JEL Classification: G21, G32, F53

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RISK HEDGING IN ISLAMIC BANKS BETWEEN BASEL III CAPITAL ADEQUACY STANDARD AND THE ISLAMIC FINANCIAL SERVICES BOARD STANDARD - AN APPLIED ANALYTICAL STUDY ON QATAR ISLAMIC BANK 2015-2023

Received 21 September 2024; accepted 18 October 2024; published 30 October 2024

Abstract. *The capital adequacy standard according to Basel III is considered one of the most prominent tools for hedging risks, and it is imposed by all central banks. However, Islamic banks find some difficulties to apply this standard, as it is intended for conventional banks. An Islamic standard issued by the Islamic Financial Services Board amending the Basel III standard has been issued with the aim of applying it by Islamic banks. However, Basel III remains the most accepted standard in the international banking arena. This study aims to identify the most important differences between the two capital adequacy standards issued by the Basel III Accord and the Islamic Financial Services Board, in addition to identifying the extent to which they can be applied at the level of Islamic banks, The study concluded that there are some similarities between the two standards, in addition to some differences, and that their application to Islamic banks is possible, but the Islamic Financial Services Board standard is considered the most appropriate for these banks.*

Keywords: *capital adequacy standard, Basel III Committee, Islamic Financial Services Board, risks, risk hedging.*

Citation: Hamani Abderraouf; Rebahi Ibrahim. (2024). RISK HEDGING IN ISLAMIC BANKS BETWEEN BASEL III CAPITAL ADEQUACY STANDARD AND THE ISLAMIC FINANCIAL SERVICES BOARD STANDARD - AN APPLIED ANALYTICAL STUDY ON QATAR ISLAMIC BANK 2015-2023. Economics and Finance, Volume 12, Issue 3, 99-110. http://doi.org/10.51586/2754-6209.2024.12.3.99.110

Introduction

The capital adequacy standard issued by the Basel III resolutions is the latest modern trend of the Basel Committee, which was established after the repercussions of the global financial crisis of 2008, after weaknesses appeared in the previous standard, which was characterized by the presence of adequacy ratios that were unable to cover the major effects left by the crisis at that time, which led to the necessary research to develop this standard and improve its financial ratios and make them more capable of hedging risks, which was evident in the Basel III standard issued in 2010 and which came into effect in 2013, as it contains financial ratios that must be maintained higher than its predecessors with an improvement in the capital structure and risk weighting, in addition to creating new ratios such as financial leverage ratios and liquidity ratios. Therefore, the Basel III capital adequacy standard has become more integrated and efficient, which made it essential for application to various global banks, and it has also become the most prominent directives and instructions of central banks in the field of risk management.

It is known that conventional banks were affected by the financial crisis of 2008, due to the difference between conventional banking and Islamic banking, as the latter issues financial products that are significantly different from what exists in the conventional system, in addition to the aspects of financing and investment. Therefore, the impact of Islamic banks was slight compared to conventional banks, which coincided with the formation of the capital adequacy standard according to Basel III according to the features of conventional banks as they are the most affected, which created a major problem for Islamic banks in applying this standard and adapting to it, especially after it was imposed by central banks on all banks without exception, in addition to the increasing volume of risks surrounding and related to Islamic banking.

In this context, an Islamic standard compatible with the Basel III capital adequacy standard was issued in 2013 by the Islamic Financial Services Board, which includes the characteristics of Islamic banks in its composition, as one of the directions for these banks to apply the capital adequacy standard, which is considered necessary, as it is based on an equation similar to the Basel III equation with a focus on Islamic aspects, especially investment deposits, which are the most important source of financing for Islamic banks. However, this standard has not received global recognition, as it is only applied in a few countries, although it is suitable and dedicated to Islamic banks and compatible with the Basel III standard. The latter remains the most mandatory for application to all banks according to the instructions of the central banks.

Qatar Islamic Bank has witnessed a wide development in its financial and banking activities, especially investment activities that are characterized by great diversity, which obliged this bank to apply the Basel III standard for capital adequacy to confront various potential risks and avoid losses surrounding banking work.

1.1 The Problematic

Through the above The following problem can be raised:

“How different are the Basel III and the Islamic Financial Services Board capital adequacy standards? And how difficult is it to apply in Qatar Islamic Bank?”

1.2 The hypothesis

To answer the problematic of the study, the following hypotheses were created:

• The capital adequacy standards issued by Basel III and the Islamic Financial Services Board have similar characteristics, but the only difference is that the Islamic Financial Services Board has entered the characteristics of Islamic banks into the structure of its standard.

• The capital adequacy standard issued by the Islamic Financial Services Board is better for Islamic banks as it is designed for them and not others.

1.3 Objectives of the study

Through this study, we seek to achieve a number of goals, which we mention as follows:

• Knowing the extent of the possibility of applying the Basel III standard for capital adequacy in the Islamic Banks.

• Learn how to calculate the capital adequacy standard according to the Basel III standard and the Islamic Financial Services Board standard.

• Knowing the most important differences between the Basel III standard and the Islamic Financial Services Board standard for capital adequacy.

• Knowledge of Qatar Islamic Bank position on applying the capital adequacy standard according to Basel III as one of the most important risk management procedures.

1.4 Study Approach

This study was conducted based on the descriptive approach, the comparative analytical approach, and the case study approach. The study was divided into two parts, the first theoretical and treated according to the descriptive method, and the second applied, which was treated according to the comparative analytical approach and the case study approach.

1.5 The tools used

This study relied on a group of different references, most notably the reports of the Basel Committee and the reports of the Islamic Financial Services Council. It also relied on the annual reports of Qatar Islamic Bank in order to obtain the data necessary to carry out the applied study.

Literature Review

There are many studies that have focused on capital adequacy in Islamic banks, whether in the form of doctoral theses, articles, etc. Among these studies we mention the following:

Saidi Khadidja's study (Saidi Khadidja, 2017)

"The Problem of Applying the Capital Adequacy Standard in Banks According to the Requirements of the Basel Committee a case Study of Islamic Banks". A PhD Thesis in Commercial Sciences, Specializing in Financial and Banking Sciences, University of Tlemcen, Algeria, 2017. The researcher addressed "the extent to which the capital adequacy standard applied by Islamic banks adapts to what was issued by the Basel Committee", as the most prominent objectives of this study were to make a comparison between the capital adequacy standard issued by the Basel Committee and the capital adequacy standard issued by the Banking Financial Services Board. The researcher used the descriptive analytical approach by dividing the research into two parts, the first theoretical based on the descriptive approach, and the second applied based on the analytical approach. One of the most important results reached in this study is that the capital adequacy standard issued by the Basel III agreement is compatible with the nature of the work of conventional banks only. Also, the standard issued by the Islamic Financial Services Board, despite its suitability for Islamic banks, the latter remain striving to apply the Basel III standard despite the inefficiency of its results at the level of these banks. The researcher has put forward a set of recommendations, the most prominent of which is the necessity of applying the Islamic capital adequacy standard issued by the Islamic Financial Services Board in banks. Islamic as it is more representative and relevant to the standards issued by the Basel Committee.

Toumi Ibrahim's study (Toumi Ibrahim, 2017)

"Adapting Safety Standards in Islamic Banks in Light of the Basel Committee's International Decisions a case Study of Al Baraka Islamic Bank Group". PhD Thesis in Economics, University of Biskra, Algeria, 2017. The researcher addressed the following problem: "How can safety standards be adapted in Islamic banks in light of the Basel Committee's International Decisions and to what extent does Al Baraka Banking Group adhere to these standards?" The most prominent objectives of this study were to shed light on the Basel Committee's International Decisions through its various standards and adapt them to the reality of Islamic banks. The descriptive analytical approach was used in the theoretical aspect and the case study approach in the practical aspect, which was limited to Al Baraka Banking Group. Among the most important results reached by the researcher in this study is that the Basel Committee developed the rules of banking work in its third and final agreement in the field of risk management through the capital adequacy standard, and Al Baraka Banking Group achieved significant results higher than those specified by the Basel Committee. The researcher also presented a set of recommendations, most notably the need to find the necessary Sharia alternatives for risk management in Islamic banks, including capital adequacy according to the Basel III Agreement, so that it can be applied at the level of these banks.

Zaidi Meriem's study (Zaidi Meriem, 2017)

"Basel III Accord for Measuring Banking Capital Adequacy and its Relationship to Islamic Financing Formulas Risk Management a case Study of Abu Dhabi Islamic Bank". PhD Thesis in Economics, Specialization in Economics of Money, Banking and Financial Markets, University of Biskra, Algeria, 2017. The researcher addressed the following problem: "What is the relationship between the banking capital adequacy standard according to the Basel III Accord and the risks of Islamic financing formulas in Abu Dhabi Islamic Bank?" Among the most prominent objectives of this study is to identify both the Basel III Accord and the capital adequacy standard issued by the Islamic Financial Services Board. The researcher relied in her study on the descriptive approach in

the theoretical aspect, and the analytical approach in the applied aspect. One of the most important results reached in this study is that the application of the standard issued by the Islamic Financial Services Board amending the Basel III standard is necessary to enhance the competitiveness of these banks and impose their presence on the global banking arena. The researcher also presented a set of recommendations, most notably the dissemination of various standards related to the Islamic financial industry via the Internet to facilitate access to them, which represents a step towards the spread of knowledge about Islamic finance in various fields.

Bitar and Madies's study (Bitar Mohammed & Madies Philippe, 2014)

"The specificities of Islamic banks and the regulation of Basel III". Financial Economics Review No. 111. This study aimed to clarify the relationship between the characteristics of Islamic banks and the capital adequacy standard according to Basel III decisions and adapting to it. The study was a theoretical research in which reference was made to Islamic banks in general, as the reports of the Basel Committee and the reports of the Islamic Financial Services Board were relied upon in conducting this study, relying on the descriptive and analytical approaches. Among the most prominent results of this study is that Islamic banks can apply the Basel III capital adequacy standard and adapt to it, with modifications to the equation being made to match the characteristics of these banks, although the standard came according to the characteristics of traditional banks, which were greatly affected by the global financial crisis of 2008 compared to Islamic banks.

Canan Ozkan and Zamir Iqbal's Study (Canan Ozkan & Zamir Iqbal, 2015)

"Implications of Basel III for Islamic Banking-Opportunities and Challenges". Policy Research Working Paper Nr: XYZ, The World Bank Group, Global Islamic Finance Development Group. This study aims to examine the elements of the Basel III Accords regarding the capital adequacy standard and the implications of its application in Islamic banks. This study was conducted on a group of Islamic banks operating in six major Arab markets: Qatar, Indonesia, Saudi Arabia, Malaysia, the United Arab Emirates and Turkey. In preparing this research, the International Monetary Fund reports and the Basel Committee reports, especially those related to the Basel III Accord, in addition to the Islamic Financial Services Board reports related to the Islamic capital adequacy standard, were relied upon. The Excel program was also used to represent the graphs. The descriptive and analytical approach is the one adopted in processing this study, which concluded a set of results, the most prominent of which is that Islamic banks face a major challenge in applying the capital adequacy standard issued by the Basel III Committee decisions, as it does not include the characteristics of these banks. It is also considered necessary for Islamic banks to apply the Basel III standard better than the Islamic standard issued by the Islamic Financial Services Board despite the surrounding challenges. With reference to the previous countries to which it was applied, even if the application was at the overall level, the Islamic banks in various countries are working to apply the Basel III standard for capital adequacy.

Rahmani Moussa and Zaidi Meriem's study (Rahmani Moussa & Zaidi Meriem, 2016)

"Basel III Accord as a Scientific Approach to Developing a Model for Calculating Capital Adequacy in Islamic Banks". The researchers addressed the following problem: "To what extent is a new standard for calculating capital adequacy in Islamic banks according to Basel III?" This study aimed to see the dimensions of the problem of applying the capital adequacy standard according to Basel III Accord in Islamic banks with the aim of developing or finding a model for calculating the capital adequacy ratio in these banks in a manner consistent with their functional characteristics. The application was applied to a group of global financial institutions such as the Industrial and Commercial Bank of China, the French BNP Paribas Bank, the Mitsubishi Financial Group and the American JPMorgan Chase Bank, although the application was only on the ratios of risk-weighted assets without looking at the capital adequacy ratios. The data of the Basel III Committee were relied upon in addition to the Excel program in drawing the curves in addition to the reports of the Islamic Financial Services Board. This study was also processed according to the descriptive and analytical approach, the most prominent results of which were that the Basel III capital adequacy standard is dedicated to conventional banks only, which came after the latter were affected by the repercussions of the global financial crisis of 2008, but Islamic banks are forced to apply this

standard in order to impose their presence on the global banking scene and enter into international investments and markets. The Islamic standard is also the most appropriate for these banks, but the Basel III standard remains the most acceptable and recognized.

Through previous studies, it can be said that they share the goal that we seek to achieve in this study of ours by clarifying the most important differences and similarities between the capital adequacy standard issued by the Basel III Agreement, and the amended standard issued by the Islamic Financial Services Board, in addition to determining the most appropriate standard for application at the level of Islamic banks.

Methods

3. Definition of Risks Hedging in the Islamic Banks

The term hedging has many meanings and concepts depending on the type of thing to be hedged against. In the financial aspect, hedging means avoiding financial losses resulting from a specific activity. Among the definitions of hedging, we mention the following:

3.1 First definition: Hedging in Islamic banks can be defined as the various measures and procedures undertaken by the bank that aim to transfer risks to other parties specialized in this field, with the aim of reducing risks, in addition to not affecting profits (Zahan & Kenett, 2012).

3.2 Second definition: Hedging in Islamic banks is defined as various measures and procedures aimed at avoiding risks, eliminating risks, reducing risks and avoiding losses (Azlin & Mustafa , 2014).

3.3 Third definition: It is a set of procedures, measures and methods adopted by banks with the aim of reducing risks and limiting them to the lowest levels, by choosing appropriate formulas and contracts while maintaining the possibility of achieving appropriate and good returns on investment activities (Oubdi & Raghibi, 2017).

The risk hedging mechanism is of great importance at the level of the Islamic banks, as it enables better planning in the field of risk management, as it helps in transferring and transforming risks and developing strategies to avoid falling into losses, in addition to contributing to providing and increasing liquidity for the Islamic banks. It also leads to protecting property and financial resources and controlling and preventing risks. The risk hedging mechanism makes the Islamic banks enjoy a good future outlook in the financial and banking field, by gaining experience in the field of risk management, which enables them to control or avoid various possible future risks, and this would affect the financial return of the Islamic banks.

Results

4. Comparison between Basel III arrangements and the amendments made by the Islamic Financial Services Board

Islamic banks are financial institutions obligated to apply the arrangements set by the Basel III Accord in order to effectively control banking risks. However, this remains a matter of contradiction and poses a problem for these banks in terms of following the Basel III Accord, or relying on what was issued by the Islamic Financial Services Board regarding its arrangements that are in line with those issued by the Basel III Accord, as the latter is designed for conventional banks only, and as is known, there are several differences in the way conventional banks and Islamic banks operate and their characteristics.

4.1 Basel III capital adequacy standard: Basel III decisions are considered an enhancement and support for the points contained in Basel II, as the 2008 global financial crisis played a major role in issuing the Basel III capital adequacy standard, which was established on January 2010, and is to be implemented from January 2013 until 2019, The Basel III agreement came with a set of amendments and the addition of new decisions, which can be summarized as follows:

✔ ***Developing capital adequacy ratios*:** The most important amendments and additions to the Basel III agreement regarding capital adequacy are as follows (Alexander Reimers, 2012):

• Cancellation the Tier 3 capital in calculating the capital adequacy standard.

• Raising the minimum ratio of common capital from 2% to 4.5% of total risk-weighted assets.

• Raising the minimum capital for the first Tier from 4% to 6%.

• The Basel Committee added 2.5% of capital conservation buffer to Common Equity to become 7%. And from there, the total core Tier 1 capital becomes 8.5%. Therefore, banks must maintain 10.5% of their total capital expressed in risk-weighted assets.

• The Basel Committee has established an additional margin as a reserve at a rate of between 0 and 2.5% of risk-weighted assets.

And it can be clarified the most prominent amendments as shown in Table 1.

Table 1. Capital adequacy ratios according to the Basel III Accord

Statements	Owner's equity ratio	Tier 1 Ratio	Total Capital Ratio
Minimum Capital	4.5%	6%	8%
Conservation Buffer	2.5%	-	-
Minimum Capital+ Conservation Buffer	7%	8.5%	10.5%
Countercyclical buffer range	0%-2.5%		

Source: (Basel Committee on Banking Supervision, 2010)

From the above, the capital adequacy equation according to Basel III can be deduced as follows:

$$CAR = [\text{Tier 1 Capital (Core Capital + Supporting Capital)} + \text{Tier 2}] / [\text{Total Risks-Weighted Assets (Credit Risk + Market Risk + Operational Risk)}] \geq 10.5\% \quad (1)$$

The Basel Committee has developed a plan for banks to implement capital standards gradually, which we will explain in the following Table 2.

Table 2. Timeline application of the proposed capital ratios issued by the Basel III agreement

Statements	2013	2014	2015	2016	2017	2018	2019
Minimum common equity capital ratio (1)	3.5%	4%	4.5%	4.5%	4.5%	4.5%	4.5%
Capital Conservation buffer (2)				0.625%	1.25%	1.875%	2.5%
(1)+(2)	3.5%	4%	4.5%	5.125%	5.75%	6.375%	7%
Tier 1	4.5%	5.5%	6%	6%	6%	6%	6%
Minimum total capital (3)	8%	8%	8%	8%	8%	8%	8%
(3)+(2)	8%	8%	8%	8.625%	9.25%	9.875%	10.5%

Source: (Basel Committee on Banking Supervision, 2010)

✔ ***Liquidity standard:*** In its third agreement, the Basel Committee set standards for liquidity coverage, which are as follows:

• *Liquidity Coverage Ratio (LCR):* Its aim is to enable banks to confront the short-term liquidity crisis, and the Liquidity Coverage Ratio can be calculated as follows (Basel Committee on Banking Supervision, 2010):

$$LCR = [\text{High Quality Liquid Assets}] / [\text{Total Net Flows over 30 days}] \geq 100\% \quad (2)$$

• *Net Stable Financing Ratio (NSFR):* Its goal is to make banks practice their financing activities using their sources with continuous stability. The Net Stable Financing Ratio can be calculated as follows (Basel Committee on Banking Supervision, 2010):

$$NSFR = [\text{Stable Financing Available}] / [\text{Stable Financing Required}] \geq 100\% \quad (3)$$

• *Financial Leverage Ratio (LR):* Financial leverage is defined as the ratio of assets on and off the balance sheet without introducing risks, so that the ratio must be greater or equal to 3%, and its goal is to reduce lending unless there is sufficient capital, and it can be calculated as follows (Basel Committee on Banking Supervision, 2014):

$$LR = [\text{Tier 1 Capital}] / [\text{Total Assets}] \geq 3\% \quad (4)$$

4.2 The capital adequacy standard according to the Islamic Financial Services Board

The Islamic Banking Services Council issued a modified standard that is identical and parallel to the Basel III standard, which is an Islamic standard that takes into account the characteristics of Islamic banks and its actual application began in January 2015 (Islamic Financial Services Board, 2013).

The amendments to the capital adequacy standard issued by the Islamic Financial Services Board do not differ from those specified in the Basel III agreement with regard to the proportions constituting capital, as capital requirements must not be less than 8% of the total assets weighted by their risk weights, and Islamic banks must have a percentage of 4.5% or more of the equity that makes up the basic capital, and the basic capital must represent 6%, in addition to the necessity of maintaining an additional margin of 2.5% to the equity, which Islamic banks must increase in periods of stability. Therefore, the minimum total capital after increasing the additional margin for the basic capital is estimated at 10.5%, which is equal to that percentage specified in the Basel III agreement (Islamic Financial Services Board, 2013).

The Islamic Financial Services Board has also developed a plan for Islamic Banks to implement capital standards gradually as did the Basel III Committee, which we will explain in the following Table 3.

Table 3. Timeline application of the proposed capital ratios issued by the Islamic Financial Services Board

Statements	2014	2015	2016	2017	2018	2019
Risk-weighted net equity	8%	4.5%	4.5%	4.5%	4.5%	4.5%
Total risk-weighted core capital		6%	6%	6%	6%	6%
Risk-weighted regulatory capital		8%	8%	8%	8%	8%
Additional margin on capital			0.625%	1.25%	1.875%	2.5%
Total capital + hedging capital		8%	8.625%	9.25%	9.875%	10.5%

Source: (Islamic Financial Services Board, 2013)

The Islamic Financial Services Board has also developed two formulas for calculating the capital adequacy ratio, which differ according to the status of each bank, which we will explain below:

• *Standard Equation:* Through this Equation 5, the total assets weighted by market risks and credit risks are excluded, and only operational risks are calculated. This is in the case that the Islamic bank does not provide any addition to profit payments to investment account holders, it can be calculated as follows (Islamic Financial Services Board, 2013):

$$CAR = [Eligible\ Capital] / [Total\ Risk\text{-}weighted\ Assets\ (Credit\ Risk + Market\ Risk) + [Operational\ Risk] - Assets\ Weighted\ according\ to\ their\ Risk\ Weights\ funded\ by\ Investment\ accounts\ (Credit\ Risk + Market\ Risk)] \quad (5)$$

• *Supervisory Authority Estimation Equation:* This Equation 6 is used by banks that provide Helps to investment account holders, especially those with unrestricted investment accounts, which leads to an increase in commercial risks, and therefore additional capital must be maintained to cover these risks, it can be calculated as follows:

CAR= [Eligible Capital] / [Total Risk-weighted Assets (Credit Risk + Market Risk) + Operational Risk] − Assets Weighted according to their Weights Financed through restricted Investment accounts (Credit Risk + Market Risk) (1−α) Assets Weighted according to their risk weights financed through restricted Investment accounts (Credit Risk + Market Risk) − α [Assets Weighted according to their risk weights financed from the profit rate reserve and the investment risk reserve belonging to the unrestricted Investment accounts (Credit Risk + Market Risk)]] (6)

The Islamic Financial Services Board has established also a leverage ratio that is calculated as follows (Islamic Financial Services Board, 2013):

$$LR = [Core\ Capital] / [Total\ Risk\ Exposure] \geq 3\% \quad (7)$$

From the previous two Formulas of the Islamic Financial Services Board and the Basel III equation, we note that the difference lies in the method of calculating total risk-weighted assets (the denominator of the equation), as the Islamic Financial Services Council took into account investment accounts in calculating the capital adequacy ratio because they are the most important source of financing in Islamic banks. Investment accounts also bear losses if they occur, given that their owners have a partnership relationship with the Islamic bank and are not just depositors. Therefore, Islamic banks obtain an additional defensive source to face risks, which represents the basic difference with traditional banks which was mentioned in the capital adequacy standard issued by the Islamic Financial Services Board and it was not mentioned in the Basel III agreement.

The numerator of the equation also differs between the two standards, According to the Islamic Financial Services Council, the eligible capital is divided into two parts: the first is for covering market risks with credit risks, while the second is for covering operational risks, and the eligible capital is a Basel III account for covering all risks without division, this is what was observed in the previous equations.

Discussion

5. Capital Adequacy of Qatar Islamic Bank according to Basel III and Islamic Financial Services Board

5.1 Introducing Qatar Islamic Bank

Qatar Islamic Bank is the first Islamic bank in Qatar and the largest Islamic banking institution in the country, accounting for 43% of the Islamic banking sector nationwide and about 11% of the total Qatari banking market. It started its operations in 1982 and is considered one of the pioneers of Islamic banking. It also has a group of branches distributed throughout Qatar, in addition to external branches in Lebanon and Sudan. It has shares in a number of financial services companies that are compatible with Islamic Sharia in Qatar, such as QInvest Bank, Beema, and Al Jazeera Finance (QIB, 2024).

5.2 Determining the capital adequacy ratios of Qatar Islamic Bank according to Basel III (2015-2023)

Before calculating the capital adequacy ratios of the bank, it is important to address the instructions of the supervising central bank regarding the amendments made to the capital adequacy according to Basel III. The Central Bank of Qatar, which supervises the supervision of Qatar Islamic Bank, requires the calculation of capital adequacy according to Basel III regulations for all banks operating starting from 2015, where it stipulates that the minimum required capital should be greater than or equal to 12.5%, more than what is specified in the Basel III Agreement, in addition to Tier 1 capital being greater than 10.5% (QIB, 2016). The following Table 4 represent the capital adequacy ratios of Qatar Islamic Bank according to the Basel III Agreement during the period 2015-2023.

From the previous Table 4, and after calculating the capital adequacy ratios of Qatar Islamic according to the Basel III standard, we note that the bank can apply the adequacy ratio according to the Basel III agreement, and from the achieved results, we note that Qatar Islamic Bank has

respected the ratios specified by the supervising central bank and what is specified in the Basel III agreement by achieving higher than what is required.

Table 4. Capital adequacy ratios of Qatar Islamic Bank according to Basel III 2015-2023 (Unit: One Million Qatari riyals)

Statement	2015	2016	2017	2018	2019	2020	2021	2022	2023
Property rights	12551.06	13890.15	14551.01	14841.5	16179.02	18090.59	19716.44	21877.02	23717.02
Tier 1 capital	14380.55	17060.99	18613.4	18898.06	20220.05	22140.52	23765.52	25930.52	27773.89
Tier 2 capital	377.81	514.35	440.83	1064.1	1302.21	1442.06	1579.44	1621.78	1698.5
Total capital	14758.36	17575.34	19054.23	19962.16	21522.26	23582.58	25344.95	27552.3	29472.4
Credit risk	98384.67	97915.19	102210.13	97856.41	100895.15	111370.51	122428.77	126262.58	131368.94
Market risk	586.14	748.44	447.68	364.71	372.17	313.28	776.79	531.3	668.18
Operational risk	5886.36	6448.87	7348.83	8177.55	9136.71	9897.93	10839.63	11776.32	12425.58
Total risk weighted	104856.17	105112.5	110006.65	106398.66	110404.03	121581.71	134045.2	138570.2	144462.7
Property rights ratio	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.16	0.16
Tier 1 capital ratio	0.14	0.16	0.17	0.18	0.18	0.18	0.18	0.19	0.19
Capital adequacy ratio	0.14	0.17	0.17	0.19	0.19	0.19	0.19	0.2	0.2

Source: Prepared by the authors themselves based on the annual reports of Qatar Islamic Bank (QIB, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023)

Thus it can be said that the bank enjoy good financial solvency that enables it to confront potential risks, although these results do not reflect the true financial solvency of this bank and are considered misleading because the capital adequacy standard issued by the Basel III agreement is designed specifically for conventional banks only without taking into account the characteristics of Islamic banks, which contain investment accounts, which are considered one of the most important sources of financing in these banks, as they cover possible losses caused by risks, which was overlooked in the capital adequacy equation according to the Basel III agreement. The capital adequacy ratios of Qatar Islamic Bank according to Basel III decision in the following Fgure 1.

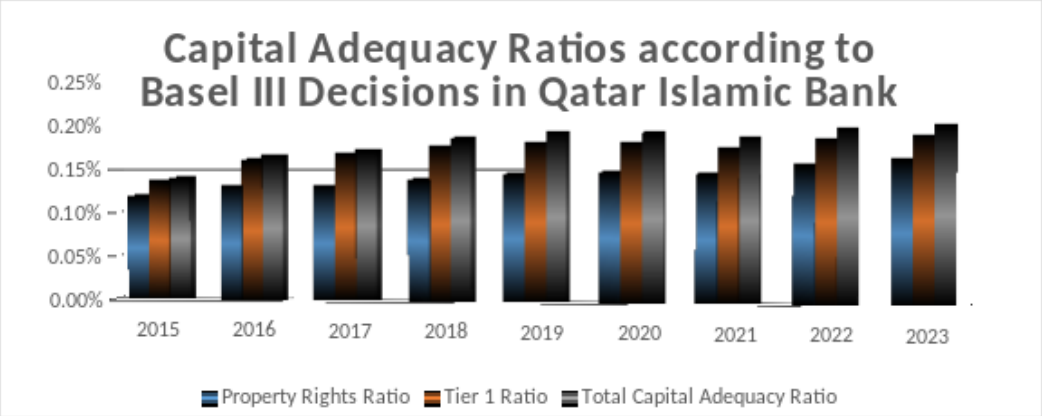

Figure 1. Capital adequacy ratios maintained in Qatar Islamic Bank according to Basel III decision 2015-2023

Source: Prepared by the authors themselves based on the data of the previous Table 4

5.3 Determining the capital adequacy ratios of Qatar Islamic Bank according to the Islamic standard issued by Islamic Financial Services Board

The difference between the Basel III capital adequacy standard and the Islamic standard issued by the Islamic Financial Services Board lies in how the elements of the denominator are calculated, due to the difference in the characteristics of conventional banks and the characteristics of Islamic banks. Through the following Table 5, we will calculate the capital adequacy ratios of

Qatar Islamic bank according to the Islamic standard amended to the Basel III standard issued by the Islamic Financial Services Board during the period 2015-2023.

Table 5. Capital adequacy ratios of Qatar Islamic Bank according to the Islamic Financial Services Board 2015-2023 (Unit: One Million Qatari riyals)

Statement	2015	2016	2017	2018	2019	2020	2021	2022	2023
Property rights	12551.06	13890.15	14551.01	14841.5	16179.02	18090.59	19716.44	21877.02	23717.02
Tier 1 capital	14380.55	17060.99	18613.4	18898.06	20220.05	22140.52	23765.52	25930.52	27773.89
Tier 2 capital	377.81	514.35	440.83	1064.1	1302.21	1442.06	1579.44	1621.78	1698.5
Total capital	14758.36	17575.34	19054.23	19962.16	21522.26	23582.58	25344.95	27552.3	29472.4
Total risk weighted	104856.17	105112.5	110006.65	106398.66	110404.03	121581.71	134045.2	138570.2	144462.7
Total Risk weighted assets funded by investment accounts	60107.47	57932.94	58174.41	54598.25	59850.34	61930.41	62951.39	61554.74	62993.45
Net Risk	44748.7	47179.56	51832.24	51800.41	50553.69	59651.03	71093.81	77015.46	81469.25
Property rights ratio	0.28	0.29	0.28	0.29	0.32	0.3	0.28	0.28	0.29
Tier 1 capital ratio	0.32	0.36	0.36	0.36	0.4	0.37	0.33	0.34	0.34
Capital adequacy ratio	0.33	0.37	0.37	0.39	0.43	0.4	0.36	0.36	0.36

Source: Prepared by the authors themselves based on the annual reports of Qatar Islamic Bank (QIB, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023)

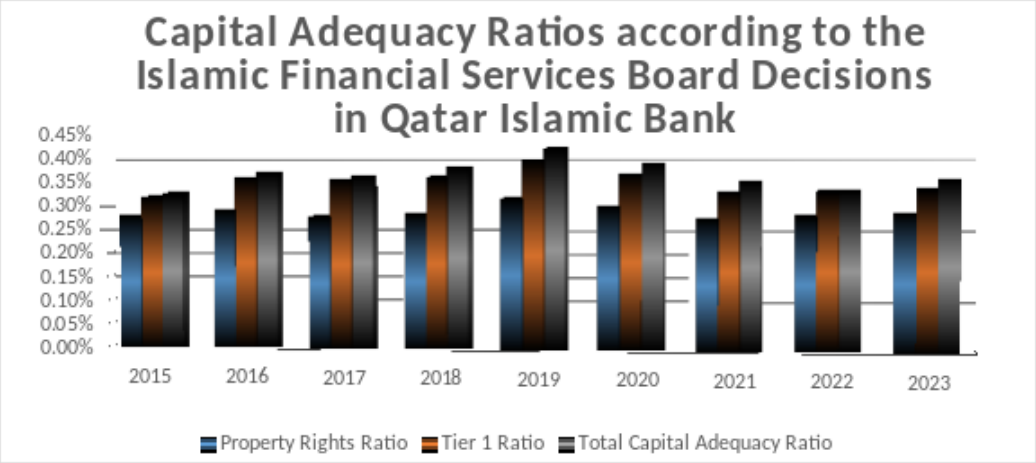

Figure 2. Capital adequacy ratios maintained in Qatar Islamic Bank according to the Islamic Financial Services Board 2015-2023

Source: Prepared by the authors themselves based on the data of the previous Table 5

After calculating the capital adequacy ratios Qatar Islamic Bank according to the Islamic standard issued by the Islamic Financial Services Board during the period 2015-2023, we note that the achieved capital adequacy ratios are much higher than those determined by the Islamic Financial Services Board throughout the study period, whether it is related to property rights (6%), the first tranche (8.5%) or the total minimum (10.5%), which confirms the bank's financial strength in the field of risk hedging, and we also note that the recorded ratios are significantly higher than the capital adequacy ratios according to the Basel III standard achieved in the bank, which is a natural matter, since the capital adequacy equation according to the Islamic standard take into account the assets financed from the investment accounts, and that is in the denominator of the equation, the

opposite of what is found in the equation established in the Basel III agreement, and the capital adequacy ratios can be represented in Qatar Islamic Bank according to the Islamic standard During the period 2015-2023 in the following Figure 2.

After discussing the capital adequacy ratios achieved by Qatar Islamic Bank according to the Islamic standard issued by the Islamic Financial Services Council and the Basel III standard, it can be said that the bank has adapted to the application of both standards by achieving very high ratios, whether it comes to equity ratios (greater than 6%), the first Tier (greater than 8.5%) or the total solvency ratio (greater than 10.5%), and we note the discrepancy in the ratios achieved between the Basel III standard and the Islamic standard. This is explained by the fact that the Islamic standard took investment accounts into account, which was reflected in the high ratios achieved in the Islamic standard.

Conclusion

The capital adequacy standard according to the Basel III agreement is applicable to Islamic banks, as we have seen with Qatar Islamic Bank, which are bound to follow what was issued in the Basel III decisions due to its imposition by the supervising central banks. However, its results do not reflect the true solvency of these two banks, as these decisions are specific to conventional banks only. It also enables the two banks to adapt to the Islamic standard issued by the Islamic Financial Services Board and amended to the Basel III agreement standard for capital adequacy by applying it and conforming to its specified ratios, which is considered the most appropriate for Islamic banks to take into account their constituent characteristics. Therefore, these banks continue to face the problem of applying the capital adequacy standard between the internationally recognized Basel III agreement required by the monetary authorities and the Islamic standard, which is considered the most appropriate for them.

Through our study, we reached a number of results:

- The capital adequacy standard according to Basel III Committee is considered specific only to the conventional banks, after relying on their characteristics in its formation without considering the other characteristics of Islamic banks.
- The distinctive characteristics of Islamic banks are a source of problem and difference in the capital adequacy standards according to Basel III and the Islamic Financial Services Board.
- Most central banks require that the capital adequacy standard issued by the Basel Committee must be applied to either conventional banks or Islamic banks, which may affect the Islamic banking.
- The latest capital adequacy standard issued by the Islamic Financial Services Board is an updated standard of Basel III, which has been modified to suit the operation of Islamic banks.
- The capital adequacy standard issued by the Islamic Banking Services Council is considered less acceptable at the global level compared to the standard issued by Basel III, as some countries apply the latter even to Islamic banks, because these decisions have a global character, and that what was seen with regard to the Central Bank of Qatar, which imposes the application of the Basel III standard on all banks.
- The capital adequacy standard of Basel III shares the same method of calculating the numerator (total capital ratios) as the Islamic standard, but they differ in the denominator (total risks).
- The leverage ratio is the only one issued by the Islamic Financial Services Board as an addition to the capital adequacy ratio in order to keep pace with the Basel III agreement, which issued liquidity ratios and net stable funding ratios as an addition to the capital adequacy ratio.
- Although the Islamic standard amended to the Basel III standard is not accepted at the global level. Its application in Islamic banks remains an inevitable necessity until the Basel Committee issues a standard that takes into account the characteristics of these banks.
- Qatar Islamic Bank was able to apply the capital adequacy standard according to Basel III and the amended Islamic standard, although the results of the first are not considered very credible as it is intended for application to traditional banks only.

- Qatar Islamic Bank has achieved very high solvency ratios, more than those specified in the Basel III Agreement and the Islamic Financial Services Board, The achieved ratios are also higher than those specified by the Central Bank of Qatar, which indicates there great financial competence and the effectiveness of there risk management system.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare that no potential conflicts of interest in publishing this work. Furthermore, the author have witnessed ethical issues such as plagiarism, informed consent, misconduct, data fabrication, double publication or submission, and redundancy.

Publisher's Note: European Academy of Sciences Ltd remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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