Any regulator that gathers periodic reports containing voluminous information must have a purpose, that is, there should be some uses of these reports. One major benefit of writing and submitting these reports is that they help the regulator determine whether the banks adhered to the regulations. If the regulator concludes that a bank violated the regulations, it usually works with the bank to ensure that it does not repeat the violation and provides guidance about compliance. I asked the bankers whether the feedback they have received from the CBB in their periodical reports were relevant to the objectives of Basel II regulations. Approximately 60%, as shown in Table 4.38, of the bankers stated that the CBB did not provide any sort of feedback on the periodical reports that they submitted to it, and 24% said that there was feedback but that it was neither useful nor helpful.

Interviewee-7 described at length the CBB's supervision of the reporting requirements:

*Interviewer: You are the head of finance at your bank. Your department is in charge of creating reports for the CBB, particularly those reports related to Basel regulations. Your department is also the one that directly receives the CBB's feedback. How would you describe the CBB's handling of the periodical reports submitted to it?*

*Interviewee 7: The way the CBB handles the reports is very inflexible, more like a box-ticking kind of thing. Yeah ... every banker I know here says so. The CBB is just piling up the reports; it makes our life miserable for submitting these reports on time, and once we submit them, nobody knows what happens to them.*

*Interviewer: So, for the sake of keeping our discussion on track, please allow me to start with the design of the reports, then move on to the content of the reports, then the timing and deadlines, and finally, the effectiveness of the reporting requirements for Basel II implementation in the country.*

*Interviewee 7: We submit many reports to the CBB, but the most important one is the PIR [prudential information returns; it is submitted on a quarterly basis and includes the detailed calculation of the bank's CAR and the largest asset's exposure, quality, and liquidity]. The report is not designed by the CBB; an external audit firm with whom the CBB has a very close and cordial business relationship prepares it. Moreover, this is the main problem that we face. ... The CBB staff come to us with many questions and claim that we have this and that mistake, but when we question the design of the PIR itself, we see that they are stuck, because they cannot make sense of it. They just wish that we would fill out every single cell in the table. It does not matter whether it makes sense or not and whether it is applicable or not. All that matters to the CBB is for us to complete the report and submit it on time. What is puzzling me, really, is why the CBB relies on an Excel-based report for Basel II designed by an external party. Don't they have basic knowledge of Basel II to be able to design a report that includes everything they want so that they can make full use of the report? ... Most of the time, I feel the CBB staff are just robots. ... They heard of something called 'Basel' internationally, announce that they are adopting it, ask audit firms to prepare the report template for them, and then, finally, send their staff to inspect banks' compliance. ... Regarding the content of the report, there is a good part, and there are unusual old tables. The good part is the calculation of the CAR sheets; all the rest, such as the liquidity risk sheet, does not benefit the CBB or us because it assumes that the bank handles its assets and liabilities in a static mode in every time bucket [the maturity of each item in the assets and liabilities side of the bank's balance sheet] ... The deadline for the report is the 20<sup>th</sup> of the month following the quarter end. First of all, why it is on the 20<sup>th</sup> day nobody knows. Does it give us time to get the audited figures for the quarter end and then plug them into the PIR? No, and the CBB does not care about that; they just want it on time on the 20<sup>th</sup> and that is it. ... How effective providing the PIR in the report that we submit to the CBB for Basel II implementation is not clear to me. As head of finance, I do not see any value; as long as we are above the minimum threshold, the CBB is happy. ... We hear no comments, no discussions, nothing. Is it happy with this? I do not know, but if you ask me how useful these reports are to me or to the banking system as a whole in Bahrain, I cannot say. ... Banks in Bahrain have basic banking activities; whether they implement Basel I or II, it does not matter a lot. The capital adequacy is not the problem; the problem is the governance, risk management, and internal control and asset quality issues. Nevertheless, unfortunately, all the CBB focuses on is capital adequacy.*

Response	All banks
Yes, we find the feedback from the CBB helpful to us in all areas of risk management and corporate governance.	2%
Yes, we find the feedback from the CBB helpful to us <b>but</b> in limited areas of our risk management and corporate governance.	10%
Indifferent	4%
No, we do not find the feedback from the CBB helpful because it lacks precision and relevance.	24%
No, we do not receive feedback from the CBB on our periodic reports.	60%

Table 4.38 Assessment of the CBB's feedback on reports (all banks)

The bankers' assessment of the CBB supervision program, which includes the on-site inspection visits, reporting process, and off-site examination was that it was inefficient and not commensurate with their business model and needs. As *the* vital force to carry out the CBB supervision program, CBB staff in charge of inspection visits, reporting administration and off-site examinations are being assessed as incompetent, unqualified and inexperienced.

#### 4.5.3 Conclusion

Bankers and the banks are not on the same ground. Bankers see CBB's regulatory policy and supervision as rules-based while the CBB describe its approaches as principles-based. The interviews with the CBB officials revealed that the official stance contradicts with what the CBB markets its approach with. The CBB officials confirmed in our data that the country could not afford following the principles-based regulations because the government and the CBB officials do not trust the banking professional with the CBB. To the CBB officials, bankers are not trusted and unless they are directed by the minute detail of what they should and should not do they would ruin the banking system. As discussed in chapter three that the culture in the country of the governing bodies are not based on trust then verify kind of attitude and culture but instead, that every consist of every industry are guilty and prone to negatively impact the system they are operating in unless we intervene heavily from the beginning and set the stage well for them to perform according to meticulously drawn plan. The CBB micro-manage the banks by intervening in all material aspect of the banking industry, from the remunerations, the appointment of head senior executives to the meeting attending fees, etc.

The variations between how the CBB describes itself to how the bankers see it indicates that there obvious miscommunications between the two. This, in turn, informed us that the banking industry is not like a community with shared values and protocols but merely like a police and rogue bankers. This gives us a picture of the institutionalism in the country, which is in in line with the political and economic environment of lack of transparency, trust, and believe in a rewarding governance structure at institutions. Even banks who blame the CBB or even the government of not being transparent and not trusting in their constituents they internally follow the same approach, knowingly or unknowingly. Akin to the relation of the CBB and the banks and how the CBB micromanage the banks while it should only run the task of a regulator, board of directors' micromanage the bank on top of the management instead of being a monitoring body. The board, in many institutions, is caught up into who is hired or fired, promoted, the political affiliations of those who join the bank, even at junior levels, etc. The proper governance is that the management is on the front line and the board monitors and direct the movement. In Bahrain, and in banking particularly, the board is in the front, and the management is only representatives of the board due to the board engagement in other business.

The bankers themselves do not see the board itself, as shown in the data, aware of the intricacies of the Basel II regulations and its implications neither are they seen as adequately aware of the risk management, corporate governance or risk appetite and strategy setting. In terms of formulating the appropriate regulatory policy, the CBB has not made progress toward intrinsically complying with the Basel II regulations as it only has a policy for capital adequacy as in Pillar 1 and Pillar 3 because it is linked to the IFRS 7 ( disclosure and transparency). The CBB has not formulated a policy for the most important pillar of the Basel II that is Pillar 2. The CBB did not develop a framework for dealing with the ICAAP submitted by the banks. The existing practice is that banks hired consultants to write for them an ICAAP document from scratch and then submitted to the CBB via the bank. The essence of the Basel II requirements is that it is the responsibility of the bank itself, and monitored by its board, to develop the ICAAP and outline its investment and credit strategies based on the routines in the ICAAP document. The CBB, as the bank regulator, is supposed to review every ICAAP document and before validating, it should ensure that the bank owns the document, i.e. the bank's management, and its board are not cognizant of the content of the document and have a fair knowledge of how each risk has been parameterized and

quantified. Banks are aware that the current practice by the CBB is a ticking box exercise. Hence, it is not a major thing they should be worried about. Subsequently, it is fair to conclude, given this situation, that banks do not include the outcomes of the ICAAP document, as the majority of the bankers indicated so in the survey and the interview, into their credit and investment strategies or while they are outlining their risk appetite statement. Bankers attribute the silence of the CBB in making the expected progress in the area of ICAAP development to the competencies of the staff of the CBB to handle the quantitative part in particular of the ICAAP. The CBB officials themselves indicated that competent staff of could challenge and validate the calculations given by the banks based on the parameters and assumptions are chosen by the bank is a cumbersome task for its staff.

In regard to the stress testing, the data shows that the CBB has not made noticeable progress in that area either. The CBB does not have hitherto regulatory requirements dedicated to stress testing. The CBB just obliged each bank to have a stress testing through a brief circular but left the whole exercise to the banks themselves to determine the scope and the depth of the stress testing. Stress testing is not being validated or challenged by the CBB, and the whole exercise is turned to be a formality. Long after the crisis of 2007 until now, many banks have submitted their semi-annual stress testing reports to the CBB and not once in any bank interviewed for this study has the CBB reverted with discussions, challenge, or calibration of the submitted results. That raise a question of the merits of such attitude by the CBB. Stress testing results could be if properly utilized, an important source for the CBB to anticipate idiosyncratic or systemic risks in the banking system.

In regard to the supervision part, it has been identified that the supervision part of the CBB comprises of three tasks, period reporting. On-site inspection and off-site examination. The periodic reporting has been found to be non-value adding, routine, and ticking box exercise by both the CBB and the banks. These reports are of no use to the banks. They are merely reported to satisfy the CBB requirements. Once submitted, they are ditched on the bank's servers. The banks do not have evidence that the CBB utilize these reports in its communications with their respective banks. The only time they hear anything from the CBB concerning these reports is when they miss some “unfilled cell” or unfilled sheets. Otherwise, the reports are submitted and forgotten. Moreover, it has been found that the format and content of these reports are prepared as one-size-fits-all, i.e. they were not designed to cater

for the difference among banks in terms of their license of the business model. The CBB is so strict in receiving their reports as per the deadlines and very critical in highlighting a found mistakes or errors in the reports.

Regarding the onsite inspection, the CBB does not carry out pre-visit due diligence to customize their visits to each bank. The CBB does not take into account prior to each visit the peculiar characteristics of each bank to design a customized inspection plan and strategy for each bank based on each bank's risk appetite, credit and investment strategy, ICAAP, Stress testing, Basel II compliance or corporate governance. Instead, the CBB follows a predetermined inspection program that is applied to all the banks irrespective of the above characteristics. The bankers unanimously see inspection teams as not competent and unaware of the risk management, corporate governance, and Basel II requirements.

In this section, we learned that the CBB and the banks are not on the same page in relation to the regulatory approach followed by the CBB. The CBB announces that it follows a principles-based approach while banks find that the CBB follows a strict rules-based approach of implementing Basel II. Concerning the supervision, we found that the majority of the banks do not find the CBB to be using any risk or governance-based parameters to design its supervision program. In other words, the CBB follows a one-size-fits-all supervision program that does not take the peculiar characteristics of the banks into consideration. Furthermore, the results showed us that banks do not find the CBB staff competent or qualified to administer Basel II regulations to meet the objectives of the CBB or the banks. Lastly, we examined the regulatory tools that the CBB adopts for Basel II implementation such as the stress testing, ICAAP (an essential Basel II requirements), and economic capital. I found that the CBB does not have, albeit expects banks to prepare for a stress testing and economic capital rules and regulations or guidance document. With regard to Basel II reporting, we learned that bankers consider Basel II reporting none value-adding and merely a ticking box exercise. Bankers discerned to the differences between the prudential set of reporting that is designed to assess, explore and rectify and that that set is designed for mere compliance with requests. In addition, we learned that neither banks nor the CBB take the ICAAP seriously. The ICAAP is utilized neither by banks in their daily operations nor by the CBB in designing their specific supervision program. Lastly, the data

informed us that the CBB had not addressed a commensurate set of regulations and supervision program of liquidity risk to the various business models of banks in the country.

#### **4.6 Banks' Institutional Characteristics**

In this section, I explore banks institutional characteristics in relation to Basel II implementation at their banks. Doing so will help us understand the environment in which they operate and give context to their responses to whether they are for or against Basel II.

The banking sector in Bahrain is a “cappuccino society.” The majority of the lower and middle management of the banks are Bahrainis. On top of this majority is a little bit of froth comprised of expatriates mostly from India, Pakistan, and the UK which makes the senior and executive management. On top of the froth is a little bit of Bahrainis or other Gulf countries national which makes the board of directors. The staff of the banking sector is not fairly well educated. Some of the senior executives have to be approved by the CBB prior to appointment. The CBB encourages banks, indirectly, to hire in the senior executive's position Europeans or Asian instead of Bahrainis. The CBB decision makers are of the opinion that Europeans and Asians bring along with the wealth of experience and skills that would benefit their institutions, as they will devise policies and procedures of a high standard. The evidence-informed us that all such banks contracted consultancy firms to prepare for them the risk management and corporate governance policies and procedures. The explanation of why the board of directors and the CBB favors expatriates over Bahrainis for senior executive management, albeit expatriates cost them more than Bahrainis, is that expatriates are entrusted to “go along” well with the implementation of the board's directives and strategies. The business of retail banks is focused on local markets. The menu of banking products is limited to consumer finance, mortgage loans, and trade finance. Wholesale banks are focused on syndications, private equity and wealth management. Similar to the cultural attributes of the all the institutions in the country, banks are managed with the same cultural mindset, banks are driven by the private interest of the board and the executive management rather than by the shareholders'. Hiring, promotion, and progress in this sector are not based on competencies, skills or educations but by the skin, political affiliations, and membership of the “ the club” mentality.” The criteria of to join this club can be summarized for the purpose of this study in two words ability “ go along” with what the board of directors and

executive management objectives and agenda. It is a heavily relationship-based sector. These relationships do not affect how institutions are managed but also affect the relationships between these institutions and the CBB. The closer the owner and the shareholders and members of the board are to the top official in the political and economic fabric of the country the more flexible is the CBB toward their supervisor of these institutions. When the CBB designs its regulatory or supervisory policy, it shops for what is available in the market. Social responsibility among banker still not a popular topic in the country.

For any regulations, policies or procedures to be implemented effectively at any entity, there is a need for the following to take place:

- The governing body to supervise and monitor the implementation; in banks, this body is the board of directors,
- A competent team to undertake the implementation; in banks, this team comprises of the executive management and senior management, namely: Chief Executive Officer, Chief Risk Officer, Chief Finance officer, Chief Internal Auditor, Chief Compliance Officer, and
- An information system that enables processing and monitoring of the underlying outputs of the policies and procedures.

In order for the governing body, i.e. the board of directors, to monitor the implementation of the regulations and policies, it should firstly be adequately aware of these regulations and policies.

I, therefore, sought to explore the level of awareness of the board of directors at the banks in the sample of Basel II. I asked respondents in the survey whether their banks' board of directors, after seven years of implementing Basel II, was adequately cognizant of the accord's requirements and the implications of the implementations. Table 4.39 illustrates that approximately 46% of the bankers did not know whether their banks' board of directors was knowledgeable of Basel II, and 10% asserted that their banks' board of directors was not completely aware of Basel II requirements.

Response	All banks
Yes, the board of directors is <b>fully aware</b> of Basel II and all the relevant issues around its implementation.	12%
Yes, the board of directors is <b>adequately</b> aware of Basel II and all the relevant issues around its implementation.	30%
Indifferent	46%
No, the board of directors is <b>not adequately</b> fully aware of Basel II and all the relevant issues around its implementation.	3%
No, the board of directors is <b>not aware</b> of Basel II and all the relevant issues around its implementation.	10%

Table 4.39 Assessment of the board of directors' knowledge of Basel II

I examined the annual reports of the banks, and I found that these issues are never mentioned in them. The governance section of the annual reports addresses only the number of meetings attended by members of the board, the structure of each committee of the board, and a brief resume of each board member. The above findings are the perception of the bankers of the board of directors of their banks. Although the above findings give us an indication of the level of awareness of Basel II, they remain to be inconclusive because we should augment and compare the results with my direct meeting and interviews with the board of directors themselves. This, however, was not part of the scope of the data because of the intractable amount of time it would take to reach the members of the board of twenty-six banks included in the study, as most of the board's members are not Bahrain residents.

Regarding the procedures that are in place to ensure adherence to Basel II, we asked the interviewees about how they managed the implementation of Basel II internally. All the banks either established a dedicated committee that was mandated to only monitor and ensure that the bank complies with the CBB's Basel requirements or included this monitoring responsibility to the already existing Risk Management Committee.

With regard to the information system, all banks in the interviews automated their process to complete the calculation in Pillar I of Basel II (the CAR). Banks acquired systems to perform the calculation, and the intervention of the banks' staff are confined to the input of the required financial information. To validate this process, the internal auditors at each bank developed a checklist to ensure that the calculation and reporting process of Basel II are performed as required by the CBB. The staff is handling Basel II implementation, typically in

the Finance and Risk Management Departments are well trained and aware of the requirements.

### **Conclusion**

I learned from this section that bankers' assessment of the awareness of Basel II is dichotomous between not knowing whether the board is aware of Basel II and the assertion that it is adequately aware. I also learned that banks have in place appropriate information systems that enable them to sufficiently adhere to Basel II requirements. Banks in Bahrain has put significant investments in their institutions to comply with the CBB's Basel II requirements. Committees were established to follow up on the implementation of the regulations, and IT systems were acquired to automate the calculations of the capital adequacy ratio.

## **Chapter 5. Conclusions and Recommendations**

This final and concluding chapter is divided into two parts. The first part starts with an overview of the dissertation then moves on to address the contribution of this research in terms of theory and methodology. After that, it draws conclusions from the data and the implications of these conclusions for banking regulation. The first part ends with the research design limitations and the potential scope of future research in this area of study. The second part of the chapter addresses recommendations, drawn from the data to the Central Bank of Bahrain (CBB).

### **Part 1**

#### **5.1 Overview of the dissertation**

In the opening chapter, we begin to understand the framework of banking regulations for the purpose of this study. I attempt to answer five fundamental questions about banking regulations and the role of government in their design and implementation. After discussing these fundamental questions, we move to address the motivations for and the scope of the research followed by the research objectives we aim to achieve. After that, we highlight the contributions of the current research then moved on to address the research questions and hypothesis.

Chapter Two reviews the literature on regulations and supervision in general with specific focus on Basel II.

The theoretical framework and research methodology in the thesis are introduced in Chapter Three. The purpose of this chapter is to describe a theoretical model for banking regulation in relation to the implementation of Basel II. This chapter also explains the methods of the research project and the chapter is divided into three parts. Part 1 describes the philosophical underpinnings of the research project. Part 2 describes the conceptual framework of Basel Accords regulations and supervision. Finally, part 3 describes the research method used in this project and explains the reasons for selecting ethnography as the research method. This is followed by a description of the data collection tools and analysis.

The Fourth Chapter illustrates the data found in the questionnaire and the interviews and shows the analysis of this data. A brief summary of the findings is addressed in section 5.3 below. The discussions and the analysis are organized along the following themes; the questionnaire and the interviews were designed based on these themes:

- Demographics and descriptive statistics
- The role and impact of Base II; we raised questions in the interview soliciting views of the interviewees about whether or not base II and III are suitable for banks and for the whole banking system and asked them to justify their stance.
- The appropriateness of the techniques and methods of Basel II (e.g. risk measures, ratios); this theme includes the interviewees' responses to questions on the technical quantitative and qualitative requirements in Basel II and II, specifically, whether or not the requirements are reflective of and commensurate with a bank's assets size and complexity.
- The competence and the role of the CBB (regulations, supervision, inspection and reporting); this theme includes the interviewees' descriptions of the regulatory environment in Bahrain. How, from the bankers' perspective, are regulations designed and implemented? Are banking regulations fragmented or integrated within the whole economic system? What are the 'rules of the game'? This theme includes the interviewees' responses on how the CBB supervises Basel regulation. The supervision includes, specifically, inspection visits, off-site examination, and reporting requirements
- The banks' management practices and familiarities with Basel II concepts, requirements and implications; to appreciate the interviewees' stances, complaints, and reservations about the regulation and supervision, we believe that it is necessary to understand the environment in which the interviewees work. What are the governance culture and attitude towards risk management and regulation in the interviewees' work environment? What are the board's and executive management's attitudes towards regulation? This theme includes details provided by the interviewees that would help us interpret their responses to the other questions.

## **5.2 Contributions**

This study contributes to the body of knowledge regarding the implementation of Basel II in a developing country to two different types of banks, namely, conventional banks and Islamic banks, which feature different business models and sizes. This study should also contribute to the body of knowledge via a case study on how regulators in a country adopting Basel II could outline its regulation, create a supervision program and communicate its vision.

This study is the first study on banking regulations on banks in Bahrain. It assessed the effectiveness of imposing Basel II regulations on Bahraini banks. It should give the CBB the perspectives of the banks in Bahrain about how Basel II regulations and supervision are being coped with and used. These perspectives may alter how the CBB plans its regulatory scheme and conducts its supervisory program. The findings of the study should result in the CBB re-visiting its scope of Basel II adoption. The study should also give the CBB a basis for future consideration to augment Basel II with other regulatory tools.

Methodologically, this research is founded on the belief that if we are to understand how banks should be regulated and supervised, we must be able to view regulation and supervision from a socio-economic perspective. Furthermore, an interpretive position was adopted. If we subscribe to the socio-economical perspective of banking regulations and supervision, then insights into the social reality that prevails within the banks and regulator and various areas of risk and governance can be garnered by understanding the existing reality. Understanding this reality is achieved by understanding that banking regulations and supervision are not different from any social setting in which there are negotiations between its constituents on what meanings that they all ascribe to social reality. I view banking regulations as a social context influenced by culture, political and economic characteristics. A context that an interpretive qualitative approach was adopted in this research.

## **5.3 Conceptual framework**

The data informed us that the existing conceptual framework that governs the banking system in the country is structured around private interest, administrative and cultural

theories. Aspects of new institutionalism and scope of cultures theories would need to be integrated into the framework in order to avoid all the pitfalls raised by the bankers as reported in the survey and interviews in this study. The part related to the public interest theory is that at the outset, the CBB's driving motivations behind adopting Basel II and Basel III regulations are to make banks safer and banking system stable and resilient to protect the public interest. Nevertheless, it was found that even though this is the announced motivation, the underlying interest that is saved is the private interest rather than the public interest. We saw the example that at the time banking licenses were generously given during 2006 and 2007 in order to benefit the public by bringing more competition and the claim that that would reduce the cost of lending, enhance innovations and improve the customer's services by banks. Later on, it was found that the ultimate objective was the regional competition among some countries in the region to win the position of who is the "financial center and hub" for banks. When the crisis hit the banking system in several of these banks and faced a cutthroat competition in a small market like Bahrain with a low appetite for different banking products, those banks were encouraged to merge by the CBB again for the interest of the public to create "strong banks." The overall regulatory and supervisory policy of the CBB are interpreted in light of the data in the study is that the CBB uses Basel II is an administrative tool. The CBB's philosophy of dealing with banks as a government agency inherited control upon the consistent that obliged to honor their obligations to it by complying with the imposed rules and regulations. As in the administrative theory of regulations, a regulator approaching the task of regulation from the administrative perspective need some tools through which the constituents are controlled, covered or even punished. Ministry of commerce would control the merchants through price ceiling, for instance, the CBB used Basel II and Basel III as the administrative tool. Moreover, as per the administrative theory that each tool is chosen by the regulator to address a specific problem. The CBB seemed to want to address the stability and resilience of the banking system as the specific problem it fights to resolve; the data showed us that the tool was not successful in addressing the problem. The tool did not work because of malpractices in administering the tool, the scope of implementing the tool and the lack of augmenting the tool with another tool that could potentially rectify the shortcomings of the tool (i.e. Basel II). The CBB has also adopted the second important part of the administrative theory, the periodic reporting mechanisms that the regulated entities should honor. The data showed us that these reports were administered

in ways construed by bankers as non-valued exercises, impractical, cumbersome and irrelevant with minimum or no regard to the underlying nature and characteristics of those obliged to adhere. From the cultural theory, we can see from the data the CBB administration of banking in general and Basel II implementation, in particular, is identical to the way the government regulates every economic phenomenon. A problem identified by the higher officials and a tool is devised based on the decisions of these officials to address this problem, narrowly from private political and economic interest, and proceed with implementation portraying this implementation as a public-interest practice. When the implementation turned out to be malfunctioning with considerable shortcoming, the tool is either enhanced, augmented, replaced or radically changed by the decisions of the same officials and re-introduced to the marketplace for implementation under the same “noble motivation,” public interest. In carrying out this implementation, the cultural values govern the conduct. These cultural values are: not giving trust to the constituents, monitor closely, micro manage in disguise, policies changed only if opposed by political or economic influential parties, and the end justifies the means (the end is the competition for the financial hub and center justified by adopting the means or tools). Furthermore, the cultural attribute of the banking system, in the country is that a regulatory body has to be staffed with those who share the common political, economic and social doctrine of the officials in charge; the competency is not a priority. From this angle, we can properly understand the data that showed how bankers responded to the questions regarding the skills and competencies of the CBB staff who inspect and examine their banks.

#### **5.4 Answers to the research questions**

In this section, I state the research questions outlined in section 1.8 and provide the answers to these questions based on the evidence the data provided in Chapter 4. Each question is showed in italics followed by the findings and discussions.

*How has Basel II implementation, in the context of the CBB Rulebooks, helped banks with risk management function and practice? Do banks see the existing regulatory program as effective in advancing their risk management practices?*

I examined whether Basel II regulations help banks improve risk management. I started with the issue of the definition of risk management to make sure that the CBB, Basel II, and bankers have the same approach to the definition of risk management to streamline the discussions. I found that Basel II regulations and the CBB's definition of risk management differ significantly. Basel II regulations focus on a generic set of principles of how the bank's board of directors and executive management should handle the risk at the bank while the CBB focuses mostly on credit risk. I found that bankers, on the other hand, define risk management in an organizational and technical sense. Organizationally, risk management to bankers refers to the presence of well-resourced department entrusted to identify, measure, and monitor all the material risks a bank is exposed to. I also found that the CBB applies a static definition of risk management; a definition that does not take into consideration the rapid changes in the banking sectors concerning the methods of quantifications and internal control environment.

The CBB relies on the influence of Basel II implementation in the country to directly or indirectly motivate banks to improve their risk management practices. The data revealed to us that the CBB does not address risk management at banks outside the context of Basel II regulations. I found that the influence expected of Basel II regulations to advance the risk management practices not appreciated by the practitioners. I learned from the data that risk management at banks is dynamic and proactive. Practitioners do not wait for the regulator to motivate them to improve and install the risk management practices that are appropriate for their needs. Instead, they develop or adopt tools and methodologies that are commensurate with their business models and the environments.

*How effective is the CBB in implementing Basel II in its banking system with the design of its regulation policy and supervisory program?*

The CBB implementation of Basel II regulations was found to be simplistic and superfluous because it focused only on the Pillar I requirements of Basel II regulations and ignored Pillar 2, which addresses, albeit in generic principles form, risk management practices and culture. Due to that fact, banks manage risk management at their institutions by adhering to the requirement in the CBB's rulebook that every bank has to have a dedicated independent risk

manager, but they go on their own way to determine the scope, the methodologies, and integration of risk management in their environments.

I found that the CBB designs its banks inspection program with a mere focus on compliance to the CBB's rulebooks instead of a comprehensive program that encompasses risk management, compliance, governance, etc. The implication of this unilateral focus was on banks' incentives and attitude toward risk management at their banks and toward the CBB.

*Is the current CBB implementation of Basel II the optimal regulation for the Bahraini banking system?*

What we get from the survey results and the above example of interviews is that even though Basel II might boost or enhance the international competitiveness of some banks that are internationally active, it does not help other banks who are locally focused in their business. This implies that there is no definitive causal relationship between Basel II and the international competitiveness of banks.

With regard to the appropriateness of Basel II's methods to the banks in Bahrain, we learned that the Basic Indicator Approach (BIA) does not reflect the essential operational risk faced by banks and it is not a valid and reliable measure for it. I also found that banks in Bahrain have the framework of identifying, measuring and reporting operational risk loss events yet they cannot utilize this capability to determine the commensurate capital requirements for this risk as the CBB still imposes the BIA. With regard to the credit risk, we found that banks do not find the Standardized Approach (SA) an appropriate measure of the credit in their lending portfolio given geographical concentrations and the one-size-fits-all approach in SA.

With regard to the role and competence of the CBB to implement Basel II, we found that the CBB and the banks are not on the same page in relation to the regulatory approach followed by the CBB. The CBB announces that it follows a principles-based approach, while banks find that the CBB follows a strict rules-based approach for implementing Basel II. Concerning the supervision, we found that the majority of the banks do not view the CBB is using any risk or governance-based parameters to design its supervision program. In another

word, the CBB follows a one-size-fits-all supervision program that does not take the peculiar characteristics of the banks into consideration. Furthermore, the results showed us that banks do not find the CBB staff competence or qualified to administer Basel II regulations to meet the objectives of the CBB or the banks. Lastly, and in relation to the regulatory tool, we examined the regulatory tools that the CBB adopts for Basel II implementation such as the stress testing, ICAAP (essential Basel II requirements) and economic capital. I found that the CBB does not have, albeit expects banks to prepare and, a stress testing and economic capital rules and regulations or guidance document. With regard to Basel II reporting, we learned that bankers consider Basel II's reporting none value-added and merely a box-ticking exercise. Bankers discerned the differences between the prudential set of reporting that is designed to assess, explore, and rectify and the set that is designed for mere compliance with requests. In addition, we learned that neither the banks nor the CBB take the ICAAP seriously. The ICAAP is utilized neither by banks in their daily operations nor by the CBB in designing the specific supervision program. Lastly, the data informed us that the CBB had not addressed a commensurate set of regulations and supervision program of liquidity risk to the various business models of banks in the country.

*Do banks prefer to be supervised by principles-based approach than by rules-based approach?*

There was a dichotomy in opinions amongst bankers with regard to this question. In this study, 75% of the bankers perceive the CBB regulatory approach as “rules-based,” but CBB officials and the CBB website are insistent that the CBB approach is not rules-based but instead risk- and principles-based regulation. Approximately 40% of the interviewees attribute this magnificent variation between the CBB and bankers' perceptions of the “lack of knowledge, and laziness in striking difference between the two, by the CBB officials.” Thus, the responses of the dominant majority of the surveyed bankers contradicted the CBB's own description of its regulation approach as ‘focused and principles-based,’ as stated on its website. In addition, Interviewee-CBB 4, who is a senior CBB official, clearly stated the following:

Bankers and the banks are not on the same ground. Bankers see CBB's regulatory policy and supervision as rules-based while the CBB describe its approaches as principles-based. The interviews with the CBB officials revealed that the official stance contradicts with what the

CBB markets its approach with. The CBB officials confirmed in our data that the country could not afford following the principles-based regulations because the government and the CBB officials do not trust the banking professional with the CBB. To the CBB officials, bankers are not trusted and unless they are directed by the minute detail of what they should and should not do they would ruin the banking system. As highlighted in chapter three that the culture in the country of the governing bodies are not based on “trust then verify” kind of attitude and culture, instead, that every constituent of every industry are guilty and prone to negatively impact the system they are operating in unless we intervene heavily from the beginning and set the stage for them to perform.

The CBB micro-manage the banks by intervening in all material aspect of the banking industry, from the remunerations, the appointment of head senior executives to the meeting attending fees, etc.

The variations between how the CBB describes itself to how the bankers see it indicates that there obvious miscommunications between the two. This, in turn, informed us that the banking industry is not like a community with shared values and protocols but merely like a police and rogue bankers. This gives us a picture of the institutionalism in the country, which is in line with the political and economic environment of lack of transparency, trust, and believe in a rewarding governance structure at institutions. Even banks who blame the CBB or even the government of not being transparent and not trusting in their constituents they internally follow the same approach, knowingly or unknowingly.

*Do banks see the current supervisory program effective in addressing all the risks they are exposed to?*

The supervisory activities are mainly a) inspection visits by the banking regulator, b) reporting requirements, c) and off-site examination. Only 13% of the respondents found the CBB staff to have the limited competence to carry out the inspection tasks fir Basel II and non-Basel II assignments while 73% of the respondents found the CBB staff *incompetent* for such tasks. The results of the survey also show that the respondents from conventional banks had a more negative view of the CBB’s supervision staff than the respondents from Islamic banks. Reports are the administrative tools of control that the CBB has at its disposal to use on banks. It is their tool for gathering intelligence on banks’ financial performance. I found that the reporting process of the CBB is viewed as useless, not helpful, and ineffective. 60%

of the respondents agreed that they do not receive any feedback from the CBB on these reports, and 24% believe that the feedback they received is useless and not helpful. Only 2% of the respondents found the CBB feedback and reports useful and helpful. An external consultancy firm designs the CBB reports. This fact is disconcerting to bankers; bankers interpreted this as a sign of inefficiency and lack of competence, and a lack of clarity of purpose and objectives. As a supervisory tool, reporting should connect with the objectives of the regulator; if the administrator of a tool is disconnected from the tool, then the regulated looks at the reporting process as a whole as a bureaucratic procedure. The CBB only responds when the CAR approaches the minimum threshold. 60% of the respondents asserted that they do not receive any feedback from the CBB, while 24% indicated that the feedback they received from the CBB is neither useful nor helpful.

*Do banks see the existing supervisory program as effective in aligning the regulation to their risk profile and appetite?*

The data shows that the concepts of risk appetite and risk culture do not seem to be adequately contextualized by these officials. The implications of this misconception of risk appetite from the regulators are that if the regulators are not certain about the concept of the risk appetite or they do not define it as it is defined in the industry's literature there would be miscommunications between the regulators and the bankers on the subject. This miscommunication is manifested by the fact that the CBB cannot assess what the banks produce in terms of risk management policies in order to determine if these banks are operating according to their limits. In addition, in Basel II accord there are stipulations that refer to having "an appropriate risk appetite of the institutions" about the type of approach used to quantify the capital requirements. Because of this misconception, the CBB believes that it is already giving banks the guidance and the requirements needed to build an appropriate risk appetite framework as stated in the above two quotations while 65% of the bankers said that the CBB has never asked them about their risk profile, appetite or strategy. That is in spite of the fact that 55% of the respondents affirmed that they have an updated risk profile, appetite, and strategy

The data show an evidence of the gap that the regulators assert that they have the necessary checks and balances to monitor risk appetite at banks while 65% of the banks indicate that the regulators have never asked them about their risk appetite, profile, and strategy. The annual reports of all the banks in the sample showed no reference to the risk appetite and profile and how they are integrated into their strategy setting and risk management.

*Do banks see Basel II implementation and its capital adequacy requirements as reflective of their essential risks and performance?*

As the crux of Basel II regulations, we learned that banks do not find the Capital Adequacy Ratio (CAR), as a whole, relevant to their operating environment. Banks consider the CBB's Basel II regulations and supervision bad due to the lack of suitability and relevance of the regulations to their environments.

### **5.5 Conventional Versus Islamic Banks**

Conventional banks are more than Islamic bank in not finding benefits of Basel II implementation. This could be explained by the fact that conventional banks were established more than the Islamic banks in terms of processes and operations. Conventional banks are more mature, and they gradually built the risk management set up through the experience of the staff, lesson learned from the current practice as well as the Basel I.

Islamic bank business model with no interest and lending are backed by assets in addition to not transacting in the hedging instruments immunize them from exposure to some risks, but they will not immunize them from market or liquidity risk because they are part of the system. For example, if the international interest rate level were rising, Islamic banks would inevitably raise eventually their interest rate on the lending portfolio because the borrowing has become an expense for them.

There is a noticeable difference between the bankers from Islamic banks and those from conventional banks regarding the concept of the CAR as a sufficient indicator of a bank's risks. Approximately 88% of the respondents from conventional banks did not see a relationship between the CAR and the risks input into the CAR calculation. Only 65% of the respondents from Islamic banks shared the above opinion, while another 26% of the

respondents from Islamic banks believe that the CAR was the right measure for their banks' risks.

9.4% of the Islamic bankers find the CBB's regulation and supervision of liquidity risk adequate and commensurate with our bank's risk appetite and profile and thus, should be maintained while 0% of the conventional banks share the view. Furthermore, 45.3% of the Islamic banks do not find the CBB to currently have formulated regulation and supervision for liquidity risk relevant to banks' type of license.

In regard to the CBB's regulatory and supervisory framework for economic capital, 13% of Islamic banks are unaware of the economic capital and its implications while only 1% of the conventional banks are shown to be unaware.

In regard to the stress testing, 15% of the Islamic banks are unaware of the stress testing requirements of the CBB is sufficient for their needs while only 1.5% of the conventional banks are unaware of that.

Islamic banks are less inclined to move to advanced approaches for credit market, and operational risk weighted assets than conventional banks. 21% of the Islamic banks would prefer the adoption of the Foundation Internal Rating Approach while 46.3% of the conventional banks prefer this method. In addition, 13% of the Islamic banks prefer to continue under the standardize approach for credit risk while only 1.5% of the conventional banks prefer this approach.

86.5 % of the conventional banks do not find the CBB's inspection and examination staff competent to supervise our bank's compliance while only 56% of the Islamic banks find that this is the case.

None of the conventional banks find the CBB uses any parameters (such as ICAAP, Risk Appetite, and CAR) to determine the design of its regulatory and supervisor program while 8% of the Islamic banks found the opposite. 81% of the conventional banks are confirmed not be aware of any parameters adopted by the CBB for the supervisory program while only 53% of the Islamic banks reported not be aware.

In sum, the data gave us evidence that there are notable differences between the maturity of the conventional bank's risk management functions and awareness compared to Islamic banks. Moreover, the data also gave us evidence that the conventional banks are more competent, updated and experienced than Islamic banks. The financial crisis hit both types of the banks by varying degrees, but both of them suffered directly or indirectly the consequences. The model for non-interest and non-derivative or structured-finance business model saved Islamic banks from toxic assets investments but hit them indirectly in terms of the level of benchmark interest rate access to liquidity, etc. We have also learned that during liquidity shortage Islamic banks would suffer the most compared to the conventional banks because the secondary markets for sharia liquidity products are not as mature as the conventional banks. The constraints on the Islamic bank's permissible products and industry make them disadvantaged compared to the conventional banks in terms of utilization of their liquidity in either financing or investment ventures.

## **5.6 Research limitations**

The reason for adopting and developing a qualitative ethnographic approach was lead primarily by pragmatic criteria. Achieving access to the bank's financial information, other than that disclosed in the annual report, is difficult enough for researchers, but when a proposed study aims to study the impact of regulations on banks risk management ( e.g., how they manage their risk, how the regulator operates), it becomes even tougher. Banks are particularly sensitive about disclosing any information; they construe that as jeopardy to their local competitiveness, their reputation, and their relationship with the regulator.

The bank and the regulator desire to withhold information and consider even the opinion of their staff as confidential were problematic. To solicit staff opinion and experience through interviews and the questionnaire required secondary data in some areas. The only information available in the public domain is the banks' annual reports. Information related to the various risk management frameworks are cursory addressed. With regard to the ICAAP, for instance, either what is mentioned is generic definitions and an indication of "we have put in place an ICAAP" or "we are embarking on ICAAP." Another example is an operational risk. Banks do not disclose how many fraud cases occurred during an accounting year or how much loss they incurred from a system disruption. Disclosure of such

information might tarnish their image and retard investors and depositors from dealing with them.

### **5.7 Area of future research**

The Research and the Methodology section addressed that the disclosure of financial information was an obstacle. An area of future research would be to quantify the financial impact of Basel II implementation on the banks by studying the financial performance (e.g., profitability, liquidity, and solvency) of the banks before and after the implementation. Another potential area of research is to quantify statistically the operational and credit risk faced by each bank vis-à-vis the capital and then compare the results to the CAR calculated by Basel II. This exercise will inform us how much of risk coverage can be explained by Basel II.

## **Part 2**

### **5.8 Recommendations**

In light of the findings of the research, we come in this section to bring out the recommendations to the CBB. I categorize the recommendations into two main sub-categories, regulatory policy, and supervisory program.

#### ***5.6.1 Regulatory Policy***

The first step that the CBB should take is to examine the scope of implementation of Basel II regulations. A practical way to perform that is to scrutinize the existing pool of banks in the country. There are financial institutions that carry the license of a bank while their business models are identical to those of investment companies<sup>62</sup>. The implications of this misalignment between the license and the business model are that many articles of Basel II regulations would be either underestimated, overestimated or not applicable to such banks. This, in turn, would result in a missing link in the chain, as the CBB does not have a

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<sup>62</sup> The design and scope of Basel II regulations are only for banks. The regulations are not applicable to any other financial or non-financial institutions.

supporting regulatory tool in place that could potentially be used to augment Basel II in such cases. From the aspect of accountability, the CBB would be asked to justify to the authority that supervises its conduct, in cases of crisis, why it failed to design a commensurate regulatory and supervisory program for these institutions. The CBB should clearly outline measurable criteria to distinguish investment companies from banks (in both forms, whole, and retail). Once the criteria have been outlined a decision should be made to change the license of those institutions which failed to meet the criteria of banks. By the end of this exercise, the CBB would have ensured that Basel II regulations are only implemented at institutions where all the articles of the regulations are applicable.

After refining the scope of Basel II regulations, and before proceeding to the implementation of the regulations, the CBB should address the competence and expertise of its staff to handle the supervision program efficiently and effectively. It has been argued by Baldwin et al. (2012) that a set of regulations is assessed to be “good” when it is carried out by a high level of expertise by the regulator. I learned from the data in this study that there is a gap of knowledge and skills between the CBB’s staff and the bankers. This disadvantage of competence led to poor communication and absence of dialogue between the bankers and the CBB that eventually caused bankers’ to look at Basel II regulations as merely a “ticking boxes” exercises. The danger in such attitude that the CBB should be concerned about is that bankers could, and in some instances did, attempt to circumvent some of the regulations in ways that are arduous to be discovered or challenged. In an unmatched level of expertise, it is possible that the CBB will take decisions about the regulatory and supervisory programs based on understanding and analysis of information that is not reflective of the reality. The CBB might find itself in a situation that where what it assessed as low risk or immaterial issues have turned out, in reality, to be jeopardizing the banking system. So, the CBB should raise the bar of its staff in terms of ability to take expert judgment, education, skills, and knowledge, to be equal to that of the bankers, if not above.

A clear macro-prudential policy would then need to be defined about which approach the CBB finds most appropriate to adopt, rules-based or principles-based approach regulatory approach. The CBB should be transparent about the policy and duly communicate it to the bankers. In addition, the CBB should be transparent with bankers about its objectives and

initiatives. The decision to choose from the above two approaches should take into considerations the organizational and operational characteristics of both the CBB the banks. The policy should also include the CBB's directions and objectives of implementing Basel II regulations. Typically, the policy should include whether the CBB intends to implement the articles of Basel II regulations in a one-size-fits-all approach (i.e. irrespective of the size of the bank's operations or its type of license) or it intends to implement the regulations based on a matrix of variables. The data in this study supports us to recommend that the one-size-fits-all regulatory policy with regard to Basel II regulations should be avoided. The CBB should consider the idiosyncratic risks, financial performance, organizational structure, governance, and business model for each bank. Subsequently, banks should be categorized based on a pre-defined matrix that is designed based on the above variables and features. For each category, there is a peculiar regulatory policy and supervision program. Criteria for mapping of banks into this matrix should be disclosed and dialogued with banks. The scope of implementation of Basel II regulations, specifically the minimum capital thresholds and approach for calculation of CAR, should be scored as per the matrix.

The data in this study informed us that the CBB should instill a culture of dialogue and trust with the banks rather than the culture of imposition and mistrust. Banks should be regarded as partners to build and maintain resilient banking system. Their feedbacks on the regulatory policy and supervision program should be solicited and attended to. The CBB should take the first step toward that objective by altering its view of banking regulations and supervisions that are currently focused on the administrative side of the regulation. The current focus of the CBB, as far as Basel II regulations are concerned, is limiting the scope of regulation to the control, control of capital, control of the government, and control of compliance. There are many facets of regulations than the capital, and Basel II is only *a tool* for banking regulations. For a regulator, the focus should not be confined to which tool we use and whether the tool we adopt is dubbed as "international best practice." In spite of the importance of applying the best practices in the industry but a focus should also be widened to include other tools to augment Basel II. These other tools should accommodate the peculiar cultural, social and economic attributes of the players in the banking system. The driving factor that would help the CBB move to that direction is the change of its attitude

from a regulator that envisages itself as a government arm mandated to police the banking system to a regular that *work with* the banks to build robust banking system.

The data advised us that Basel II is not an adequate regulation in Bahrain. The CBB should consider augmenting Basel II implementation with other regulatory tools should be deployed on a case-by-case basis. There should be a clear policy at the CBB that outlines the tools, scope of their implementation and the criteria that guide which and when each tool is implemented.

### ***5.6.2 Supervision program***

The above recommendations were for macro-prudential regulations and supervision. Moving to micro-prudential regulations and supervision, we recommend that the CBB should design and develop a comprehensive regulations and supervision program for Pillar 2 of Basel II. The CBB should clearly demarcate the minimum requirements for the composition of ICAAP by banks. With the absence of clear requirements in this respect, banks resorted to external auditors or consulting firms to develop the ICAAP document on their behalf. These documents are then sent to the CBB. This is a ticking box exercise. Basel II regulations require that the ICAAP document is developed internally by each bank and it is the responsibility of the bank's management and board of directors to make all the needed assessments to determine the size of capital required to absorb all the material risks. This behavior of CBB toward the implementation of Pillar 2 of Basel II is in sheer breach of Basel II regulations. Thus, we recommend that the CBB requires every bank to develop their own ICAAP and the exercise of preparing the ICAAP should not be outsourced. The CBB should utilize the ICAAP in the design of its supervision and inspection program and monitor how banks develop and utilize ICAAP in their risk management conduct.

With regard to the risk management at banks, the CBB should not rely on the implementation of Basel II to instill risk management practices at a bank or prevent exposure to the financial crisis. The CBB should adopt tools such as stress testing for each bank and aggregate stress testing of the whole system in order to enable them to foresee and prepare for financial crises. There should be a design for comprehensive regulatory and supervisory

methodologies for stress testing and economic capital. These regulations should cover the desired scenarios to be tested, the frequency of testing and the mechanics of dealing with the results at the banks and the CBB level.

The CBB should opt for an advanced approach of Basel II. If the CBB cannot obtain the needed resources to implement advanced approaches it should augment the currently applied methods with another method to reflect the essential risks faced by the bank;

The CBB's periodic reporting should be enhanced to create value to the CBB, to uncover the essential underlying risk of banks' operations, and value to the banks as a monitoring tool for the board and executive management. The prudential reports should be designed consistently with the banks' business models, and the CBB's staff should be very well aware of the intricacies of these reports to be able to effectively monitor banks' adherence. The data informed us that the CBB outsources the entire design of its Basel II prudential reporting to a consultancy firm. Since the CBB's inspectors and examiners are not aware of the rationale and objectives of the design of this reporting, their reaction towards the banks' feedback on the reporting is perceived to be unproductive. I, therefore, recommend that the CBB instill a culture of transparency and dialogue with the banks about their scope of supervision, inspections programs, and supervisory objectives.

## Appendix (A)

### Questionnaire's questions

1. Do you think that Basel II implementation, in the context of the CBB Rulebooks helps to improve your bank risk management's function and practices?

- Yes, we find strong positive correlation between Basel II implementation and risk management practices at our bank
- Yes, but the improvement in risk management is not as per our expectations
- Indifferent
- No, we find no differences in risk management practices after or before Basel II implementation
- No, we find no correlation between Basel II implementation and our bank's risk management practices

2. Has your bank been impacted by the financial crisis erupted in 2007?

- Yes, our bank was hugely impacted by the crisis
- Yes, our bank was considerably impacted by the crisis
- Indifferent
- Yes, our bank was insignificantly impacted by the crisis
- No, our bank was not impacted by the crisis at all

3. Do you believe Basel II implementation at your bank, along with the CBB guidance, helped your bank survive the crisis of 2007?

- Yes, but our bank was also impacted by risks not addressed in the CBB Basel II implementation
- Indifferent
- No, because banks were impacted by risks other than those calculated in Basel II Capital Adequacy Ratio(CAR)
- No, because banks in Bahrain were not impacted by this crisis

4. In your view, could Basel II implementation in Bahrain reduce the systemic risk?

- Yes, and the CBB has shared with the banks the relationship between Basel II implementation and systemic risk
- Yes, but the CBB did not share with the banks how could Basel II implementation reduce systemic risk
- Indifferent
- No, but the CBB has shared with the banks the relationship between Basel II implementation and systemic risk
- No, I do not see a relationship between Basel II implementation and systemic risk

5. In your view, could Basel II implementation enhance the reputation of your bank?

- Yes, Basel II implementation significantly enhanced our bank's reputation
- Yes, but the positive impact is not significant
- Indifferent
- No, Basel II implementation has not enhanced our bank's reputation
- No, we do not find a relationship between Basel II implementation and our bank's reputation

6. Has Basel II implementation at your bank enhanced its international competitiveness?

- Yes, we noticed strong positive correlation between the implementation and our international competitiveness
- Yes, but the positive impact was not significant
- Indifferent
- No, Basel II implementation did not enhance our bank international competitiveness
- No, we do not believe there is a relationship between Basel II implementation and international competitiveness

7. If Basel II was not imposed by the CBB until now, would you have applied the same tools of risk management such as VaR, Economic capital, Stress testing, that you are/ will be applying?

- No, if Basel II was not imposed by the CBB we would not have applied the risk management tools we are currently applying
- No, but we might eventually apply to be at par with the international best practices
- Indifferent
- Yes, but not in the same level of scale and sophistication
- Yes, we would have implemented all the risk management international practices and standards even if Basel II was not imposed by the CBB

8. Does the Standardized Approach of Credit Risk Weight Calculation reflect the essential credit risk in your bank's portfolios?

- Yes, and our bank does not need to consider another approach or further calculation
- Yes, but our bank needs to show more robust capital allocation for credit risk in its ICAAP
- Indifferent
- No, and the CBB relies on our ICAAP for the adequacy of capital for the bank's credit risk
- No, and we think our bank should adopt advanced approaches for credit risk
- Other (please specify)

9. Which methods when implemented do you think would mostly reflect your bank actual credit risk?

- Alternative Standardized Approach
- Foundation Internal Rating Approach (FIRB)

- Advanced Internal Rating Approach (AIRB)

10. Does the Basic Indicator Approach of calculating the operational risk-weighted assets reflect the essential operational risk your bank is exposed to?

- Yes, and our bank does not need to consider another approach
- Yes, but our bank needs to show more robust capital allocation for operational risk in its ICAAP
- Indifferent
- No, and the CBB relies on the bank's ICAAP for the adequacy of capital for the bank's operational risk
- No, and our bank should adopt advanced approaches for operational risk
- Other (please specify)

11. Which methods when implemented do you think would mostly reflect your bank actual operational risk?

- Standardized approach
- Advanced Measurement Approach (AMA)
- Bayesian methods

12. Do the CBB Rulebooks, inspection visits and prudential meetings help to improve your bank economic capital framework and practices?

- Yes, we find the CBB regulation and supervision for economic capital framework helpful and adequate to our needs
- Yes, but the CBB regulation and supervision for economic capital framework are not up to our needs
- Indifferent
- No, we do not find the CBB regulation and supervision for economic capital framework helpful
- No, the CBB does not currently have a regulation, guidance or supervision program for economic capital framework and practices

13. Does the CBB Rulebooks, inspection visits and prudential meeting help to design/improve your bank stress testing framework and practices?

- Yes, we find the CBB regulation and supervision for stress testing framework helpful and adequate to our needs
- Yes, but the CBB regulation and supervision for stress testing framework are not up to our needs
- Indifferent
- No, we do not find the CBB regulation and supervision for stress testing framework helpful
- No, the CBB does not currently have a regulation, guidance or supervision program for stress testing framework and practices

14. Do the CBB Rulebooks, inspection visits and prudential meeting help to design/ improve your bank risk profile and risk appetite framework?

- Yes, we find the CBB regulation and supervision for risk appetite framework helpful and adequate for our needs
- Yes, but the CBB regulation and supervision for risk appetite framework are not up to our needs
- Indifferent
- No, we do not find the CBB regulation and supervision for risk appetite framework helpful
- No, the CBB does not currently have a regulation, guidance or supervision program for risk appetite framework and practices

15. Do the feedbacks from CBB on the periodic reportings from your bank (e.g. PIRI, etc.) help you identify weaknesses and areas for improvements in your risk management, capital allocation, corporate governance and strategic risk management?

- Yes, we find the feedbacks from the CBB helpful to us in all these areas
- Yes, we find the feedbacks from the CBB helpful but for limited areas and aspects of our risk management and corporate governance
- Indifferent
- No, we do not find feedbacks from the CBB helpful because they lack precision and relevance
- No, we do not receive feedbacks from the CBB on our periodic reportings.

16. In your view, is the Capital Adequacy Ratio, as calculated based on Basel II, a sufficient indicator of your bank capitalization level toward your portfolio risks?

- Yes, CAR is a sufficient indicator of our bank's portfolios risks
- Yes, but needs to be enhanced with other indicator or proxy
- Indifferent
- No, we do not find CAR as we currently calculate a sufficient indicator of our bank's portfolios risks
- No, we do not find a relationship between our portfolios risk and the CAR we currently calculate
- Other (please specify)

17. Do you prefer to be supervised by the central bank based on principles-based supervision or rules-based supervision?

- Principles-based supervision
- Rules-based supervision
- Principles and Rules-based supervision

18. Do you find the current supervision of CBB on the liquidity risk on your bank is adequate and commensurate with your risk profile and appetite?

- Yes, we find the CBB regulation & supervision of liquidity risk adequate and commensurate to our bank risk appetite and profile and should be maintained.
- Yes, but the CBB needs to improve its reporting requirements for liquidity risk to reflect the types of license and business model for a bank
- Indifferent
- No, the CBB adopts a standard one-size-fits-all liquidity regulation & supervision for all types of banks licenses
- No, the CBB does not currently have a formulated regulation and supervision for liquidity risk relevant to our bank license

19. Do you find the CBB regulation and supervision effective in implementing the pillar 2 of Basel II?

- Yes, we find the CBB regulation and supervision for Pillar 2 effective and commensurate with banks business model
- Yes, but only on the regulation side; the CBB needs to improve its supervision side of the Pillar 2 implementation
- Indifferent
- No, we do not find the CBB effective because its regulation and supervision for pillar 2 are not commensurate with banks business model
- No, the CBB does not have a formulated regulation & supervision for Pillar 2

20. Do you have risk profile and appetite updated and approved by the board and adequately linked to the capital planning and risk management?

- Yes, and it is adequately integrated with our strategic planning and capital allocation
- Yes, but it is not adequately integrated into our strategic planning and capital allocation
- Indifferent
- No, we do not have an updated risk appetite and profile
- No, we have not yet developed a risk appetite and risk profile for our bank

21. How frequently, and in which way, does the CBB ask for the risk profile& appetite and strategy of your bank?

- Annually, in the prudential meeting
- Semi-annually, in the prudential meeting
- Quarterly
- During the Inspection visits only
- The CBB never asked us about a risk profile and appetite document

22. Did the CBB indicate to your bank which methods to use to measure the concentration risk, liquidity risk, strategic risk, leverage risk and stress testing?

Yes, the CBB has given us adequate instructions, guidance, regulations and supervision on how to quantify these risks

- Yes, the CBB has given us instructions, guidance, regulations and supervision on how to quantify these risks but we have not implemented them
- Indifferent
- No, the CBB has not given us any instructions, guidance, regulations or supervision on how to quantify these risks because the CBB did not assess how important these risks are to the banking system
- No, the CBB has not given us any instructions, guidance, regulations or supervision on how to quantify these risks because it does not have the competence or the methodology to do so

23. Do you believe the board of directors of your bank is fully aware of Basel II implications on your bank's risk management, capital planning, and risk appetite and risk profile?

- Yes, the board of directors is fully aware of Basel II and all the relevant issues around its implementation
- Yes, the board of directors is adequately aware of Basel II and all the relevant issues around its implementation
- Indifferent
- No, the board of directors is not adequately fully aware of Basel II and all the relevant issues around its implementation
- No, the board of directors is not aware of Basel II and all the relevant issues around its implementation

24. Has the CBB given your bank sufficient guidance to design and utilize ICAAP document?

- Yes, the CBB gave to us a sufficient guidance to formulate our ICAAP
- Yes, the CBB gave to us a guidance but was not sufficient and lacked precision and clear requirements
- Indifferent
- No, the CBB required us to prepare an ICAAP without giving any guidance for the preparation
- No, the CBB has not required preparation of an ICAAP for our bank

25. Do you believe that the CBB relies on your ICAAP document to direct its supervision program toward your bank?

- Yes, we believe the CBB relies on our ICAAP document in its decision about the supervision program for our bank
- Yes, but the CBB reliance on the ICAAP document is not significant in its decision about the supervision program for our bank
- Indifferent
- No, we do not believe that the CBB uses our ICAAP document in its decision about the supervision program for our bank
- No, we do not believe the CBB examines or assesses our ICAAP document

26. Do you find the CBB designs and plans its supervisory program on your bank based on the parameters of your bank: business model, risk profile, risk appetite, stage of growth, strategy, board and executive management expertise, etc.?

- Yes, we find the CBB supervisory program for our bank designed based on these parameters
- Yes, we find the CBB supervisory program for our bank designed based on only a few of these parameters
- Indifferent
- No, we find the CBB uses a standard supervisory program for all the banks irrespective of these parameters
- No, we are not aware of the parameters the CBB uses in its decision about the supervisory program for our bank

27. Do you believe that the CBB staff of inspection and off-site supervision possess the required skills, competence and knowledge of risk management, capital management & planning, and business risk?

- Yes, we find the CBB staff competent and possess the required skills to supervise our bank
- Yes, but the CBB inspection and examination staff needs to be up-to-date with the changes in banking environments to give applicable and practical recommendations
- Indifferent
- No, we find the CBB inspection and examination staff with limited competence or required skills to supervise our bank
- No, we do not find the CBB inspection and examination staff competent or possess the required skills to supervise our bank
- Other (please specify)

28. What is your title or current post?

- Head of Risk
- Head of internal Audit
- Head of Financial Control
- General Manager/ CEO
- Head of Compliance

29. How long have you been with the bank?

- 1-3 year
- 3-5 years
- 5-10 years
- 10-15 years
- More than 15 years
- Other (please specify)

30. What is your academic Background?

- Undergraduate
- Baccalaureate
- Master/ MBA
- PhD
- Other (please specify)

31. What is your professional qualification?

- CPA
- CFA
- ACCA
- FRM/PRM
- CMA/CIMA
- CIA
- CA
- PMP
- CAIA

32. What is the type of your bank's license?

- Islamic Retail Bank
- Islamic wholesale bank
- Conventional retail bank
- Conventional wholesale bank

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