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Country comparative assessment of Islamic banks' financial economic situation

Evaluación comparativa, por país, de la situación económico-financiera de los bancos islámicos

Avaliação comparativa, por país, da situação econômico-financeira de bancos islâmicos

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Abstract

Purpose: Promote a country comparative assessment of the Islamic banks economic and financial situation.

Methodology: We used a descriptive and documentary analytical approach. We collected data on Islamic bank financial indicators in 21 countries and analyzed it in light of the standards recommended by the Islamic Financial Services Board (IFSB) and the Basel Committee on Banking Supervision (BCBS). The sample consisted of all countries with available data in the IFSB database (PSIFIs). Data refers to the second quarter of 2018 grouped by countries. We used a simple descriptive statistic, in figures form, to analyze the collected data.

Results: This document points out that 90% of Islamic financial institutions (IFIs) in the sample calculate the capital adequacy ratio (CAR) according to BCBS recommendations. In addition, 95% have CARs above 8% (the minimum set by BCBS and IFSB). Therefore, 95% of countries have secure financial systems in terms of bank solvency. In terms of asset quality, the Islamic financial system in Oman showed the best quality in managing its resources. Sudan has shown the highest ratios of profitability in its Islamic banks. In the liquidity analysis, it was not possible to identify precisely which country has the best liquidity ratios in short and long term as more than 60% of the countries did not present sufficient data. In terms of net assets over total assets, and short-term compliance, the Islamic financial systems of Egypt and Afghanistan, respectively, led with better liquidity ratios, showing the ability and security to meet their obligations.

Contributions of the Study: Identify countries with the highest / lowest risk considering IFSB and BCBS requirements and recommendations.

Keywords: Islamic Finance, *Sharia*, Islamic Banks, Islamic Financial Risks.

Resumen

Objetivo: Este estudio tiene como objetivo proporcionar una evaluación comparativa, por país, de la situación económico-financiera de los bancos islámicos.

Metodología: Se utilizó un enfoque analítico descriptivo y documental. Los datos se recopilaron sobre los indicadores financieros del banco islámico en 21 países y se analizaron a la luz de los estándares recomendados por la Junta de Servicios Financieros Islámicos (IFSB) y el Comité de Supervisión Bancaria de Basilea (BCBS). La muestra consistió en todos los países con datos disponibles en la base de datos IFSB (PSIFI). Los datos se refieren al segundo trimestre de 2018 agrupados por países. Se utilizó una estadística descriptiva simple, en forma de figuras, para analizar los datos recopilados.

Resultados: Este documento señala que el 90% de las instituciones financieras islámicas (IFI) en los países de la muestra calculan el índice de adecuación de capital (CAR) de acuerdo con las recomendaciones del BCBS. Además, el 95% tiene CAR superiores al 8% (el mínimo establecido por BCBS e IFSB). Por lo tanto, el 95% de los países tienen sistemas financieros seguros en términos de solvencia bancaria. En términos de calidad de activos, el sistema financiero islámico en Omán tenía la mejor calidad en la gestión de sus recursos. Sudán ha mostrado las tasas más altas de rentabilidad en sus bancos islámicos. En el análisis de liquidez, no fue posible identificar con precisión qué país tiene el mejor índice de liquidez a corto y largo plazo, ya que más del 60% de los países no proporcionaron datos suficientes. En términos de activos netos sobre activos totales y cumplimiento a corto plazo, los sistemas financieros islámicos de Egipto y Afganistán, respectivamente, lideraron con mejores índices de liquidez de muestra, mostrando la capacidad y la seguridad para cumplir con sus obligaciones.

Contribuciones del Estudio: Identifique los países con el riesgo más alto / más bajo considerando los requisitos y recomendaciones de IFSB y BCBS.

Palabras clave: Finanzas islámicas, *Sharia*, Bancos islámicos, Riesgos financieros islámicos.

Resumo

Objetivo: Este estudo visa promover uma avaliação comparativa por país da situação econômico-financeira de bancos islâmicos.

Metodologia: Foi utilizada uma abordagem analítica descritiva e documental. Realizou-se uma coleta de dados sobre indicadores financeiros de bancos islâmicos em 21 países e procedeu-se a análise desses dados à luz das normas recomendadas pelo Conselho de Serviços Financeiros Islâmicos (IFSB) e pelo Comitê de Supervisão Bancária de Basileia (BCBS). A amostra foi composta pelos países com dados disponíveis na base de dados do IFSB (PSIFIs)[1]. Os dados referem-se ao segundo trimestre de 2018 agrupados por países. Uma estatística descritiva simples, na forma de figuras, foi utilizada para analisar os dados coletados.

Resultados: Este documento ressalta que 90% das instituições financeiras islâmicas (IFIs) nos países da amostra calculam o índice de adequação de capital (CAR) de acordo com as recomendações do BCBS. Além disso, 95% apresentam CAR superior a 8% (o mínimo estabelecido pelo BCBS e IFSB). Portanto, 95% dos países possuem sistemas financeiros seguros em termos da solvência bancária. Em termos de qualidade de ativos, o sistema financeiro islâmico em Omã apresentou a melhor qualidade no gerenciamento dos seus recursos. O Sudão demonstrou os maiores índices de rentabilidade em seus bancos islâmicos. Na análise de liquidez, não foi possível identificar com precisão qual é o país de melhor índice de liquidez no curto e longo prazo uma vez que mais de 60% dos países não apresentaram dados suficientes. Em termos de ativos líquidos sobre o total de ativos, e o cumprimento de obrigações a curto prazo, os sistemas financeiros islâmicos do Egito e do Afeganistão, respectivamente, lideraram com melhores índices de liquidez da amostra, mostrando capacidade e segurança para cumprir suas obrigações.

Contribuições do Estudo: Identificar os países com maior/menor risco considerando os requerimentos e recomendações do IFSB e do BCBS.

Palavras-chave: Finanças Islâmicas, *Sharia*, Bancos Islâmicos, Riscos Financeiro Islâmicos.

1 Introduction

Religions are still one of the main issues that explain different cultures, customs and social traditions between societies and civilizations, because it influence people in the way of thinking and understanding life. Despite the multiplicity of religions over the ages, there is no knowledge of financial institutions regulated by a law integrated into a particular religious base, except in the Islamic case.

The term "Islamic financial system" is relatively new, emerging in the mid-1980s. Commercial or mercantile activities, in accordance with Islamic principles, would take place before the emergence of the system, under the aegis of “interest-free” or “Islamic” banking services. However, interpreting the Islamic financial system simply as interest-free does not capture a true image of the system as a whole. Undoubtedly, prohibiting the receipt and payment

[1] Os dados foram coletados em 22/02/2019.

of interest is the core of the system, but it is supported by other principles of Islamic doctrine that defend social justice, risk sharing, the rights and duties of individuals and society, property rights, and the sanctity of contracts (Greuning & Iqbal, 2008).

There are two important points to be clarified when it comes to Islamic banks and their relationship to the Islamic religion. According to Ansari, Hassan, & Metwally (1988), first: Islamic banks are institutions of economic development that can be based on religion, but are by no means, Islamic missionaries. Second: they are not limited to Islamic societies and can operate in societies of different beliefs and cultures. So, it is necessary to emphasize that economic and financial thinking is not derived from a specific religion or belief, but is influenced by it, therefore, introducing them as Islamic missionaries raises suspicions of sectarian bias.

The roots of the Islamic banks and financial institutions idea arose from the perception of Muslims that taking a negative attitude towards *Riba*[2] (usury) in conventional banks would not be useful, and therefore the ideal solution for getting Muslim customers out of *Haraam*[3] and put them in *Halal*[4], was to establish Islamic financial institutions that would offer, without *Riba*, the same services as conventional banks, and operate in accordance with Islamic laws. Thus, Muslim customers were rescued from the obligation to deal with usurious banks (Ansari et al., 1988).

Within this context, this paper aims to highlight the economic and financial aspect of Islamic civilization, represented by Islamic financial institutions (IFIs) or Islamic banks, without addressing the merits of Islamic religion itself, but comparatively assessing Islamic banks, by country, analyzing the economic and financial situation of these institutions. The analyzes are carried out focusing on the capital requirements recommended by the Islamic Financial Services Board (IFSB) and the Basel Committee on Banking Supervision (BCBS). The study is justified by dealing with an approach that is poorly developed in terms of national and international research in Islamic financial institutions area, which present characteristics deserve further investigation.

2 Literature Revision

Iqbal (1997) Iqbal (1997) summarizes the basic principles of an Islamic financial system in six characteristics: a) prohibition of interest, that is the central principle of the system, based on arguments of social justice, equality and property rights; b) risk-sharing, as interest is prohibited, fund providers become investors, not creditors, where the provider of financial capital and the entrepreneur share risks such as profits; c) money as potential capital, money has value only when it becomes real capital; d) prohibition of speculative behavior such as transactions that present uncertainties, bets and extreme risks. e) sanctity of contracts, it is a sacred duty aimed at reducing the risk of asymmetric information and moral risk. f) activities approved by *Sharia*[5], for example, any investment in companies dealing with alcohol, gambling and casinos will be prohibited.

[2] *Riba* is an Arabic word that means interest.

[3] *Haraam* "forbidden" is a term used in Islam to refer to anything that is prohibited by faith (Williams, 1962).

[4] *Halal* "allowed" is the opposite of *Haraam* (prohibited).

[5] It is a set of rules and laws that govern economic, social, political and cultural aspects of Islamic societies (Iqbal, 1997).

Unlike conventional banks, Islamic banks are prohibited from charging or paying interest, but they do offer profit-sharing investment accounts, so the return of investors depends on the return on assets financed by the funds of these investors (Karim, 2001). Thus, the Islamic banking system replaces interest-based intermediation with interest-free profit and loss sharing (PLS). In addition, it does not subscribe to the same conventional financing criteria based on the credit and collateral quality of borrowers. (Mansoor Khan & Ishaq Bhatti, 2008).

The reinforced moral element with a continued emphasis on the need for religion in everyday life and in all commercial and occupational activities, is one of the most important factors that distinguish the Islamic economy from other economic systems. In the economic arena, the moral element appears in the emphasis placed on justice and faithfulness in relationships, in the distribution of properties in inheritance, in the sanctity of the oath and in trust, in the honor of covenants, in the prevention of Riba and in the general prevalence of egalitarian sentiment. (Abbasi, Hollman, & Murrey, 1989).

The Islamic banking system is basically an equity-based system and has zero-based interest, economy sharing, equity participation, joint ventures, mutual funds, leasing, innovation and a promising rate of return. So the Islamic banking system replaces interest-based intermediation with interest-free profit and loss sharing (PLS). In addition, the Islamic banking system does not subscribe to conventional financing criteria based on borrowers' credit quality and strong guarantees. (Mansoor Khan & Ishaq Bhatti, 2008).

Hanif (2011) highlights the Islamic financial instruments used by the IFIs and objectively classifies them into three financing categories: a) trade-based instruments, b) leasing-based and, c) PLS-based.

Table 1

Islamic financial instruments

Trade-based instruments:	• *Murabaha*: refers to a sale contract whereby the IIFS sell to a customer at an agreed profit margin plus cost (selling price), a specified kind of asset that is already in their possession (IFSB, 2005, p. 37). • *Murabaha for the Purchase Orderer* (MPO): Refers to a sale contract whereby the IFIs sell to a MPO customer at cost plus an agreed profit margin (selling price), a specified kind of asset that has been purchased and acquired by the IFIs based on a promise to purchase from the customer (IFSB, 2005, p. 37). • *Muajjal*: A credit sales without disclosing amount of profit charged (Hanif, 2011, p.4). • *Salam*: Refers to an agreement to purchase, at a predetermined price, a specified kind of commodity not available with the seller, which is to be delivered on a specified future date in a specified quantity and quality (IFSB, 2005, p. 38). • *Istisna*: Refers to an agreement to sell to a customer a non-existent asset, which is to be manufactured or built according to the buyer's specifications and is to be delivered on a specified future date at a predetermined selling price (IFSB, 2005, p. 37).
Leasing-based instruments:	• *Ijara*: Refers to an agreement made by IFIs to lease to a customer an asset specified by the customer for an agreed period against specified installments of lease rental (IFSB, 2005, p. 37). • *Ijara Muntahia Bittamleek*: Is a form of lease contract that offers the lessee an option to own the asset at the end of the lease period (IFSB, 2005, p. 37).
PLS-based instruments:	• *Musharaka*: is a contract between the IFIs and a customer to contribute capital to an enterprise, whether existing or new, or to ownership of a real estate or moveable asset, either on a temporary or permanent basis. Profits generated by that enterprise or real estate/asset are shared in accordance with the terms of *Musharaka* agreement whilst losses are shared in proportion to each partner's share of capital (IFSB, 2005, p. 37). • *Mudaraba*: is a contract between the capital provider and a skilled entrepreneur whereby the capital provider would contribute capital to an enterprise or activity, which is to be managed, by the entrepreneur as the *Mudarib* (or labor provider). Profits generated by

	that enterprise or activity are shared in accordance with the terms of the *Mudaraba* agreement whilst losses are to borne solely by the capital provider unless the losses are due to the *Mudarib's* misconduct, negligence or breach of contracted terms (IFSB, 2005, p. 37).

Source: *Self elaboration based on the cited studies*.

The Islamic banking system is relatively new, which is why, according to Ahmed & Khan (2007), the risks inherent in the instruments used are not well understood, but Islamic banks can face two types of risks: risks similar to those faced by conventional financial intermediaries, and unique risks due to *Sharia* compliance. The unique and challenging risks to Islamic banks are summarized in: displaced commercial risk, withdrawal risk, governance, fiduciary risk, transparency, *Sharia* non-compliance risk and reputational risk (Greuning & Iqbal, 2008; Rosman & Abdul Rahman, 2015).

According to Khan & Ahmed (2001) most of the risks faced by conventional financial institutions, such as credit risk, market risk, liquidity risk, operational risk, etc., are also faced by Islamic financial institutions, however, The magnitudes of some of these risks are different for Islamic banks due to their compliance with *Sharia*, which, for example, does not allow the application of fines or any type of penalties against defaulting customers (Greuning & Iqbal, 2008).

The term "displaced commercial risk" for the IFSB (2013), as explained in the IFSB-15 standard, refers to the extent of additional risk borne by IFI shareholders, that is, its own capital, to compensate investment accounts holders (IAHs)[6], even if they assume with the bank the commercial risks related to the assets financed by their funds. According to Greuning & Iqbal (2008), this can occur when the IFI presents low performance during a period that it would be unable to generate adequate profits for distribution to IAHs. Although, in principle, the IFI has complete autonomy over the realization of this commercial risk shift, in practice the IFI may be virtually obliged to do so in order to mitigate the withdrawal risk (IFSB, 2013).

The experience gained to mitigate displaced commercial risk has led IFIs to develop two standard practices in the sector: the first is to maintain a profit equalization reserve (PER) to guarantee smooth future returns and protect shareholders' equity from future shocks, and the second one is an investment risk reserve (IRR) that will be maintained in order to mitigate the effects of the investment future losses risk (Greuning & Iqbal, 2008).

The *Sharia* non-compliance risk is one of the operational risks resulting from non-compliance with Islamic law or from different interpretation of *Sharia* rules which result in differences in financial reporting, auditing and accounting treatment. On the other hand, this risk may result from non-standard practices in relation to different contracts in different jurisdictions (Greuning & Iqbal, 2008; IFSB, 2013).

All the risks faced by any financial institution are interconnected, so that the occurrence of one can lead to the occurrence of the other. For IFIs, the impact is greater due to some peculiarities, for example, the credit risk arising from customer defaults can generate liquidity risk. Furthermore, it is important to note in this context that Islamic banks cannot, in order to manage its risks and protect it selves, use the same techniques used by conventional banks, since such techniques in essence can be based on some type of interest, bets or speculation prohibited by *Sharia* (Makiyan, 2008; Mansoor Khan & Ishaq Bhatti, 2008). Thus, Islamic banks cannot impose penalties or fines on delayed outstanding debts, which increases the impact of risk on the bank (Greuning & Iqbal, 2008).

[6] So named, but equivalent to our "depositor" in conventional banks.

Islamic banks differ almost entirely from conventional banks in their activities nature, in the resources use and in their investments structure. The depositors' financial resources received by the Islamic bank based on *Mudaraba* for example, the depositor must bear with any loss to its resources unless the bank's default and negligence are proven. According to Islamic law, any profit sharing relationship can be agreed between the partners, but the loss share is restricted to the proportional share of each partner (Hanif, 2011).

2.1 CAMEL Method

In the 1980s, US supervisory authorities, using the CAMEL rating system, were the first to introduce ratings for on-site exams at banking institutions. The concept introduced a uniform rating system for a banking institution in the United States. Under this system, each banking institution subjected to on-site examination is assessed based on five (now six) critical dimensions related to its operations and performance, which are referred to as component factors (Sahajwala & Bergh, 2000; Trivedi & Patel, 2019).

The Federal Reserve Board's analyzes raised many questions about the credibility of this method for assessing the security of banks' financial situation. Economic analysts concluded that the results of this method in detecting bank failures and determining financial integrity were better than those used in traditional statistical analysis, also demonstrating their ability to determine the degree of risk for banks before being exposed by the mechanism and market prices. Thus, the need arose to disclose these results to the public and to include in the annual financial statements of the banks, since achieving a high level of transparency helps in market discipline, one of the main pillars of the Basel Committee on Banking Supervision, in addition to demonstrating facts that could support the choice of banks with lower risks and better performance (Capelle-Blancard & Chauveau, 2004).

Iqbal (2012) states that there is no uniform definition of CAMELS, but it can be defined in general as follows:

- A technique for assessing banks' financial solidity and operational performance, providing meaningful and concise information on the banks condition;
- A supervisory tool to help identify banks that are having problems and require strict supervision;
- A tool to categorize banks based on their financial health.

According to Kramo (2004), banks are distributed at rating intervals ranging from 1 to 5, with 1 being the best rate and 5 the worst, as follows:

Table 2
Banks Classification by CAMELS standard

Classification	Degree of Classification	Bank position	Control procedure
Strong	1 ----- 1.4	A good position in all respects	don't take any action
Satisfactory	1.5 ------ 2.4	Relatively true with some deficiencies	Treatment of negatives
Fair	2.5 ---- 3.4	Shows the elements of weakness and strength	Control and follow-up to the Bank
Margin	3.5 ---- 4.4	Risk may lead to failure	Field reform and follow-up program
Unsatisfactory	4.5 ---- 5	Very dangerous	Permanent control+ supervision

Source: *Adapted from Abbas et al. (2019, p. 31).*

The classification is uniformly distributed among the six components of the CAMELS method and is based on the evaluation of 44 indicators, including 10 numerical indicators in the form of indexes and financial criteria and 34 qualitative indicators, all of which are taken into account to determine the final classification of banks similar groups and each bank separately, according to the group to which they belong.

According to Hammad (2001), this method is one of the direct means of control, carried out through on-site inspection, adopted by regulatory authorities in the United States as a standard for decision making and is based on the following elements, which form the acronym CAMELS:

Table 3
CAMELS Components

C *– Capital Adequacy*
A *– Asset Quality*
M *– Management (Efficiency)*
E *– Earning (Capacity)*
L *– Liquidity (Management)*
S *– Sensitivity to Market Risks*

Source: *Adapted from Iqbal (2012, p. 5).*

2.2 Theory Used

The research was based fundamentally on normative theory, considering the capital requirements issued by regulatory bodies, in this case BCBS and IFSB.

2.3 Previous Studies Resume

No specific research we have found promotes a comparative assessment between Islamic banks in different countries. However, there are surveys that analyze Islamic banks with their conventional counterparts in different aspects. Below is a summary of the most relevant ones.

Bin Nasser (2009) emphasizes in his work on risk management at IFIs that, due to the lack of the necessary means and requirements, the risk index faced by Islamic financial and banking institutions has increased, and the high level of risk faced has led to many negative effects and consequences to the Islamic investment business.

Khadija & Rifai (2007) discussed the risks and challenges of Islamic banking products and stressed that Islamic banks invest in lower risk products, due to the limited risk management capabilities in these banks that comply with *Sharia* provisions. They also concluded that conventional banking methods used to control credit risk are not all allowed for Islamic banks under *Sharia* prohibitions.

Hassan & Bashir (2003) examined worldwide Islamic banks performance indicators during the period 1994-2001 to find Islamic bank profitability determinants. They concluded that Islamic banks' loan portfolio is strongly influenced by short-term commercial financing, so it is low risk and contribute only modestly to bank profits.

Abedifar, Molyneux, & Tarazi (2013) attempted to investigate the credit risk and Islamic commercial banks stability characteristics using a sample of 553 conventional and Islamic banks from 24 countries between 1999 and 2009. The authors argue that Islamic banks face different risks than those faced by conventional banks due to differences in their obligations towards depositors (IAHs), where Islamic banks must share the realized profits or losses with the IAHs, while conventional banks must fulfill their obligations to depositors, regardless of their profits or losses. On the other hand, Islamic banks may face extra risks due to the complexity of Islamic financing modes and limitations in their financing, investment and risk management activities, with banks expected to be more concerned with their religious beliefs. The authors concluded that Islamic banks have less credit risk than conventional banks; the quality of loans, income and expenditure of Islamic banks are less sensitive to domestic interest rates compared to conventional counterparts; and finally, the authors found little evidence that Islamic banks charge rent to their customers for offering *Sharia*-compliant financial products.

Zainol & Kassim (2010) analyzed the return rate potential risk in Islamic banks and the interest rate risk in conventional banks, using data covering the period from January 1997 to October 2008, and concluded that when the interest rate on conventional banks increases, Islamic depositors transfer their funds from Islamic banks to conventional banks thus increasing withdrawal risk, so the bank is obliged to waive part or all of the shareholders' profits to mitigate this risk, this may adversely affect the bank's equity, which can lead to the risk of insolvency in extreme cases.

Al Rahahleh, Ishaq Bhatti, & Najuna Misman (2019) examined risk management development in Islamic banks and concluded that there is weak support for the *Sharia*-based development products due to the lack of risk mitigation knowledge in Islamic banks, justifying that Islamic banks are more sensitive to risks, compared to conventional banks, due to their products nature, contractual structure, legal funding, governance practices and liquidity infrastructure.

Hamdi, Abdouli, Ferhi, Aloui, & Hammami (2019) studied Islamic and conventional banks stability in the countries of the Middle East and North African region (MENA) during the financial crisis, from 2007 to 2012, and stressed that Islamic banks performed better during the period, in particular, profitability and capitalization, which means that Islamic banks were more stable than conventional banks during the subprime and euro zone crises.

Few research deals with the analysis of financial indicators in Islamic banks and, still, related to capital requirements defined by the regulatory bodies (IFSB and BCBS) which we believe can be the contributions of this work.

3 Methodological Procedures

3.1 Research Strategy and Method

A descriptive statistics in figures form was used to analyze the data collected in this research based on data treatment, inference and interpretation that aim to make valid and meaningful data. For this purpose, according to Gil (2008), statistical procedures were used to make it possible to establish figures that synthesize and highlight the information obtained.

3.2 Indicators

The selected data consisted of financial indicators for all countries with data available from the Prudential and Structural Islamic Financial Indicators (PSIFIs)[7] up to the date of collection[8]. Table 1 shows the indicators collected for the analysis.

There are three types of indicators in the aforementioned database: core prudential, additional prudential and structural. This research deals only with the core prudential indicators[9]. Such indicators are grouped by country and represent all IFIs or Islamic banks in the countries where they are based.

The mentioned database does not include some countries data, which showed some gaps in the analysis and, therefore, the analysis results of each indicator are limited only to the available data.

The IFSB did not justify why the published indicators are for 21 countries, although there are other countries that have an Islamic banking system. On the other hand, it did not inform how the indicators values of each country are measured.

It is worth noting that none of these indicators were calculated, but were collected from the source as they were, without any modifications or distortions.

Table 4

Financial indicators acronyms and names

Indicator	Description
CAR-BCBS	Capital adequacy ratio (CAR) calculated according to the BCBS formula
CAR-IFSB	CAR calculated according to the IFSB formula
Assets Quality	Non-performing financing (NPF) on total loans
	NPF provisions
Profitability	Return on assets (ROA)
	Return on equity (ROE)
	Net profit margin (NPM)
Liquidity	Net assets on total assets
	Net assets on short-term liabilities

Source: *Research data based on IFSB (2019).*

3.3 Population or Sample

[7] IFSB database.

[8] Data was collected on February 22, 2019 in its last update for the second quarter of 2018.

[9] Core Prudential Islamic Financial Indicators (PIFIs).

We used in this study a descriptive and documentary analytical approach. Data collection on Islamic banks financial indicators was carried out in 21 countries and the data was analyzed in the light of the IFSB and BCBS recommended standards. The sample includes only those countries with available data in the IFSB database (PSIFIs). The data refer to the second quarter of 2018 grouped by countries.

Describing means identifying, reporting, comparing, among other aspects with the purpose of clarifying certain characteristics and/or aspects inherent to the studied phenomenon (Raupp & Bauren, 2006). The documentary research for Gil (2008)uses materials that can be reworked according to the research objectives.

The sample population consists of 21 countries which are: Afghanistan, Bahrain, Bangladesh, Brunei, Egypt, Indonesia, Iran, Jordan, Kuwait, Lebanon, Malaysia, Nigeria, Oman, Palestine, Pakistan, Qatar, Saudi Arabia, Sudan, Turkey, United Arab Emirates and United Kingdom. All data are proportional and refer to the second quarter of 2018 (2018Q2).

3.4 Database Definition

PSIFIs represents an IFSB project to establish a global database of prudential statistics for the Islamic financial services industry (IFSI). These indicators provide information on the strength, stability and size of Islamic financial systems in participating jurisdictions, and cover aggregated data from Islamic banking institutions at country level, compiled by the regulatory and supervisory authorities (RSAs) of participating countries. These data are provided by independent Islamic banks and Islamic windows of conventional banks, and represent, when available, the entire banking system in the respective countries (IFSB, 2019).

3.5 Data Analysis Technique

Islamic financial indicators are analyzed in terms of risks in the light of the IFSB and BCBS recommended standards, thus identifying the countries with the highest\lowest risk.

4 Results and Analysis

4.1 Capital Adequacy Analysis

The Basel I agreement, which took place in 1988, established a global capital adequacy ratio (CAR) based on the assets weighting according to their degree of severity, having been determined this ratio at 8%, to enter into force from the end of 1992 (Nasser, 2006). In mid-1999, BCBS published preliminary proposals for a new bank solvency framework to replace Basel I, and after lengthy discussions on the proposals for this agreement, the Basel II was approved in 2004, to enter into force during a transition period until the end of 2006. Basel II developed the general capital structure more sensitive to credit risk, which requires high capital levels to absorb high risks. The agreement added operational risk to the formula and gave banks new approaches to measure risk, but did not differentiate between banks in terms of size, working complexity and development degree. In December 2010, BCBS undertook a series of amendments and reforms to the Basel II agreement, issuing two documents: a global regulatory framework for more resilient banks and banking systems, and a international framework for liquidity risk measurement, standards and monitoring, which were named Basel III (Bank for International Settlements, 2019).

$$CAR - BCBS = \frac{Regulatory\ Capital}{Risk\ weighted\ assets\ (Credit\ +\ Market)\ +\ Operating} \geq 8\%$$

The capital adequacy calculation for Islamic banks was initially carried out by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), before the establishment of the IFSB, when it issued in March 1999 a statement clarifying the purpose of the capital adequacy rate for Islamic banks and explaining how to calculate it.

In December 2005, the IFSB issued the capital adequacy standard (IFSB-2) for institutions that provide Islamic financial services, taking into account the specific characteristics of investment account holders (IAHs) who participate in the risk together with the shareholders. In December 2013, the board issued the revised capital adequacy standard (IFSB-15), changing some concepts related to risk sharing.

$$CAR - IFSB = \frac{Regulatory\ Capital}{\{Risk\ weighted\ assets\ (Credit\ +\ Market)\ +\ Operating} \geq 8\%$$
$$-Risk\ weighted\ assets\ financed\ by\ PSIA[10]\ (Credit\ +\ Market)\}$$

The difference between the two formulas is only in the denominator. Since depositors in Islamic banks are partners of the bank in profit and loss through investment accounts (PSIA), depositors will bear with the bank any possible future risks. For this reason, the IFSB deducted from the formula denominator the assets financed by the depositors' funds (PSIA), which will be covered by the depositors themselves and not by the bank. Thus, the bank assumes only the possible risk arising from assets financed by its own funds.

In view of the above, the CAR of Islamic banks must be lower than that of conventional banks, as the conventional bank is obliged to assume all risks and is obliged to pay interest to depositors regardless of their final results, while the Islamic bank assumes only the risks related to the part financed by its own funds, being that it shares losses and profits with its depositors (Sheikh Hassan, 2005)[11].

As we see in Figure 1, all Islamic banks in the sample countries calculate the CAR according to the BCBS standard, except Jordan and Sudan, which only follow the IFSB standard. Lebanon is the only country in the sample that did not provide data on capital adequacy; therefore, it is not possible to know whether its Islamic banks follow BCBS or IFSB to calculate the CAR.

[10] PSIA: Profit-Sharing Investment Accounts (Depositors' funds).

[11] The word "Sheikh" is part of the author's name.

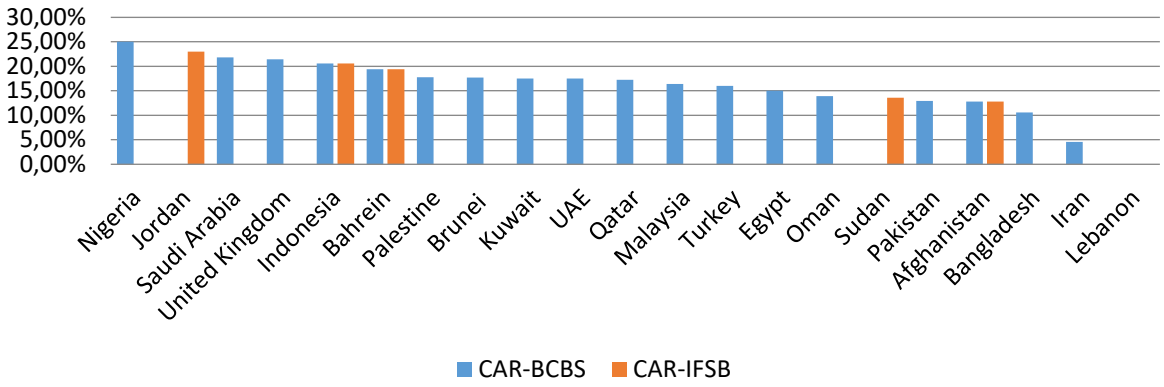

Figure 1 *Capital adequacy ratio (CAR)*
Source: *Self elaboration based on research data.*

Nigeria showed the best CAR index in its Islamic banks (25.04%) calculated based on the BCBS standard, which indicates that Nigerian Islamic banks are apparently safe and able to take risks and absorb unexpected future losses. Iran, on the other hand, had the lowest CAR index in its Islamic banks (4.55%) calculated according to BCBS. Iran's index is considered to be very low, lower than the minimum capital requirements determined by BCBS (8%), which reveals that a high risk degree is likely in Iran's Islamic banks.

4.2 Asset Quality Analysis

The quality of assets will be explained by the non-performing financing index (NPF), which represents the sum of overdue financing that are in default or close to being in default[12]. NPF for Islamic banks and NPL for conventional banks are related to financing and credit risk, that is, the two indexes show the bank administration's ability to manage problematic loans and financing granted by the bank. Thus, the higher the index, the lower the bank's credit quality and, therefore, the lower the quality of its assets (Sukmana & Febriyati, 2016). According to Havidz & Setiawan (2015), banks with high NPF can be considered inefficient.

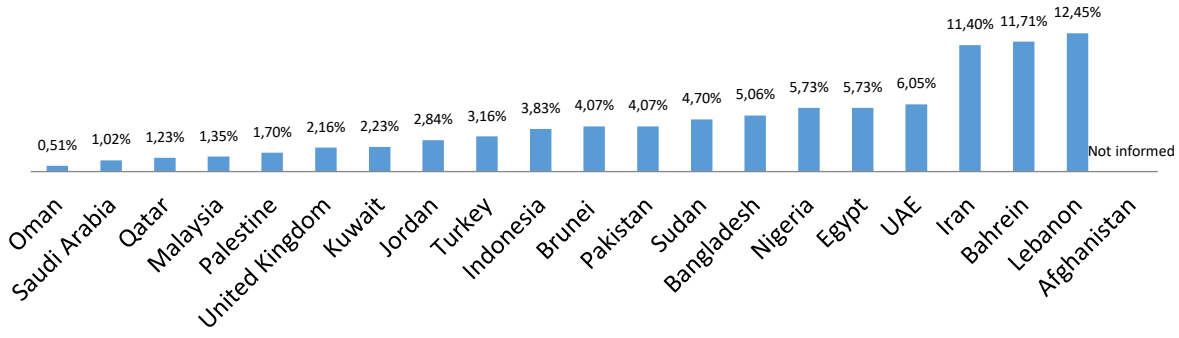

Figure 2 *Non-performing financing index (NPF).*
Source: *Self elaboration based on research data.*

[12] In Brazil, credits overdue up to 60 days are not considered to be in default by Resolution No. 2682, National Monetary Council.

The Lebanon, Bahrain and Iran countries, respectively, have the worst gross NPF rates, exceeding 11%, as shown in Figure 2. It indicates that Islamic banks in these countries face a default problem, which probably requires better improvement of the bank's management and financing policy. It also reveals that the Islamic banking system in these countries faces high credit risk compared to other countries, whereas the provisions, as shown in Figure 3, are relatively low and are not sufficient to cover credit risks in extreme cases. On the other hand, Oman and Saudi Arabia, respectively, had a better NPF index, which shows good resources recruitment, indicating high asset quality and lower credit risk in their Islamic banking systems.

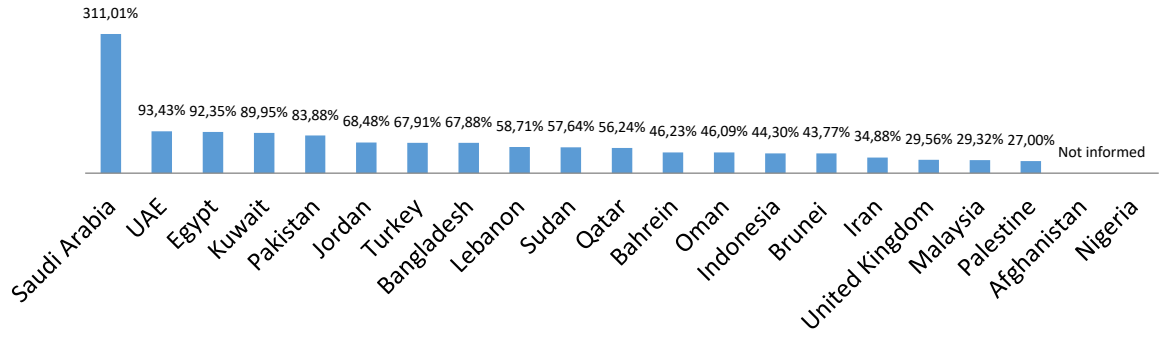

Figure 3 *NPF provisions.*
Source: *Self elaboration based on research data.*

We noted that Saudi Arabia presented a provision three times higher than the total NPF, which reflects, in principle, the robustness of the Saudi Islamic banking system, appearing to be a prudent system in its financial policy and capable of absorbing future losses. In this sense, it should be noted that the excess provision is classified, according to Basel III, as a "Tier 3", strengthening capital.

4.3 Profitability Analysis

The ROA provides information on how much profit is generated, on average, by each unit of assets. Therefore, ROA is an indicator of how efficiently a bank is being managed (Petersen & Schoeman, 2008).

According to the PSIFIs database, ROA is calculated using the following formula:

$$ROA = \frac{Net\ income\ \left(before\ tax\ and\ Zakat^{13}\right)}{Total\ assets}$$

[13] Tax equivalent. It is an obligation by *Sharia*, theologically, it means spiritual purification resulting from the donation (Wahab & Rahim Abdul Rahman, 2011).

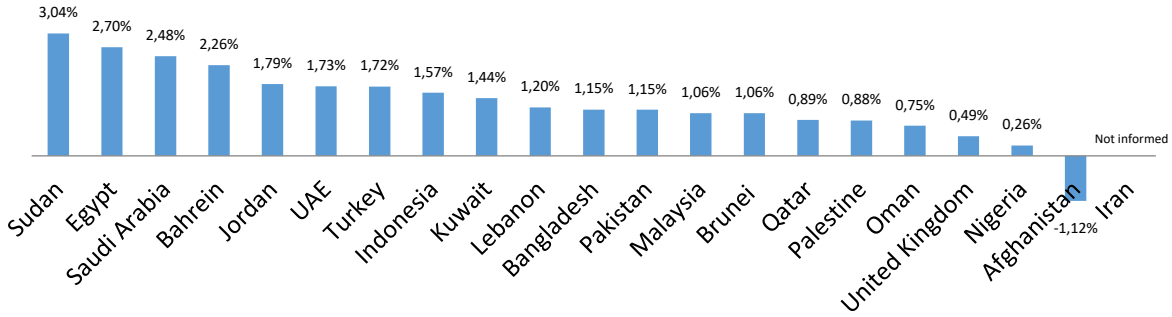

Figure 4 *Return on assets (ROA).*
Source: *Self elaboration based on research data.*

The return on equity (ROE) is a central measure of performance in the banking sector, as it highlights the efficiency and capacity of own resources to generate profits. According to Moussu & Petit-Romec (2014), ROE is not only the main measure of bank's performance, but it also directs resources allocation between and within the bank's divisions.

According to PSIFIs database, ROE is calculated using the following formula:

$$ROE = \frac{Net\ income\ (before\ tax\ and\ Zakat^{14})}{Equity}$$

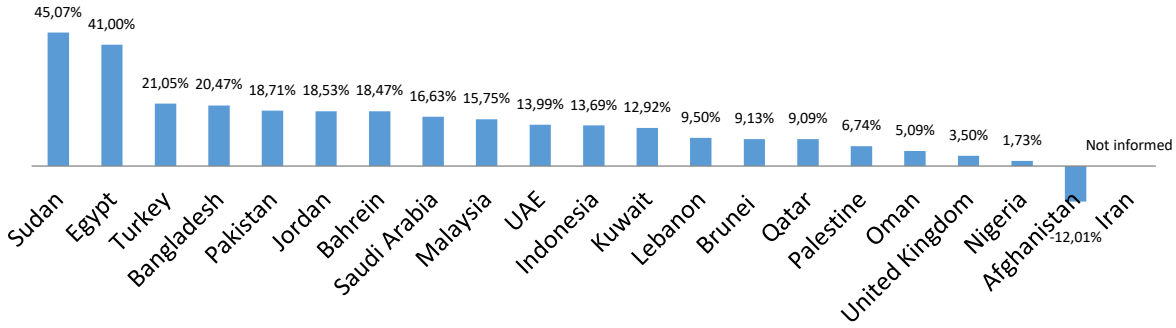

Figure 5 *Return on equity (ROE).*
Source: *Self elaboration based on research data.*

All Islamic banks in the sample countries showed profits during the study period, except Afghanistan, where losses reached 1.12% of total assets, and 12.01% of total equity. This is probably due to the political situation, insecurity and economic instability that the country has suffered for a long time. It is suggested that this fact has generated not only the loss of credibility, but also the scarcity of resources to be the object of financial intermediation. For it is not possible that all Islamic banks in Afghanistan are inefficient in using their financial resources.

Iran did not provide information on its profits, as shown in Figures 4 and 5. There is an inconsistency in this fact, since the country presented information about other indicators. The best indicators for ROA and ROE were presented by Sudan (3.04% and 45.07%), respectively, which reveals a good performance and high efficiency in management, thus surpassing other

[14] It was clarified on the previous page.

more developed countries in the sample, although it is a country that recently faced serious economic and political problems. On the other hand, it is noted that the worst rates are for Nigeria, 0.26% and 1.73%, which may indicate problems in the quality of financing and resource management (operational risk), which affects not only profitability, but may increase credit risk.

Revenue and net profit are variables that allow to obtain the net profit margin (NPM), which is a fundamental indicator to understand an institution situation and its operational efficiency. PSIFIs calculates NPM as follows:

$$Net\ profit\ margin\ (NPM) = \frac{Net\ profit\ (before\ tax\ and\ Zakat)}{Revenue}$$

In this context, it is clear that Afghanistan's Islamic financial system losses during the study period was more than 366% of its total revenue, as shown in Figure 6, which demonstrates the risk magnitude posed by war and insecurity over financial institutions in the country, and perhaps, for the same reason, Afghanistan poses the greatest financial risks in the world.

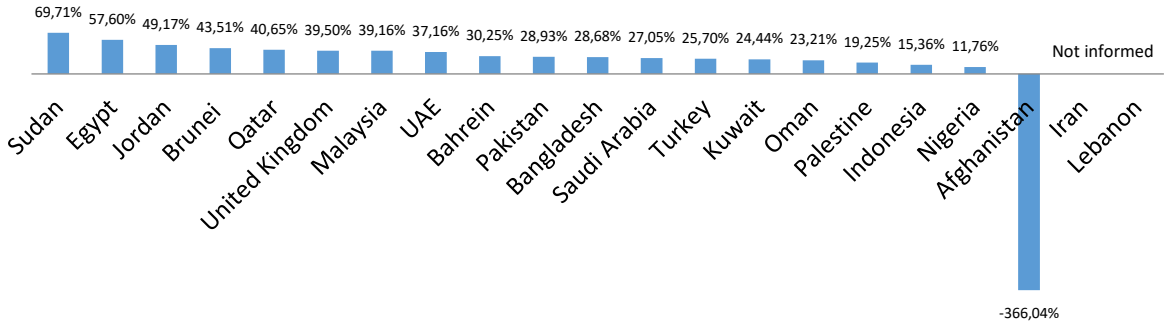

Figure 6 *Net profit margin (NPM).*
Source: *Self elaboration based on research data.*

Iran and Lebanon have not provided information on the profits of their Islamic banks. Sudan had the highest profit among the countries in the sample, reaching almost 70% of its Islamic banks' total revenue, again outperforming Islamic banks in other countries, which is an unexpected result in this survey.

4.4 Liquidity Analysis

The retention of a reasonable proportion of liquid assets is necessary to address various risks associated with the withdrawal. In addition, this proportion must be monitored and managed so as not to exceed certain limits and negatively affect the bank's profitability.

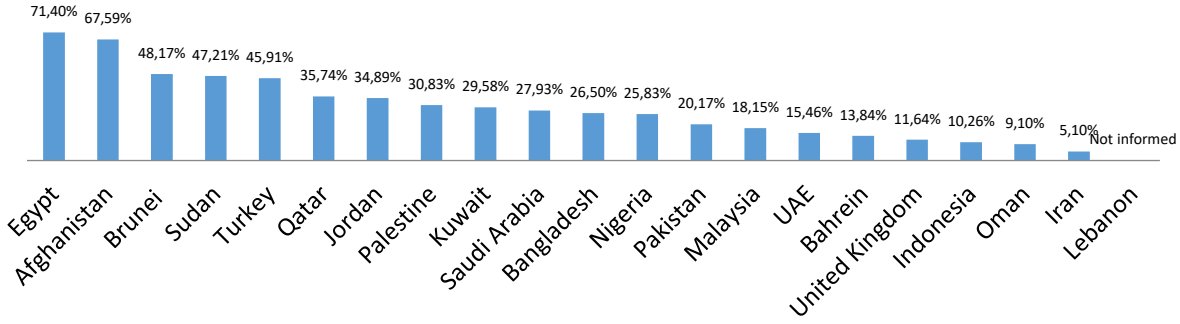

Figure 7 *Liquid assets ratio.*
Source: *Self elaboration based on research data.*

It is worth noting that PSIFIs did not specify which assets were considered to be liquid by Islamic banks when calculating liquidity indicators.

Macroeconomic variables impact liquidity in banks in general, but political and security conditions have a greater impact on that. Such conditions change constantly and are difficult to predict. As Figure 7 shows, countries that have already suffered or are still experiencing political problems and security disturbances had higher liquid assets to total assets ratios in their Islamic banks. Egypt and Afghanistan, respectively, had higher liquidity ratios, indicating low liquidity risk. However, the rate is relatively high in such countries, which highlights an Islamic banks fear to increase investment levels due to the insecurity situation.

Lebanon did not provide information on liquid assets in its Islamic banks. Iran, in turn, showed the lowest rate in the sample (5.10%), indicating a low probability of covering withdrawal risk and confirming, therefore, high liquidity risk in its Islamic banks.

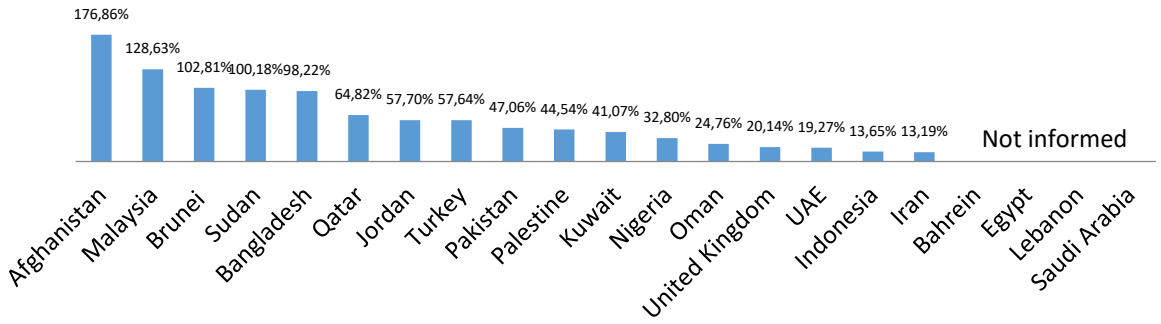

Figure 8 *Liquid assets to short-term liabilities ratio.*
Source: *Self elaboration based on research data.*

Four countries in the sample did not provide information on their ability to meet their short-term obligations (Bahrain, Egypt, Lebanon and Saudi Arabia). As shown in Figure 8, Afghanistan had the highest rate among the countries in the sample, 176.86%, which is normal for a country that generates losses and faces significant difficulties in its investments.

Iran, again, showed the least capacity to meet its short-term obligations among the countries in the sample, with 13.19% of liquid assets to total short-term liabilities, indicating high liquidity risk in its Islamic banks.

5 Conclusion

This work aimed to promote a comparative assessment, by country, of Islamic banks' economic and financial situation . For this purpose, we used a descriptive and documentary analytical approach, through descriptive statistics in figures form.

The analysis results showed that 90% of Islamic financial institutions (IFIs) in the sample countries calculate the capital adequacy ratio (CAR), according to BCBS recommendations, despite the essential differences presented in the CAR calculation method between IFSB and BCBS. In addition, 95% have a CAR greater than 8% (the minimum established by BCBS and IFSB). Thus, 95% of countries have secure financial systems in terms of bank solvency.

In terms of asset quality, the Islamic financial system in Oman showed the best quality in managing its resources, followed by Saudi Arabia, which presented the highest provision to face credit risk and customers default.

Regarding profitability, Sudan's Islamic banks showed the highest return on assets (ROA) and equity (ROE), while Afghanistan is the only one that has suffered losses.

In the liquidity analysis, it was not possible to identify precisely which country has the best liquidity ratio in the short and long term, since more than 60% of the countries did not present enough data. In terms of liquid assets to total assets ratio, and the fulfillment of short-term obligations, the Islamic financial systems of Egypt and Afghanistan, respectively, led with the highest liquidity ratios in the sample, showing the capacity and security to meet their obligations. On the other hand, we noted that Iran had the lowest ratios of liquid assets and compliance with short-term obligations, indicating a high liquidity risk, with slight difference from Indonesia, which came second.

With these results, it was possible to achieve the objective and highlight the economic and financial situation of Islamic banks at country level, since that information was not obtained directly from the banks' financial statements, but from the database (PSIFIs), which presents a consolidated position by country. However, it is noteworthy that there was a data unavailability for some indicators in certain countries and a lack of disclosure related to the calculation method for some indicators, which prevented further analysis.

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