

ROLE OF AAOIFI STANDARDS IN THE RESILIENCE OF ISLAMIC BANKS DURING THE LAST CRISIS

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ABSTRACT:

Since the 70s, Islamic finance has gained importance in the world's major financial centers. It has attracted more attention at the outbreak of the 2009 crisis. Unlike conventional financial system that collapsed, the Islamic financial system has shown strength. The explanation of the causes of the outbreak of the crisis in 2009 has identified shortcomings of conventional accounting regulation. Therefore, this study aims to analyze the role of the Islamic accounting regulation in the resilience of Islamic banks during the 2009 crisis. Indexes of compliance to AAOIFI¹ standards have been built and tested by the method of regression panel data to analyze their impact on the profitability of Islamic banks in Malaysia and Bahrain for the period 2006-2010. The study shows that the compliance of Islamic banks to AAOIFI standards affects the variation of ROA and ROE of these banks, which match our predictions.

Keywords: Islamic Banks, financial crisis, profitability, AAOIFI, index of compliance.

INTRODUCTION

For decades, the economy has experienced a period of rise, in almost all countries. But the outbreak of the worst crisis since the Second World War, the 2009 crisis, has questioned reasons for the sudden drop of the economy in general and the financial sector particularly. The explanation of causes of the outbreak of the 2009 crisis has identified the shortcomings of the accounting regulations. The introduction of IFRS has coincided with the appearance of a large financial volatility, which we observe today the most remarkable events. Many economists have criticized the use of the concept of fair value: the first review which corresponds to pro-cyclical elements introduced. The second review of the "illiquidity" of markets. This crisis although it brings up failures of the conventional financial system, it reinforces the reputation and the credibility of Islamic financial system. At the Paris Conference on Islamic Finance, in 2009,

¹ Accounting and Auditing Organisation for Islamic Financial Institutions

the Governor of the Bank of France, Christian Noyer, argues that Islamic finance could be an interesting solution to conventional finance issues and he qualifies it as "an interesting alternative."

Islamic banks are defined by their commitment to adapt the provisions of the Sharia. Their main sources are the *Qur'an* (the holy book) and *Sunnah* (words and actions of the Prophet). They are reinforced by secondary sources: comments, interpretations and new laws to respond to changing circumstances produced by Islamic jurists, namely *Ijmaa* (consensus of Islamic jurists), the *qiyass* (analogy and necessary) and *Ijtihad* (rational intellectual effort). It is on the basis of these sources that are melted principles of Islamic financial system. Its principles are organized around five obligations: the prohibition of interest, the prohibition of uncertainty of transactions, the prohibition of speculation, the backing funding for tangible assets in the real economy, the profit sharing and losses and the prohibition of illegal investments. The growth of Islamic finance is provided by the establishment of regulatory bodies which is the case of the AAOIFI. The organization products accounting, auditing and sharia standards for Islamic financial institutions and financial instruments. The organization has also an important role in the harmonization of the accounting practices.

The AAOIFI has established eighty standards: twenty-six accounting standards, five auditing standards, seven governance standards (relating to Sharia committee), two ethic codes and forty sharia standards. As an international independent organization, the AAOIFI is supported by institutional members (200 members from 45 countries), including central banks, Islamic financial institutions, international Islamic banking, and other industry participants and worldwide finance.

Given the importance of this organization and that many financial institutions preparing their annual reports according to its standards, we construct indexes of compliance with a sample of its standards and then we test the impact of changes in compliance on the variation in the profitability of Islamic banks during the 2009 crisis.

Our research is divided into two parts. The first part is devoted to study the impact of the financial crisis on the profitability of Islamic banks as treated by previous studies and to the construction of compliance indexes. The second part is devoted to the development of the methodology of the empirical study and to the presentation of the results of this study.

FINANCIAL CRISIS OF 2009 AND PROFITABILITY OF ISLAMIC BANKS

Hasan and Dridi (2010)² have studied the impact of the 2009 crisis on the performance of Islamic and conventional banks. They found that Islamic banks show a better performance in early stages of the crisis (between 2007 and 2008). They also found that Islamic banks contribute to economic and financial stability during the crisis, since the growth in loans and assets is at least two times higher than that of convertible bonds. However, as the crisis moved to the real economy, in 2009, the profitability of Islamic Banks fell sharply compared to

² Hasan M. and Dridi J. (2010), "The Effects of the global crisis on Islamic and Conventional banks: A comparative study." Emerald Management Reviews. Finance & Development: Vol :47, N°4, p. 46-47.

conventional banks. Profitability is one of the most used to analyze bank performance index.

To measure the impact of the 2009 crisis on the performance including profitability of Islamic banks, several researchers have made use of ROA and ROE measurements.

Based on a sample of 64 Islamic banks and 343 conventional banks, Bourkhis and Nabi (2013)³ have used two approaches; parametric and non-parametric. By the latter and to compare the profitability of the two types of banks, the authors used ROA and ROE. They conclude that before the crisis, Islamic banks were more profitable than conventional banks. Then the onset of the crisis (between 2007 and 2008), only large Islamic banks were more profitable than large conventional banks. However, in 2009, Islamic banks have become less profitable, with the spread of the crisis on the entire economy.

The study of Miniaoui and Gohou (2011)⁴ also focuses on measuring the performance of banks during the 2009 crisis. They assess the performance gap between conventional and Islamic banking. Authors choose to use the balance sheet data of 37 banks from United Arab Emirates (UAE). Therefore, they used both ROA and ROE measures. Miniaoui and Gohou (2011) found that, overall, Islamic banks in the UAE were greatly affected by the crisis.

Zarrouk (2012)⁵ chose to investigate empirically the impact of the 2009 crisis on the performance of a sample of 20 Islamic banks in the GCC. To meet the objective of the study, Zarrouk (2012) uses an inter-temporal analysis to test the impact of the crisis on the performance of Islamic banks (between before and after the onset of the crisis). The author concludes that the financial crisis negatively affects the performance of Islamic banks: A recovery in performance in 2008 due to the factors of the business model of Islamic banks, significant decrease in the performance of Islamic banks in 2009 reduced profitability of Islamic banks (Kuwait, Bahrain and UAE).

INDEX OF COMPLIANCE TO THE AAOIFI STANDARDS

Islamic banks must comply with accounting standards of Sharia to publish reliable and useful information to stakeholders. Compliance with AAOIFI standards has been subject of little previous researches. We note the initiative of Vinnicombe (2010)⁶. By constructing an index of compliance with Sharia, the author tries to measure differences in application of AAOIFI standards (accounting and governance) among Islamic banks in Bahrain. We then refer to the methodology of the study to conduct ours: it comes to distribute a score to each of the items. For those clearly disclosed the score will be 1, those disclosed with ambiguity will have a score of 0.5 and for undisclosed items, the score will

³ Bourkhis K. et Nabi M.S. (2013), "Islamic and conventional banks' soundness during the 2007–2008 financial crisis". *Review of Financial Economics*: Vol : 22, N°2, p. 68-77.

⁴ Miniaoui H. and Gohou G. (2011), "Did The Islamic Banking Perform Better During The Financial Crisis? Evidence from the UAE". *International conference in management, economy and social sciences*. Bangkok : 2011, p. 630-635.

⁵ Zarrouk H. (2012), "Does Financial Crisis Reduce Islamic Banks' Performance? Evidence from GCC Countries". *Journal of Islamic Finance and Business Research*: Volume 1, N°1, p. 1-16.

⁶ Vinnicombe T. (2010), "AAOIFI reporting standards, measuring compliance". *Advances in Accounting, incorporating Advances in International Accounting*. Elsevier: N°26, p. 55-65.

be 0. For each category we give an index weight of the total index. Finally we calculate an index for each category of conformity (per bank and per year).

1. The compliance index on the standard of sharia supervisory board

The Sharia Supervisory Board (SSB) is a board that ensures the convergence of Islamic banks activities with the values of Sharia (represented by AAOIFI standards). The SSB is a very important regulatory body given the lack of competence of other bodies on Sharia.

Rapiah et al. (2010)⁷ attempt to examine the disclosure practices of sustainability information in Malaysian listed sharia compliant companies. To meet the objective of their research, Rapiah et al. (2010) use the index Islam-city disclosure. This index includes the index of compliance with Sharia, index of corporate governance and socio-environmental index. Data are collected by referring to the information published on the websites of companies (and not published in recent annual reports). The index of compliance with Sharia includes, among other instruments for measuring compliance with the standard of Sharia Supervisory Board. The items are then: the appointment of the Board, the Board's report, the identification of the actual activity carried out and the bottom board members (Name, education background, experience). Rapiah et al. (2010) conclude that the lower compliance index is that relating to the Sharia Supervisory Board. In addition, none of the companies made a single disclosure on the Shari'ah Supervisory Board category. According to the authors, companies comply with, Malaysia recently identified. This explains the low compliance with the standards of Sharia.

The index of conformity related to the study of Vinnicombe (2010) includes the indicator of compliance with the standard for the Sharia Supervisory Board: GSIFI No.1⁸. The indicator consists on the following items; the appointment of the Board, the composition of the Board, the report of the Board in the financial statements and the report (which should contain the title, address, opening paragraph, scope paragraph opinion opening paragraph, date and signature). By analyzing the annual reports of Bahraini Islamic banks, Vinnicombe (2010) concluded a high level indicator of compliance with standards for Sharia Supervisory Board. The Board reports are often prepared in accordance with the requirements of the standard of governance (GSIFI 1). The high level of compliance in this category is, according to the author, an important finding given the importance of individual counseling to ensure compliance with Sharia by Islamic financial institutions.

In order to explain the variation in Islamic banks profitability, during the 2009 crisis, we propose that the level of compliance with AAOIFI standards is crucial. The first hypothesis is next:

- ❖ ***H1.a. Compliance Index of the standard related to the supervisor sharia board has an effect on ROA of the islamic banks during the 2009 crisis.***
- ❖ ***H1.a. Compliance Index of the standard related to the supervisor sharia board has an effect on ROE of the islamic banks during the 2009 crisis.***

⁷ Rapiah M. et al. (2010), "Sustainability Disclosure among Malaysian Shari'ah-Compliant listed Companies: Web Reporting". Issues in Social and Environmental Accounting: Vol :3.N°2.p. 160-179.

⁸ Governance Standard for Islamic Financial Institutions

2. The compliance index on the standard of "murabaha" contract

The murabaha contract is related to a sale of goods. It's an agreement on the benefit for the cost. murabaha sale is of two types. In the first type, the Islamic bank purchases the goods and makes them available for sale without any prior promise from a customer to buy it. In the second type, the Islamic bank purchases the goods ordered by a customer from a third party and then sells these products to the same customer. In this case, the Islamic bank purchases the goods only after a customer has made a promise to purchase. AAOIFI (2013)

The murabaha Contracts are addressed by FAS n°2. This standard covers the valuation of the assets object of the contract. The recognition of an impairment loss of these assets is also covered. In addition, the standard provides guidance for the bookkeeping of profits and the disclosure by the buyer (ie the bank). Finally, FAS n°2 gives regulates procedures for non-compliance of payments and insolvency.

To test the compliance of Islamic banks in Bahrain, the standard for murabaha, Vinnicombe (2010) chooses to test a set of elements of measures related to the FAS n°2. Items are: presentation, recognition of profit (short term and long term) and the valuation of assets (acquisition and after the acquisition)

This category measures the compliance of Islamic banks in Bahrain with the requirements of AAOIFI statement on the murabaha. Compliance in this category is high. The author explains that level of compliance by the relatively small measuring elements and simplicity of the contract. The murabaha contract is pretty simple itself mainly involving the purchase of a single item through repayments scheduled over a designated period.

Sarea (2012)⁹ chooses to develop a survey to measure the compliance of Bahraini Islamic banks to AAOIFI accounting standards. Indeed, this research aims to assess the perception of accountants about the level of compliance and acceptance of Islamic banks to AAOIFI accounting standards. He measures the perception of accounting compliance with the FAS n°2. The author finds out that this standard is more understandable and acceptable to be implemented; Because of this, this operation is in line with the provisions of the Sharia as adopted by Islamic banks.

The second hypothesis is the next:

- ❖ ***H2.a. Compliance Index of the standard related to muabaha has an effect on ROA of the islamic banks during the 2009 crisis.***
- ❖ ***H2.b. Compliance Index of the standard related to the zakat has an effect on ROE of the islamic banks during the 2009 crisis.***

⁹ Sarea A.M. (2012), "The Level of Compliance with AAOIFI Accounting Standards: Evidence from Bahrain". International Management Review: Vol :8, N°2, p. 27-32.

3. Compliance index on the standard of "mudharaba" contract

The mudharaba contract is a partnership between capital and labor. It can be made between investment account holders as providers of funds and Islamic bank as mudhareb. By mudharaba contract, Islamic bank announces its willingness to accept funds from holders of the investment amount. Profit sharing is agreed between the two parties. Losses are assumed by the donor, unless they are due to a fault, negligence or violate of any conditions agreed by the Islamic bank. In such cases, losses are assumed by the latter. The mudharaba contract is stated by FAS n°3.

To test the compliance of Islamic banks in Bahrain to FAS n°3, Vinnicombe (2010) chooses to test a set of elements of measures. These elements are the conclusion of the study of the related standard. The measuring items are: the presentation of the restricted contract, the presentation of the unrestricted contract, changing the account result and the bookkeeping note policy adopted for the consideration of the result. The compliance index in this category is low. This was not surprising. The mudharaba funding is, as stated, quite complex. Consequently, the AAOIFI standards require compliance with relatively detailed information about the contract. This includes information about the bank fees as mudhareb, the degree of confusion between mudharaba funds with funds from other non-bank sources as well as the more usual requirement relating to the assessment and recognition. There is a high degree of non-compliance on the part of banks in the sample compared to the more detailed questions.

Sarea (2012) chooses to develop a survey to measure the compliance of Bahraini Islamic banks to AAOIFI accounting standards. In particular, this research aims to assess the perceptions of accounting for the level of compliance of Islamic banks to AAOIFI accounting standards. It then measures the perception of accounting compliance with the standard contract mudharaba. Sarea is that these standards are more understandable and acceptable to be implemented; Because of this, these operations are in line with the provisions of the Sharia as adopted by Islamic banks.

The third hypothesis is the next:

- ❖ ***H3.a. Compliance Index of the standard related to the mudharaba has an effect on ROA of the islamic banks during the 2009 crisis.***
- ❖ ***H3.b. Compliance Index of the standard related to the mudharaba an effect on ROE of the islamic banks during the 2009 crisis.***

4. The compliance index on zakat standard

The AAOIFI identifies zakat as one of the areas that should be developed by financial institutions. As zakat is one of the pillars of Islam, the establishment of standard around this pillar is considered vital. It would help Islamic financial institutions to communicate relevant information relating to zakat in their financial reports. It would also help to reduce the differences in the methods used by Islamic financial institutions. Thus, it is expected that the standardization of the methods will provide useful information to users of financial statements. On the basis of preliminary studies conducted by appointed consultants, the AAOIFI specifies four conditions that require the payment of zakat on assets. It is the

unhindered possession, the growth in real terms or via estimation, the achieving *nissab*¹⁰ and finally the adoption of *Hawl*¹¹.

Sarea (2012) measures the perception of accountants to the compliance of Malaysian Islamic banks with the AAOIFI standards, including FAS n°9 (standard on zakat). The tests indicate a relatively low average of 2.46 and 2.38. The results show that the average scores of all respondents are relatively low. The reason, according to Sarea (2012) may be due to religious needs.

The study of Vinnicombe (2010) is in line with these results. The results shows a level of compliance, relatively low to the FAS n°9. According to Vinnicombe, the measurement items includes the method of determining basic zakat, disclosure if the bank pays the zakat for investors / shareholders, calculating zakat required by shareholders and the disclosure of compliance with FAS n°1. This category measures the compliance of Islamic banks in Bahrain to the reporting requirements of AAOIFI on zakat. Compliance in this category is surprisingly low for the majority of the sample; including wholesale banks that they are not obliged to pay zakat for their shareholders. The AAOIFI standards require more detail. In some cases, the wording of the relevant notes to the financial statements which suggesting that more information is available elsewhere. (Vinnicombe, 2010)

The fourth hypothesis is the next:

- ❖ *H4.a. Compliance Index of the standard related to the zakat has an effect on ROA of the islamic banks during the 2009 crisis.*
- ❖ *H4.b. Compliance Index of the standard related to the zakat has an effect on ROE of the islamic banks during the 2009 crisis.*

DEVELOPMENT OF THE METHODOLOGY OF THE EMPIRICAL STUDY

I. Sample and context

Our study is conducted in two countries; Bahrain and Malaysia. Malaysia is one of the 8 countries that their national standards are based on AAOIFI standards. It has an Islamic banking law since 1982. It is the third place among the top 25 active countries Sharia compliant. Regarding Bahrain, the country has 27 Islamic banks managing \$ 25.8 billion of assets. The country is considered as the capital of Islamic finance, given the existence of the head of the AAOIFI (other than the two organizations: the IIFM and the IIRA). It adopts the provisions mandating AAOIFI among its jurisdictions. Bahrain is in 6th place among the top 25 sharia-compliant assets countries. The sample for this study consists of 26 Islamic banks that publish their financial statements on their websites. The study period runs from 2006 to 2010. As we study the effect of the 2009 crisis on Islamic banks, i.e. we would like to see if there were differences in their profitability's. This argues the choice of ranging the test period. In fact, it

¹⁰ Level of wealth from which the person is obliged to pay zakat.

¹¹ Full lunar year

seems reasonable to conduct the study in the two periods: 2006-2008 and 2009-2010.

2. Identification and measure of variables

View the complexity of the Islamic financial system, we retain only the most commonly used the measures of profitability. Similarly, given the lack of literature that addresses the compliance of Islamic banks to AAOIFI standards, we sum limited to the use of evidence of compliance initiative Vinnicombe (2010).

The profitability of Islamic banks is then divided into financial profitability as measured by ROE and economic profitability as measured by ROA. Compliance with AAOIFI standards indices are then related to the Sharia Supervisory Board, the murabaha contract, the contract moudharaba and zakat.

2.1 Dependent variables

According to Olson and zoubi (2011)¹², the profitability can be defined as the ability of a company to make a profit over time. The two accounting measures of profitability of the most common banks return on assets (ROA), which is defined as net income divided by total assets and return on equity (ROE), which is net income divided by own capital (Van Horen, 2007; Ben Naceur and Omran, 2011). The ROA essentially depends on the policy of the bank and uncontrollable factors related to the economy (as the case of the crisis) and regulations (such as AAOIFI standards). By cons, ROE reflects the manner in which the bank manages funds of shareholders and it is affected by the ROA, which leads banks to increase return on capital at a competitive level.

According to the same authors, the most common banking performance metrics are return on assets (ROA), which is defined as net income divided by total assets and return on equity (ROE), which is the net income divided by average shareholders' equity. The authors also give the example of previous studies, namely Van Horen (2007), Ben Naceur and Omran (2011) who used the choice of these variables.

Similarly, Miniaoui and Gohou (2011) argue that using annual reports, virtually all studies measuring the performance of banks, ROA and ROE use as determinants of bank profitability.

¹² Olson D. and Zoubi T.A. (2008), "Using accounting ratios to distinguish between Islamic and conventional banks in the GCC region". The International Journal of Accounting. Elsevier: N°43, p. 45-65.

Table 1. Measures of profitability

Variables	Measure	Authors	Formula
economic profitability	ROA	Olson & Zoubi (2011) ElMosai & Boutti (2012)	Net income divided by total assets and return on equity
financial profitability	ROE	Olson & Zoubi (2011) ElMosai & Boutti (2012)	Net income divided by own capital

2.2 Independent variables

a) Identification and measure

For the construction of compliance indices, we refer to the study of Vinnicombe (2010). The methodology of the study follows the approach used by Buzby and Falk (1979), Inchausti (1997) and Maali et al. (2006) (among others). It is to apportion the scores for each measurement item. Clearly disclosed elements will have a score of 1, those disclosed with ambiguity will have a score of 0.5. Undisclosed elements will have a score of 0.

The following table shows the different sensor elements for each compliance index. We refer to the work of Vinnicombe (2010) for the construction of the compliance indicators. According to this author, the measuring elements tend to reflect the detail required in the AAOIFI standards with respect to identification of compliance.

Table 2. Measures of Compliance items

Index compliance	Items	Measure
Sharia Supervisory Board	<ul style="list-style-type: none"> - Appointment of SSB - Composition of the SSB -SSB Report published with the financial statements, which must contain : <ul style="list-style-type: none"> - Title. - Adress. - Opening paragraph. - Scope paragraph. - Opinion paragraph. - Date - Signature 	1 : clearly disclosed 0.5 : ambiguously disclosed 0 : undisclosed
Murabaha	<ul style="list-style-type: none"> - Presentation. Profit recognition : <ul style="list-style-type: none"> - Short-term. - Long-term. Asset valuation : <ul style="list-style-type: none"> - At acquisition. - After acquisition. 	1 : clearly disclosed 0.5 : ambiguously disclosed 0 : undisclosed

Mudharaba	- Presentation : - Restricted - Unrestricted - Change to profit (loss) - Note on the accounting policy adopted by the bank in recognizing profit (loss)	1 : clearly disclosed 0.5 : ambiguously disclosed 0 : undisclosed
Zakat	- Method used to determine zakat base. - Disclosure as to whether the bank pays zakat on behalf of investors/shareholders - Calculation of zakat required from shareholders	1 : clearly disclosed 0.5 : ambiguously disclosed 0 : undisclosed

b) Compliance indexes

The following table presents the components of measuring weight of each category in total selected items. For each category, we calculate the scores. These scores depend on the existence of each element in the bank's annual report.

Table 3. Weight of compliance items by category

Category	Items	Weight (Wi)
SSB	10	45.45
Murabaha	5	22.72
Mudharaba	4	18.18
Zakat	3	13.65
Total	22	100

From these weights, we calculate the total annual compliance ratios respectively for Islamic banks in Bahrain and Islamic banks in Malaysia; bank by bank and year by year.

We determined the total index (IT) compliance for each bank for each year of study. In the following, we determine the weight of each category relative to each total compliance index. By multiplying this weight by the total scores, we will have a compliance index for each category and each bank and year.

- Calculating the weight of each category in the total index.

Weight of each category in the total index: $Wijt = ITijt \times Wi / 100$; i: category, j: bank, t: year.

- Compliance index calculation for each category.

Compliance Index by category: $Wijt \times TSijt$; i: category, j: bank, t: year; TS: total of scores.

These calculations are done for each sample bank, during the years of study. We will have 520 indices compliance (520 banks x 26 = 5 years x 4 classes of index).

3. Specification of empirical models

From the above, we have specified the various independent and dependent variables and their measurement indicators. We shall, in what follows, define the two empirical models of our study.

Our first model aims to analyze changes in the economic profitability of Islamic banks during the financial crisis of 2007, as a result of the conformity of these banks to AAOIFI standards. Thus, this model is fitted with the hypothesis of ROA with 4 indices of compliance with AAOIFI standards. The model is as following:

$$ROA_{it} = a_0 + a_1 SSB_{it} + a_2 Mr_{it} + a_3 Md_{it} + a_4 Z_{it}^{13}$$

Our second model aims to explain the differences in the financial profitability of Islamic banks during the financial crisis of 2009, the effect of the conformity of these banks to AAOIFI standards. Thus, this model is fitted assuming ROE with 4 indices of compliance with AAOIFI standards. The model is as following:

$$ROE_{it} = a_0 + a_1 SSB_{it} + a_2 Mr_{it} + a_3 Md_{it} + a_4 Z_{it}$$

ANALYSIS OF EMPIRICAL RESULTS OF THE STUDY

Our results, based on means comparison of the different variables, as shown in the table below, demonstrate first that there are variations in the profitability of Islamic banks (measured by ROA and ROE), during the crisis of 2009. This confirms the results of earlier studies. Islamic banks have been affected by the 2009 crisis; profitability has seriously declined since 2009.

Table 4. Statistics for comparison of means (ROA/ROE)

		Mean	N	Standard-deviation	Standard error
Paire	ROA (%)	1.6579	130	9.04613	0.79340
1	ROE (%)	7.0219	130	35.05804	3.07479

The results show, secondly, as shown in the table 5, that there are differences in compliance with AAOIFI standards. We found, on the one hand, a high level of compliance to the SSB and murabaha contract standards. On the other hand, we found a low level of compliance to the mudharaba contract and zakat standards. These results confirm also the results of previous studies.

Indeed, the differences in compliance, is due to two reasons; the first reason is the complexity of some standards and the simplicity of others. The second reason is the level of experience of and practice of the standard which is explained by the experience of the proposed contract for this standard; it is the case of low compliance to the mudharaba contract standard.

¹³ SSB: The compliance index on the standard of Sharia Supervisory Board, Mr: The compliance index on the standard of "murabaha" contract, Md: Compliance index on the standard of "Mudharaba" contract, Z: The compliance index on zakat standard.

Table 5. Statistical comparison of average of compliance index

Compliance index	N	Mean	Standard error
SSB	130	1.918536	0.07156800
Mr	130	0.42247490	0.02812601
Md	130	0.24276817	0.01446874
Z	130	0.20698892	0.00964668

SSB: The compliance index on the standard of Sharia Supervisory Board, Mr: The compliance index on the standard of "murabaha" contract, Md: Compliance index on the standard of "Mudharaba" contract, Z: The compliance index on zakat standard.

Table 7. Comparison of results on intervals of years (1st model)

	Non-standardized coefficients		Standardized coefficients	T	Signification	Confidence interval 95% de B	
2006-2008							
	B	Standard error	Beta			Inferior terminal	Superior terminal
(constantes)	-0.839	2.255		-0.372	0.711	-5.334	3.655
SSB	2.963	1.091	0.352	2.716	0.008*	0.789	5.138
Mr	-1.560	3.009	-0.067	-0.519	0.606	-7.556	4.436
Md	9.256	5.433	0.225	1.704	0.093	-1.572	20.085
Z	-9.934	6.893	-0.149	-1.441	0.154	-23.671	3.803

Based on linear regression panel data of 26 Islamic banks in Bahrain and Malaysia, our results generally shows that the compliance of Islamic banks to AAOIFI standards affects the ROA and ROE variation of these banks, consistent with our predictions. In particular, the compliance index of the SSB has a positive and significant effect on economic profitability (measured by ROA) of Islamic banks during the 2009 crisis.

$$\text{ROA}_{[2006, 2008]} = 0,352 \text{ Indice1}_{[2006, 2008]}$$

H1a. validated. Compliance Index of the standard related to the supervisor sharia board has a positive and significant effect on ROA of the islamic banks before the 2009 crisis.

Table 8. Comparison of results on intervals of years (2nd model)

	Non-standardized coefficients		Standardized coefficient	T	Significance	Confidence interval 95% de B	
	B	Standard error	Beta			Inferior terminal	Superior terminal
2006-2008							
(constant)	4.280	4.379		0.97	0.332	-4.448	13.008
	-	2.119	-0.033	7	0.812	-4.727	3.718
SSB	0.505	5.842	-0.121	-	0.382	-	6.500
Md	-	10.551	0.450	0.23	0.002*	16.78	54.965
Mr	5.143	13.385	0.195	8	0.080	7	50.450
Z	33.93			-		12.91	
	8			0.88		0	
	23.77			0		-2.903	
	3			3.21			
				7			
				1.77			
				6			
2009-2010							
(constant)	66.91	27.262		2.45	0.018	12.06	121.75
	1	11.227	-0.346	4	0.035*	8	4
	-	23.201	-0.185	-	0.222	-	-1.808
SSB	24.39	50.044	0.016	2.17	0.912	46.98	17.937
Md	4	62.520	-0.094	3	0.493	0	106.22
Mr	-			-		-	6
Z	28.73			1.23		75.41	82.603
	7			9		0	
	5.551			0.11		-	
	-			1		95.12	
	43.17			-		4	
	2			0.69		-	
				1		168.9	
						47	

The results also show that the compliance index to murabaha and to zakat have no effect on the change in ROA and ROE of Islamic banks during the 2009 crisis and for their stability during this period. The slight variation of these indexes does not coincide with the high volatility of ROA and ROE of Islamic banks.

$$\text{ROE}_{[2006, 2008]} = 0,450 \text{ Md}_{[2006, 2008]}$$

H3b. validated. Compliance Index of to the standard related to the contract of mudharaba has a positive and significant effect on ROE of the islamic banks before the 2009 crisis.

The compliance index relating to the mudharaba contract has a positive and significant effect on the change in ROA of Islamic banks during the financial crisis. This effect is due to the volatility of compliance of Islamic banks to the FAS n°2 due to the complexity of the requirements of the standard. The "positive" effect calls into question the small use of this type of contract (relative to the murabaha contract) which plays a role in the profitability of Islamic banks but also in promoting the economy in general.

But it has a negative effect and significant change in the financial profitability (measured by ROE).

$$\text{ROE}_{[2009, 2010]} = -0,346 \text{ SSB}_{[2009, 2010]}$$

H1b. validated. Compliance Index of the standard related to the supervisor sharia board has a negative and significant effect on ROE of the islamic banks during the 2009 crisis.

According to the empirical results, we conclude that the compliance of Islamic banks to the standard for the SSB (GSIFI n°1) affects the most the change in the economic profitability of these banks during 2009-2010. The compliance of Islamic banks to GSIFI n°1 standard has risen sharply during the second stage of the crisis (2009-2010). This raise was negatively correlated with the fall of the financial profitability of these banks during the same period. Hasan and Dridi (2010) and Bourkhis and Nabi (2013) showed that the profitability of Islamic banks has fallen sharply from 2009. Our empirical results confirm these conclusions.

From these findings, we recall the importance of the existence of sharia committee within the Islamic financial institutions, including Islamic banks. This committee ensures precisely the fulfillment of these banks to the Sharia standards.

By following the provisions of this committee Islamic banking give an image of reliability to its customers and investors. Furthermore it allows publishing the real results of the bank. Therefore, compliance with the standard of Sharia Supervisory Board has reflected the real situation of the bank during the worst 2009 crisis.

On the other hand, the compliance of Islamic banks with the accounting standard related to the mudharaba contract affects the change in their economic profitability during 2006-2008. Compliance of Islamic banks with the accounting standard FAS n°2 felled dramatically during the period of the study. This fall can be explained by the complexity of the requirements of the standard. The decrease in compliance coincides with the birth so effective for the 2009 crisis on the financial profitability of Islamic banks.

Since the effect is positive, this leads us to advise that, unless the Islamic bank shall apply the accounting provisions in the mudharaba contract, unless it displays good revenue on capital. Thus, it appears the importance of this contract yet with a relatively low compliance with the murabaha contract, represents an application of the principle of sharing profits and losses (one of the fundamental

principles of Islamic finance). In this context, the first advocates of Islamic finance, including Mohammad Siddiqi Nejatullah declare often disappointed by the fact that Islamic banks provide very little funding type mudharaba, focusing instead on trade finance in the short term (murabaha), which is a mere reproduction of the activities of conventional banks. Wilson (2011)¹⁴

The compliance index with the accounting standard of murabaha as well as the zakat had no effect on the variation of ROE of Islamic banks during the study period. Indeed, evidence of compliance was not too varied during the study period. The "murabaha" is the most widely financial instrument used by Islamic banks. Therefore, the compliance of the latter with respect to the accounting standard FAS n°1 is quasi-stable and may not reflect the large variation in bank profitability especially in such a volatile and turbulent period (crisis). In a more general way, the slight variation of these indexes (murabaha and zakat) does not coincide with the significant variation (recession or even depression) of the ROE.

CONCLUSION

The strength of Islamic banks in facing the severe crisis in 2009, as we show in our study, highlights the strengths of this Islamic Finance and its dispositions. In other words, we seek to explain the reasons for this potency.

In our study, we chose to test the role of AAOIFI standards in the profitability deviation of Islamic banks during the 2009 crisis. We analyzed the profitability of the banks, by comparing the average ROA (measure of economic profitability) and ROE (measurement of financial return) during 2006-2010. This period allowed us to see the change in profitability of Islamic banks, during and before the outbreak of the 2009 crisis. Subsequently, we analyzed the compliance of Islamic banks to AAOIFI standards during the study period by comparing the four compliance indexes. This comparison allowed us to validate the results of the previous studies; a high level of compliance to the murabaha and SSB standards and a low level of compliance to the mudharaba and zakat. Finally, we used the method of multiple linear regressions to test if the compliance with AAOIFI standards has an effect on the change in ROA and ROE of Islamic banks. Thus we concluded the existence of the effect of compliance of Islamic banks AAOIFI standards on profitability displayed in their financial reports.

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