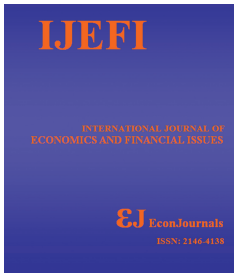


International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2019, 9(2), 202-218.

Ownership Structure and Islamic Banks Performance: An Empirical and Multiregional Tests Before, During and after the Last Global Financial Crisis

Cedrix Ngandop Djeutcheu[1,2]*

[1]Faculty of Economic Sciences and Management of Warrocqué, Umons, Belgium, [2]Besançon University, France.
*Email: Cedrix.DJEUTCHEUNGANDOP@student.umons.ac.be

Received: 12 November 2018 **Accepted:** 22 February 2019 **DOI:** https://doi.org/10.32479/ijefi.7365

ABSTRACT

This paper investigates the effects of ownership structure on Islamic Banks (IBs)' performance in many regions (Middle East and North Africa, Europe, and others Asian countries), using agency theory as an analytical framework. The study period covers 10 consecutive years (2006-2015), we use return on average asset, return on average equity (ROAE), and net income margin (NIM) as measures of performance. Ownership structure was operationalized in terms of ownership concentration (percentage of share held by the top shareholder) and ownership identity (identity of the top shareholder). Results suggest almost no relationship between ownership concentration and IBs' performance, before, during and after 2008/2009 financial crisis. Ownership identity may be linked to IBs' performance, results suggest a positive and statistically significant relationship between family-owned IBs and performance, controlled IBs and managerial IBs as well.

Keywords: Ownership Concentration, Corporate Governance, Islamic Banks Performance
JEL Classifications: G21, G32, G01

1. INTRODUCTION

Many management problems have been associated with the dysfunction of the governance system, ranging from simple internal conflicts (Enron, WorldCom) to large financial scandals. The literature on management may sometimes offers us relevant tools to manage or evacuate management risks. So there is might be a link between the governance system of financial institutions and the management problems they encounter (Pathan and Faff, 2013).

On other hand, besides "conventional" finance where corporate governance has known and constantly experiencing improvements, "Islamic" finance has been developing for more than forty years (Chapra and Ahmed, 2002). Its statistics are becoming increasingly relevant, representing in terms of assets, almost 1% of total global financial assets in the first half of 2014 according to the IMF's Juan Solé study (2007), and more than 300 Islamic finance institutions in 51 countries. The latest report by Ernst and Young (2016) on the issue shows a 17% change in Islamic banking assets over 2009-2013 period. All this explains the will and above all the necessity to understand this concept of making finance, especially since the argument in general that underlies its performance is the respect of the principle of ''Sharia compliant'' and sharia governance. Researchers such as Iqbal and Mirakhor (2004), Warde (2000), Matoussi and Grassa (2012) or even Chapra and Ahmed (2002) found some links between these two aspects of Islamic banks (IBs) activity (governance and performance).

In terms of governance and performance in general, the conclusions of the empirical studies are rather divided, Charreaux (1991), shows a nuanced influence that may exist between the ownership structure and the performance of French companies

(96 listed companies in a sample of 106 companies). His work is based on two main theories, Lawriwsky (1984) which is rather in favour of the fact that the structure of ownership and decision (Managerial) would have an influence on the performance and, on the other hand the organizational theory, Fama (1980), Fama and Jensen, (1983a and b), which makes it possible to elaborate the different types of organization in respect of ownership and decision-making. Godard and Schatt (2000) also found that, corporate governance mechanisms may influence performance and demonstrate that the composition of the board largely determines its effectiveness in fulfilling its roles. The relationship between governance mechanisms and performance may be negative as as shown by Hutchinson (2002), who found a shows a negative influence of corporate governance on the value of the firm.

Our objective here will be to better understand the findings of Charreaux (1991) on this issue, and try to check if a transposition can be made in the case of IBs. In fact, the contribution of this work in the banking environment, however, excluded by Charreaux (1991) is to better understand the link that may exist between the ownership structure and the performance of said banks, specifically IBs. It should nevertheless be noted that the ownership structure has an influence on the management of non-bank entities (Charreaux, 1991), since banking institutions have been and remain at the centre of the debate on the 2007/2008 financial crisis, so we have found it judicious to study the link that may exist between this governance mechanism and the banking performance over a period that takes into account the before and after the financial crisis 2007/2008our main contributions can be observed in the following elements:

- The study period, which is ten years (2006-2015), makes possible to evaluate the robustness of the link between the ownership structure and performance: Before, during and after the 2008/2009 financial crisis.
- The influence of certain corporate governance mechanisms on the IBs' performance over the study period. For instance we compute the number of Sharia Supervisory Board' (SSB') member, Board of Directors (BOD') member and also the number of BOD' meeting per year, just to appreciate if they might be linked to IBs' performance.
- The relationship between the ownership structure and the IBs' performance according to geographical position (region).
- Finally our sample integrates African listed conventional banks (CB), and this is very interesting in the context of the comparison between IB versus CB, because the geographical position can also influence the performance.

We apply the technique of generalized least squares (GLS) estimation, which serves to correct the presence of serial correlation and heteroscedacity, it also takes care of endogeneity problem (Zouari and Taktak, 2012).

To cover all those points, the rest of the paper is structured as follows: Section 2 outlines main literatures about ownership structure and performance in both Islamic and conventional finance, this section also take into account the development of our hypotheses. Description of our data and the applied methodology is specified in section 3. We plan to discuss about the empirical results in section 4 and robustness checks in section 5. The conclusion is the last section of this paper (section 6).

2. LITERATURE REVIEW

The literature on this issue, especially in Islamic finance is not sufficiently abundant. Research on ownership structure and its impact on corporate management is increasing nowadays, due sometimes to the necessity of having a good understanding of the link between board of director and board of managers, Berle and Means (1932) were among the first to issue some ideas concerning governance matters that might occur due to the configuration of the firm. The agency theory (Jensen and Meckling, 1976) has been instrumental in bringing about a specific change in this area, by given some ways out for solving conflict of interest and reducing agency' cost. The main difficulty in this issue is to know how to reduce conflict of interest of managers toward shareholders, that's why the way that ownership is structured might influence management behaviour and also the performance. Demsetz (1983) suggest that the separation of ownership and decision leads to a decrease in the levies of the directors and there is no reason to believe that a firm whose capital is wholly owned by its manager is more efficient than a company where the capital is scattered. Today, several systems of government in the company are suggested to resolve the problems of divergence of interests and minimize the costs of Agency associated with conflicts. The structure of Ownership constitutes an important mechanism which may affect the financial performance of the firm. In this framework, the researchers questioned the existence of optimal ownership' structure that maximizes the performance. This structure depends on the way how shareholders are organized to control and mobilized for an optimal decisions taking. It is therefore, necessary to ask the question of which extent the structure of ownership can have an impact on the value of the firm. This question helps several research' studies that have attempted to highlight a clear link and interactive process between the performance of firms and the concentration of capital, on one hand, and the nature of the ownership on the other hand.

Researchers like Srairi (2013) found a negative link between concentration of ownership and risk taking, whereas Madani and Khlif (2010) argued differently, in their work on conventional Tunisian firms they found that: The concentration of ownership has no effect on performance. Adding public enterprises, Ongore (2011) also finds that Ownership concentration and government ownership have significant negative relationships with firm' performance in Kenya, as we can see, conclusions are divergent. For being more specific, we are going to check the link that may exist between the nature of ownership property and performance of firm. Our sample contains, according to the nature of ownership, family-owned firms, public-owned firms, managerial firms and controlled firms. One of the objectives of this study will be to check first of all the link and the significance of relationship between ownership and performance in the IBs. Many conclusions have been made in this area, some found a non-significant link between ownership structure and ROE, but significant link with ROA as measure of performance, with family-owned as best ownership structure for performance (Charreaux, 1991). Charreaux (1991)

reports that, in case of maximization of shareholder value, among the three thesis developed (the thesis of the convergence of interests; the thesis of neutrality and the thesis of entrenchment of managers), the thesis of neutrality (Demsetz, 1983) is the one suggested by his study. Soufeljil et al., (2016) also reported no relationship between the concentration of capital and the performance, measured by the ROA and the ROE, and they also reported a positive relationship between family-owned firms and accounting performance. We will also check if this conclusion really matter on IBs field.

On the other hand, we should be aware of the fact that positive links between corporate performance and ownership structure also exist, means that corporate performance is influenced by ownership structure positively as reported by Asadi and Pahlevan (2016). Through this paper, we'll try to discuss about those different points in order to have IBs point of view.

2.1. SSB Structure and Performance

In Islamic finance, and especially with regard to banks, the relationship between governance and performance is also a cause of divergence. While authors like Bourkhis and Nabib (2013) do not find a real impact related to the difference in the business model on the performance of IB, on the other hand, authors such as Kusuma and Ayumardani (2016), Mollah and Zaman (2015), Beck et al. (2013) found some real differences according to business model, and sometimes justify the fact IB are less cost-effective (Beck et al., 2013) or better performing than CB (Olson and Zoubi, 2016) through their governance' mechanisms. It is important to note that the major organizational difference is undoubtedly the presence of the SSB within IB (Mollah and Zaman, 2015). It is a board that does not exist in the organizational structure of the CB, where as in IB, it allows the development and the control of compliance with Sharia-Compliant rules.

According to Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI') standard (2010), the SSB should be an independent office, with recognized doctors and specialists in Islamic law, Islamic commercial jurisprudence (Fiqh al-Mua'malat)[1], who have good knowledge concerning how Islamic finance institutions work. In the profile of the members of the SSB, there is a wide range of skills. Note that apart from this definition of the AAOIFI, there are several more (Garas and Pierce, 2010), with a common point that resides in the role this body can play within the institutions of Islamic finance. Within these institutions, the SSB is in charge of ensuring the conformity of Sharia transactions, the development of Islamic products, the issuance of jurisprudence and the rules that governing their practice. It must also monitor the procedure and compliance with the rules put in place. To the question what is SSB? It can be said that it's the body in charge of the implementation, control, and management of elements of sharia governance within Islamic finance institutions. The AAOIFI provides in its texts that the SSBs consist of at least 03 members, note that in practice this Number varies from 4 to 7 depending on the activity of the entity in question. Before giving the main generally recognized roles of SSBs, it should be noted that Iran holding more than 40.21% of the Islamic financial assets (first position), has a configuration (SSB) quite different from that which can be observed in other countries where Islamic finance is evolving. In this country (Iran), there is no SSB in the IB, all is centralized in a council of guardian of the central bank of the country, which council used to develop, monitor and control the Bank's corporate governance mechanisms, as all banks practice Islamic finance.

The role of the SSB can be divided into five main areas (Grais and Pellegrini, 2006):

- Certification of financial instruments authorized via the fatwas (ex-ante sharia audit);
- Verification of the compliance of the transactions, with regard to the fatwas issued (ex-post Sharia Audit);
- The calculation and payment of the Zakat[2];
- How to deal with the consequences of operations deemed not to comply with the Sharia;
- Advice on the distribution of income or expenditure between shareholders and owners of investment accounts.

2.2. Hypotheses Development

2.2.1. Ownership concentration and performance

According to Berle and Means (1932), ownership concentration contributes to alleviate agency conflict between shareholders and managers and improves control over firm's operation and management. This theory, known as alignment hypothesis can be explained by the fact that large shareholders' position gives them the ability to collect required information to evaluate director's decisions. This controlling power lead to maximize firm's value and shareholders wealth (Shleifer and Vishny, 1986). So, this controlling power due to ownership concentration is considered as an effective control mechanism over discretionary managerial behaviours that small investors rely heavily on it, and that could help them be aware of real firm's situation.

The link between ownership concentrations and performance has been largely discussed in corporate governance topics (e.g.: Demsetz, 1983; Stančić et al., 2014; Reyna et al., 2012; Soufeljil et al., 2016; Iannotta et al., 2007; Charreaux, 1991; Kuznetsov et al., 2010; Asadi and Pahlevan, 2016; Madani and Khlif, 2010; Ongore, 2011; Khamis et al., 2015; etc.) toward conventional finance view, most of those studies reported no relationship between ownership concentration and performance, by following Demsetz (1983) thesis of neutrality.

In Islamic finance area, concentration ownership has been discussed in some few papers like, Bourkhis and Nabib (2013); Srairi (2013); Asadi and Pahlevan (2016); Khamis et al.(2015); etc., and their findings are sometime different from conventional finance' conclusions on the same topic, for instance when Bourkhis and Nabib (2013) reported a positive association between ownership concentration and performance in countries with low official bank supervision, Khamis et al. (2015) reported that ownership structure have a negative effect with statistical significance on company

1 According to Islamic finance Encyclopedia: Fiqh al-Mua'malat means a branch of Islamic jurisprudence that deals with commercial and business activities in an economy.

2 Alms and charity.

performance from Bahrain, Zouari and Taktak (2012) found that there is no obvious correlation between ownership structure and IB performance, so as we can see according to the observation and methodology, conclusion may sometime be influenced, so further researches are therefore required to settle this issue and try to explain this findings conflicts. In this paper, we intend to check out Charreaux (1991) conclusion, our first hypothesis is linked to his first conclusion about ownership concentration and performance (thesis of neutrality of ownership structure on performance). That's why our first hypothesis is formulated by this way.

H_1: There is no relationship between ownership concentration and IB performance.

2.2.2. Nature of ownership structure and performance

By "nature of ownership," we are talking about the major profile of ownership in the firm. The classification of this kind of profile is sometime related to the aim of paper's research, the environment or the topics. Charreaux (1991) distinguished three kind of firms according to the nature of ownership (controlled firms, managerial firms, family-owned firm). This distinction is made with regard to the degree of separation of the couple ownership and the decision or that of ownership and control. According to Charreaux managerial firm is a firm in which, there is an almost complete separated function of ownership and decision, and no manager holds a significant share of the firm as well. In Family-owned firm, a family holds a large ownership of the firm and appoint one of them for management. In this case, the degree of separation of ownership/decision and ownership/control is light and very smooth, the family members enjoy both ownership and control/decision, despite the presence of other investors (minority shareholders). In a Controlled firm, ownership concentration is more accentuated, the degree of separation of ownership/control or decision is strict, and the large ownership (institutional funds, pension funds, etc.) may control the firm's strategy and some governance tools. The last type of ownership we choose to add in this classification is Government-owned firm, because of their role on Islamic banking supervision in many countries of Middle East and Africa.

The relationship between ownership structure (nature) and firm performance has been a topic of interest in literature. In conventional finance, results are mixed, but at least the link between the ownership structure and firm performance is found through many researches (Morck, et al., 1988; Charreaux, 1991; Iannotta et al., 2007; Madani and Khlif, 2010; Ongore, 2011; Stančić et al., 2014; McConnell and Servaes, 1990). Some of these papers (McConnell and Servaes, 1990; Morck, et al., 1988) found a significant and positive ((Madani and Khlif (2010); Khamis et al., (2015)) relationship between Managerial ownership and firm performance. Charreaux (1991) found a non-significant link between Managerial ownership and firm performance, but a significant link between Family-owned firms and performance (return on average asset [ROAA]), all this to say that, according to his sample, there is a link between ownership structure (type) and firm performance (ROAA). As far as controlled firms are concerned, many researchers (Fazlzadeh et al.,(2011); Khamis et al.(2015); Abbas et al., (2009)) found a positive and statistically significant link between this type of ownership and performance, the main argument behind this relationship is how institutional investors control manager and the monitoring role they used to play. Government ownership is considered as inefficient and bureaucratic (Ongore, 2011), the specific characteristic of shareholders in this ownership is that, they do not have direct claim on their residual income, and the management is often bureaucratic, so all that leads to inefficient performance. Ongore, (2011) found a negative and significant relationship between government ownership and performance. In this paper, we intend to check out these conclusions, that's why under the assumption of the link between ownership structure and firm performance, following hypotheses are developed:

H_2: The nature of ownership structure has an effect on IB performance.

2.2.3. SSB structure and IB performance

Because we are working on Islamic Finance field, SSB monitors and certifies compliancy and it's unique in governance structure of IBs compared to their counterparts (CB), we'll check if the compositional characteristics of SSB have an influence on IB performance. The idea here is to appreciate the impact of the presence of Sharia Scholars on IBs performance. Mollah and Zaman, (2015) try to link the sharia supervisor to IB performance, because of the existence of this board, IB will be likely to offer less risky product and that may have an influence on the performance. We think that, because composition, size and even the remuneration of BOD members can influence firm performance (Godard and Schatt, 2000), the size of SSB may perhaps has an influence to IB's performance, that's why we formulate this hypothesis:

H_3: The size of SSB influences the performance of IBs.

3. DATA AND METHODOLOGY

The data on which analyses will be carried out are based on the following databases: Bankscope, DataStream, Factset, World Bank country level macroeconomic data and Annual reports of both IBs and CBs. The study period goes from 2006 to 2015, a 10-year sample, taking into account 2007, during which we want to assess the robustness of some banks specifics and corporate governance mechanisms in both CBs and IBs on performance. Study period will follow the same subdivision used by Mollah and Zaman, (2015): Including 2006-2007 pre-crisis, 2008-2009 crisis, and 2010-2015 post-crisis periods and covers 28 countries.

We have chosen banks by applying some selection criteria, to create a balanced panel and to avoid many bias conditions, we only kept banks for a minimum of 5 consecutive years as done by Srairi, (2013). For having a homogenous sample we only retain commercial banks and do not consider other types of banks. The Table 1 describes sample of study, but we should note that our sample take also into account the ownership concentration, ownership structure, some governance mechanisms like number of meeting held by the BOD, the number of SSB member and so on. To complete our sample we use information from couples of web sites like Islamicfinance.com, Islamicbanker.com or salamgateway.com, well-known web sites often quoted in Islamic

Table 1: Sample distribution

Country	Conventional banks	Islamic banks	Full sample	Percentage
Algeria	2	0	2	1.2
Bahrein	6	14	20	11.98
Egypt	3	2	5	2.99
Indonesia	3	2	5	2.99
Iraq	0	3	3	1.8
Israel	5	0	5	2.99
Iran	0	9	9	5.39
Jordan	2	2	4	2.40
Kuwait	5	7	12	7.19
Lebanon	4	0	4	2.40
Lybia	1	0	1	0.6
Malaysia	2	11	13	7.78
Morocco	3	0	3	1.80
Oman	6	0	6	3.59
Philippines	2	0	2	1.20
Pakistan	0	6	6	3.59
Qatar	6	3	9	5.39
Saudi arabia	8	4	12	7.19
Singapore	3	0	3	1.80
Sri lanka	0	1	1	0.6
Sudan	0	9	9	5.39
South Africa	0	1	1	0.6
Thailand	1	0	1	0.6
Turkey	0	4	4	2.4
United arab emirates	15	6	21	12.57
United kingdom	0	3	3	1.80
Vietnam	1	0	1	0.6
Yemen	0	2	2	1.2
Total	78	89	167	100

finance researches (Alman, 2012; Garas and Pierce, 2010; Iqbal and Mirakhor, 2004). Information about ownership structure and concentration or even number of SSB/BOD members and meeting held come from annual reports of each bank per year, missing information have been completed through Islamic web site below. Shareholders' composition has been found in both annual report and "salamgateway.com" web site from Thomson Reuters.

3.1. Measures of Bank Performance

Charreaux (1991), indicates several factors such as the rate of profitability, the rate of growth, return on equity, return on asset, Sharpe ratio, Tobin Q, Marris ratio etc., may account for the firm's performance. We retain first return on average equity (ROAE), which is the proxy of bank performance, it's a measure of return on shareholder funds, the higher this figure is the better it is, except when the bank is highly leveraged (Mollah and Zaman, 2015). Our second performance measure is ROAA, defined as a measure of the return generated by assets, and in the same vein it gives an idea of the investment' policy of the firm.

This table describes sample of study, as we can see: 167 banks (78 conventional banks and 89 Islamic banks), the proportion of each country in terms of banks is given in the last column.

This indicator (ROAA) is used as proxy for bank profitability in many governance studies (Stančić et al., 2014; Busta, 2007; Bektas and Kaymak, 2009; Classens et al., 2000), in this study it will help us to better capture IB' performance and the comparison to conventional ones. Our last performance measure is net interest margin (NIM), it's also named net interest margin (NIM) in conventional finance, in this case (Islamic finance) we obtain it through a principle of PLS (Profit and Loss Sharing) because IBs do not collect or charge interest (Hassoune, 2002), it can be found in the income statement under the name net interest margin (see on Bankscope). Some studies proxy NPM as bank Islamic performance in the view of making comparison between IB to CB (Olson and Zoubi, 2016; Rachdi, 2013). Tobin's Q is also used as bank performance indicator (e.g. Charreaux, 1991; Mollah and Zaman, 2015; Olson and Zoubi, 2016; Soufeljil et al., 2016), because it reflects the market performance of the firm. However, Tobin's Q might not accurately reflect bank performance if stock market efficiency and liquidity deviates from the standards of the developed stock markets (Stančić et al., 2014), which is the case with some financial markets from Association of Southeast Asian Nations (ASEAN) or Middle East and North Africa (MENA). It's also important to add that the matter of missing data didn't help to use Tobin's Q as a proxy of IB performance. That's why we focused on ROAA, ROAE and NPM as proxy of banks performance for both Islamic and Conventional. Because we are using data from Bankscope, there are some conventional variables which have been brought to the same level of significance for easily comparing statements. For instance the net income (conventional finance) is obtain according to Bankscope translation by adding Zakat[3] to net income. Interest income also is equal to income from Murabaha + Musharka + Istisna + Ijarah + Salam + Mudarabah + Wakalat (Olson and Zoubi, 2016). So our analyses will be done with the assumption of the equivalence of both financial statements (Hassoune, 2002).

3.2. Bank Ownership Variables

Ownership structure takes two dimensions in this paper, the first dimension is about identity of main shareholders according to Charreaux's definition, the next dimension is about how concentrated or dispersed is the configuration of shareholding in the firm. As Charreaux did, we have followed Demsetz and Lehn (1985) in measuring concentration by taking into account the percentage of equities (share) held by well-known shareholders (Charreaux, 1991). The ownership concentration has been described by Charreaux in two main variables in order to take into account ownership and decision: First he named PCAAD, the variable which captures the percentage of capital represented by directors, and PCADI the variable which capture the percentage of capital represented by managers. In this paper, like La Porta et al. (2002), we retain that a bank has a dominant shareholder if this shareholder has >10% of direct or indirect voting rights, in listed banks the procedure is a little bit different.

As far as ownership structure identity is concerned, we include it as a categorical variable (Charreaux, 1991), to appreciate its influences on banking performance. Four dummy variables representing the identity of the largest owner have been used, first Public-owned dummy which takes a value of 1 if the largest shareholder is the government (or its decentralized organism) and 0 otherwise. Managerial-owned dummy take a value 1 if shareholders

3 Zakat is a term used in Islamic finance which refers to the obligation that an individual has to donate a certain proportion of wealth each year to charitable causes (Investopedia's definition).

Table 2: Summary of the variables

Variables	Description	Sources
Dependent variables: Bank performance		
ROAA	Net income over the average assets in percentage	Bankscope
ROAEV	Net income over the average equity in percentage	Bankscope
Net interest margin	Investment returns – interest expenses over earning assets	Bankscope
Independent variables		
Ownership variables		
Ownership concentration	Equity percentage participation by the largest shareholder of the bank	Annual reports and salamgateway.com
Controlled-owned banks	Largest proportion of capital held by a financial institution or nonfinancial group	Annual reports and salamgateway.com
Family-owned banks	Largest proportion of capital held by an individual or family member investor	Annual reports and salamgateway.com
Public-owned banks	Largest proportion of capital held by government or its decentralized organism	Annual reports and salamgateway.com
Managerial-owned bank	Dispersed ownership	Annual reports and salamgateway.com
Bank specific variables		
Capital ratio	Equity to total assets value	Bankscope
Loan to deposit ratio	Loan value divided as percentage of deposit	Bankscope
Overheads to total assets	Operating expenses over total assets	Bankscope
Nonperforming loan provision	Loss provision over total assets	Bankscope
Bank size	Log of total assets	Bankscope
Cost to income ratio	Ratio of total expenses to total revenue	Bankscope
bank age	Number of years the bank was established until 2015	Bankscope
Bank category	Either Islamic bank or conventional bank	
Macroeconomic variables		
GDP growth	Yearly GDP growth rate in percentage	World development indicators
Inflation rate	Yearly consumer price index variable in percentage	World development indicators
Boone indicator	Competition measure derived from Boone-type model	Global financial development

Table 3: Descriptive statistic of main variables

Variables	Obs.	Mean±standard deviation	Minimum	Maximum
ROAA	666	0.133±5.051	−45.311	31.953
ROAE	724	3.337±12.050	−127.147	54.575
NIM	300	6.411±9.276	−26.267	48.197
OFBS	579	5191.445±30744.11	0	426334.6
CIR	534	20.504±102.011	−957.336	950
Board size o~B	822	3.236±1.800	0	7
BODSIZE	802	8.082±2.426	2	16
Number of se~r	759	6.258±4.802	0	40
CONC	887	54.364±34.504	5.55	100
log size	725	7.525±1.926	2.493	11.340
EQTA	725	0.249±0.248	0.017	0.996
OFBSTA	574	0.167±0.156	0	0.9995292
Equity	725	884.9898±1468.337	1.390131	12437.09
Log age	887	3.078±0.5978882	2.302	4.634
Loans	679	4555.19±7761.585	0.001434	58681.78

Source: Author' calculation

are dispersed and in which, managers are in charge of major policy without a significant pressure coming from shareholders, this dummy take a value 0 otherwise. Family-owned dummy take a value 1 if the largest shareholder is private investor who manages the firm with his family members. Sometimes the surname of shareholders might be an indicator for detecting this kinds of links. This dummy takes the value 0 otherwise. Controlled-owned dummy takes a value 1 if the largest shareholders is a financial institution investor or another firm, and 0 otherwise.

3.3. Bank-specific Variables

Many existing studies report a number of covariates commonly used to understand what may influence the link between ownership structure and performance. We choose the logarithm of total assets of the bank as measurement for its size (e.g. Matoussi and Grassa, 2012; Mollah and Zaman, 2015; Beck et al., 2013), a positive link between size and performance can be interpreted under the analysis of economies of scales and a negative link might be a matter of facing difficulties in adapting to changes. We tend to know in our case if the size will influence both performance and ownership structure. Others bank specific variables like leverage ratio (EQ/TA); LOAN/TA; non-performing loan provision to total assets inter alia will be performed. The main idea in this case will be to choose specifics bank variables which influence in the same time both performance and ownership structure.

Finally to control some country effects or region effects on our analysis, we use many macroeconomics environment variables, first Boone indicator variable from world bank data, which indicates the degree of bank' competition in the country, GDP growth rate per year, the Inflation rate, also the population may have an influence on bank performance (Mollah and Zaman, 2015).

3.4. Methodology

To investigate this research question, we have followed Charreaux (1991) by adding specifications from Iannotta et al., 2007; Bourkhis and Omri, 2016; Zouari and Taktak, 2012; Stančić et al., 2014; and then we encode "Region variable" which is supposed to capture the link between ownership structure and performance according to a specific region (MENA, ASEAN, GCC, Others etc.), that's also our contribution to the literature. The following model has been set up:

$$Perf_{i,j,t} = \alpha + \beta OS_{i,j,t} + \delta BS_{i,j,t} + \mu BG_{i,j,t} + \lambda MA_{j,t} + \theta Y_t + \tau R_j + \sum_{i,j,t}$$

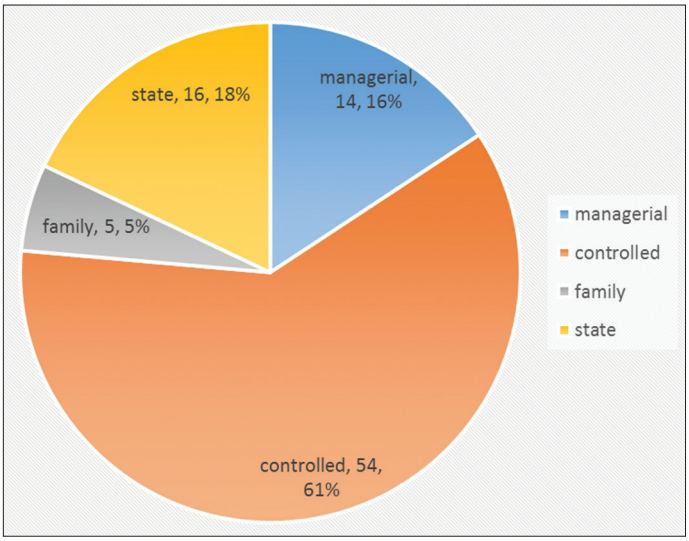
Where $Perf_{i,j,t}$ stands for the performance of the bank i in the region j at year t which is going to be expressed by ROAAs, ROAE or Net profit margin. $\alpha, \beta, \delta, \propto, \lambda, \theta, \tau$ are the regression coefficients, $OS_{i,j,t}$ is the vector of ownership structure, Y_t and R_j are year and region dummy variables respectively. BS is the vector for bank specific variables, BG stands for bank governance variables and MA is the vector for macroeconomics environment. The last part of the model is $\varepsilon_{i,j,t}$ the disturbance term.

For running this model, we applied a panel regression with the aim of testing the impact of ownership structure variables on IB performance, all this on a panel of 89 IBs over the period 2006–2015. We performed the Hausman test in order to know which of fixed-effect or random-effect should be applied, this test suggested a random-effect. The presence of categorical variables with dummies which may take the same value for the same bank across study period can prevented from using fixed-effect models (Zouari and Taktak, 2012), so we ran random-effect with robust results. By following Drukker (2003), to test for autocorrelation problems, and also for multicollinearity and heteroscedacity, we found both autocorrelation and heteroscedacity, then to solve those problems and better estimate our model as Zouari and Taktak (2012) did, we use the technique of GLS estimation, which serves to correct the presence of serial correlation and heteroscedacity, it also takes care of endogeneity problem (Zouari and Taktak, 2012).

4. RESULTS

The Table 4 shows the correlation matrix, which displays different correlations between variables included in the analysis along with their corresponding significance level. We can noticed that types of ownership structure are individually and significantly correlated to at least one dependent variable, whereas the variable CONC which captures the concentration shows no significant link with dependent variables. Matrix also shows a significant correlation between log Size and both ROAE and NIM, as far as cost to income ratio (CIR)' concerned, it's negatively and significantly correlated with both ROAA and NIM. We also notice a high inter-correlation between CONC and some bank's specific variables (EQTA, CIR),

Figure 1: Ownership structure of Islamic Bank in the sample



Source: Author's chart

that's interesting because all those variables account together as predictor variables in the analysis and then may help avoiding multicollinearity.

We can observed in the table above that, the average of Sharia scholar present in the SSB is around 3, this Figure 1 is also given by AAOIFI' standard recommendations[4]. The average number of BOD is around 8, which is also relevant thanks to literature point of view, especially in governance issue as suggested by the agency theory. The average number of meetings held by the BOD is around 6, that means, in the study period they used to meet up at least once a quarter. Concerning the average concentration, it's around 54%, as we said in the beginning, different degree of concentration matter in this study, we therefore followed La Porta et al., (2002) who suggest that a company has a dominant shareholder if this shareholder has more than 10% of direct or indirect voting rights. In that case the minimum of concentration value is supposed to be more than 10%, that's why we added this condition in our regression model. As far as the nature of ownership structure is concerned, the pie chart below describes how distributed they are:

Banks which have institutional funds or pension's funds, as dominant shareholders are highly represented in our sample (61%), this percentage is equivalent to 54 IBs, Khamis et al., (2015a); Zouari and Taktak, (2012); Khamis et al., (2015b), found that, controlled ownership is the most common form of ownership structure in middle east, southeast Asia and north Africa, it's common, inter alia, because Islamic finance is a private initiative and many worldwide financial groups want to benefit from their profitability[5]. The rest of the sample contains 5 family owned IBs (5.6%); public IBs are 16 (18%); Managerial owned IBs are 14 (16%).

4 AAOIFI (Accounting and Auditing Organization for Islamic Financial Institutions) standard 2012.

5 Drawn from interview we had on April 27th of this year, with the sharia scholar Sheikh Bachir OULD SASS at CUI (Centre Universitaire International) Paris, France.

Table 4: Correlation matrix

Variables	ROAA	ROAE	NIM	Log SIZE	Managerial	Control	Family o~	Publico~	EQTA	CIR	CONC	Inflation	Board si~B	Boone in~r
ROAA	1													
ROAE	0.752***	1												
NIM	0.211***	0.0959	1											
log SIZE	0.0214	0.0862*	0.126*	1										
Managerial~	0.0246	−0.00579	−0.151**	−0.0866*	1									
Control~	−0.0330	−0.0825*	0.228***	−0.137***	−0.537***	1								
Family ~	0.0701	0.257***	−0.0119	0.0319	−0.105**	−0.303***	1							
Public ~	−0.0229	−0.0446	−0.137*	0.229***	−0.202***	−0.582***	−0.114***	1						
EQTA	0.0316	−0.0570	−0.159**	−0.606***	0.0293	0.115**	−0.0508	−0.139***	1					
CIR	−0.118**	−0.0596	−0.286***	−0.148***	0.110*	−0.0397	−0.0240	−0.0354	0.225***	1				
CONC	0.0354	−0.0378	0.0180	0.0718	−0.328***	0.289***	−0.114***	0.0121	−0.156***	−0.0886*	1			
Inflation	0.00736	0.117**	−0.0753	0.0368	0.0284	−0.170***	0.142***	0.112**	−0.228***	−0.0412	−0.0796*	1		
Board size~B	0.0137	0.0268	0.110	0.102**	−0.0564	0.0860*	0.0911**	−0.111**	0.00114	0.0101	−0.00475	−0.385***	1	
Boone in~r	−0.0161	−0.0744	−0.0563	0.116**	0.0316	−0.0456	−0.00828	0.0346	0.228***	0.146**	0.0385	−0.263***	0.0793*	1

Statistically significant at: *P<0.05, **P<0.01, ***P<0.001

Where ROAA, ROAE, NIM are respectively ROAA , ROAE and NET Profit/Interest Margin, all proxy as dependent variables for performance, bank specificities are captured here by CIR (cost to income ratio) and governance variables such like board size of SSB, Board size of directors and the number of meeting held by this board during a year. As we can see, there are significant correlations among main variables, for instance, net interest margin is significantly correlated to bank specificity (CIR) also the types of ownership structure are individually correlated to at least one dependent variable.

Table 5 shows different regressions we run from estimating performance equation with concentration as main variable for ownership structure, we added bank characteristics (Log size; Cost to income ratio; and Loans) to capture bank activity, concerning macroeconomic variables we added inflation. Governance indicators are also represented, the results of these regressions suggest that, there is no statistically significant relationship between concentration and performance. The estimated values of Wald chi2 indicate that the estimated models are a good fit to the data. Whatever performance' proxy we choose (ROAE, ROAA or NIM), the absence of link is noticed. We may therefore interpret this result by saying that, taking into account the characteristics of our sample, the concentration ownership seems to have no impact on IBs performance. This finding is consistent with neutrality thesis advanced by Demsetz (1983) and Demsetz and Lehn (1985), who stipulated that, ownership structure has no link with performance. Our results corroborate Charreaux (1991)' conclusions and others like Madani and Khlif (2010); Fazlzadeh et al., 2011 as well. In the field of Islamic banking, Zouari and Taktak (2012) found also no relationship between concentration and performance among 53 IBs. Generally, the main explanation reported for this "no statistically significant link" between ownership structure and performance is the fact that ownership structure may be endogenous, because of the simultaneity between ownership and value (Pindado and Torre, 2004). Another explanation might come from how developed are different economies our analysis is based on, that's why Bonin et al., (2004) justified insignificant influence of ownership structure on performance because of the nature of environment where those banks used to operate.

Bank' size affecting negatively and significantly performance proxy with both ROAA and ROAE, this result is consistent with Beck et al., (2013); Olson and Zoubi, (2016); Rashid and Jabeen (2016), Charreaux (1991) and Ali and Ahmed (2011) findings, who also found the same link and level of significance. Agency cost, bureaucracy, operating cost and lack of economy of scale may establish a negative relationship between bank size and performance. Smaller IBs are more profitable than larger ones (Olson and Zoubi, 2016).

The SSB size is positively and significantly correlated with ROAE, when concentration is chosen as main variable of ownership structure identity. This result suggests that, there is first of all a link between SSB' size and performance, so the number of sharia scholar sitting on SSB matters when analysing IBs performance. Positive link suggests that the more sharia scholar are in SSB for analysing activities, certifying reports, issuing fatwa concerning

Table 5: Multiple Regressions for ROAE, return on average assets, net income margin with CONC as main ownership structure. full sample

Variables	ROAE	ROAA	NIM
Concentration	0.02973 (0.02309)	0.01022* (0.00529)	0.00377 (0.01898)
log_ SIZE	1.45649** (0.57473)	0.18844 (0.13155)	2.11856*** (0.55745)
EQTA	10.28167** (5.14350)	9.81815*** (1.17721)	16.59902*** (4.34158)
Net loans tot assets	−0.00874** (0.00370)	−0.00156* (0.00085)	−0.01422*** (0.00374)
Net Loans Dep STFundi	0.00444 (0.00593)	−0.00174 (0.00136)	−0.00119 (0.00427)
Cost to income ratio	−0.01084 (0.00768)	−0.00711*** (0.00176)	−0.01007 (0.00700)
Age	0.01028 (0.05042)	0.00949 (0.01157)	0.07999 (0.05155)
Boone indicator	−9.35592 (11.07314)	−0.62596 (2.53302)	24.37222 (15.07840)
Board size of SSB	0.50418 (0.45816)	0.05310 (0.10477)	−0.27179 (0.38995)
Nber of session per year	−0.22925* (0.12477)	−0.07467*** (0.02853)	−0.50190** (0.25320)
BODSIZE	−0.808 24*** (0.25924)	−0.17113*** (0.05938)	0.98381*** (0.24565)
Inflation	0.45164*** (0.10685)	0.01304 (0.02449)	−0.05281 (0.08252)
GCC	2.72909 (2.25753)	0.12619 (0.51614)	−25.77363*** (2.30602)
Mena	4.03437 (2.56766)	0.45069 (0.58792)	−15.51333*** (2.39456)
Others	−0.28991 (4.58565)	0.11170 (1.04827)	2.58923 (5.68590)
West europe	−8.25341 (6.93911)	−8.44582*** (1.58622)	0.00000 (0.00000)
Constant	−6.60417 (6.35795)	−0.69491 (1.45807)	2.64860 (6.36067)
Observations	235	233	145
Years dummies	Yes	Yes	Yes
Regions dummies	Yes	Yes	Yes
Wald chi 2	100.52***	224.42***	230.52***
Number of pan_id	52	52	33

Standard errors in parentheses. ***P<0.01, **P<0.05, *P<0.1

products and rules that should be followed by IBs, the better performance may be obtained. Hypothesis (H_3) is therefore confirmed by this result, there is an influence of SSB's size to performance (ROAE) and that depends whether concentration is in our model or not, because when we substitute Concentration by different types of ownership structure (Family, Managerial, Controlled and Government), results are different as shown in Table 6 below. It's important to notice that, these results are also confirmed in full sample (see Appendix 1).

Table 6 above, exhibits a link between type of ownership structure and performance before, during and after 2008/2009 financial crisis. This relationship between type of ownership structure and performance is consistent with many findings in governance fields (Asadi and Pahlevan (2016); Bourkhis and Omri (2016); Charreaux (1991); Khamis et al., (2015a); Madani and Khlif (2010); Ongore (2011); Soufeljil et al. (2016); Stančić et al. (2014); Zouari and Taktak (2012)), they all found that, type of ownership structure has an impact on bank's performance. Our regression model displays a positive and significant relationship between family owned IBs and performance (ROAE), this relationship is persistent before, during and after 2008/2009 financial crisis. Zouari and Taktak (2012), also found the same link between family owned IBs and ROAE, their explanations were much about environment of love and commitment which may be necessary for better performance resulting for in lower agency cost. It's also necessary to take into account that, the will to ensure generational transmission (safeguarding family's patrimony) may push family's owned managers to settle down good governance practices, those actions may be helpful for influencing performance. We also found a positive relationship between controlled IBs and performance during (ROAA, NIM) and after (ROAE and ROAA) 2008/2009 financial crisis. These findings are consistent with Khamis et al., (2015a); Khamis et al., (2015b); Abbas et al., (2009); Pound, (1998); Fazlzadeh et al., (2011) and Uwalomwa and Olamide, (2012) conclusions about a positive and significant relationship between institutional ownership and performance. This link may be due to the monitoring role of institutional investors, they have a capacity to influence inside decision-makers. Pound's, (1998) "efficient monitoring" hypothesis suggests that, institutional investors possess superior monitoring ability with greater dealing power and resources which when exercised, may highly influence performance. Managerial IBs also have a positive relationship with performance' measure, after (ROAA, ROAE) 2008/2009 financial crisis, this finding is consistent with Mueller and Spitz (2002); Donghui et al., (2007) and Palia and Lichtenberg (1999) conclusions. They found a positive and significant link between Managerial ownership and performance (ROA, productivity measurement, etc…). This type of ownership (managerial ownership), both aligns shareholder and management interest and places voting power in the hands of corporate decision-makers, these latter are aware of firm's financial health, because they are insiders, and may have a direct influence on firm's performance, through their choice and decision.

As far as bank-specify factors are concerned, Table 6 exhibits a negative and significant relationship between Net loans to total assets (NLTA) and performance before, during and after 2008/2009 financial crisis, this suggests that liquidity and bank performance have a negative relationship, the more IBs are liquid the less performed they are, NLTA measures the percentage of assets tied up in loans. About Net loans to deposits and short terms funding (NLDSTF), no significant relationship has been displays by our regressions. Cost to income ratio is negatively and significantly related to performance during (ROAA, ROAE, NIM), and after (ROAA) 2008/2009 financial crisis, this finding is consistent with literature's view, cost has a negative effect on income and this influence, negatively impacts performance. Appendix 2 exhibits the same relationship as seen in Table 6.

Table 6: Performance and ownership structure

Variables	Precrisis			Crisis			Postcrisis		
	2006–2007			2008–2009			2010–2015		
	ROAE	ROAA	NIM	ROAE	ROAA	NIM	ROAE	ROAA	NIM
Managerial firm	7.06954	1.41992	0.00000	−0.05286	0.60538	−9.51226**	9.04912***	1.84608***	0.85622
	(5.89519)	(1.55342)	(0.00000)	(3.82276)	(1.28369)	(4.13764)	(2.22113)	(0.39880)	(2.13780)
Controlled firm	−3.32843	0.01823	0.00000	2.76367	3.22485***	21.27757***	6.16481***	1.27356***	1.08164
	(4.26043)	(1.18498)	(0.00000)	(3.83186)	(0.95131)	(4.08621)	(1.70378)	(0.30691)	(2.08106)
Family owned firm	45.48791***	17.21897***	0.00000	23.16529***	8.31284***	4.70171	13.40184***	1.49930***	2.50224
	(7.92174)	(2.08101)	(0.00000)	(5.81345)	(2.01405)	(6.80390)	(2.95696)	(0.53096)	(2.97871)
Public owned firm	-	-	-	-	-	-	-	-	-
log_SIZE	−1.58055	−1.97508***	0.00000	2.09738	−0.32648	−1.21063***	1.26518**	0.23190**	2.58336***
	(1.63925)	(0.43191)	(0.00000)	(1.32485)	(0.31272)	(0.39811)	(0.58446)	(0.10520)	(0.64503)
EQTA	−7.07178	7.83423***	0.00000	8.46963	4.50096	−10.82960**	1.95222	5.06312***	12.93968**
	(8.23775)	(2.16073)	(0.00000)	(6.14066)	(2.85698)	(4.71714)	(6.04957)	(1.08672)	(5.14430)
Net loans tot assets	−0.00986	−0.00586**	0.00000	−0.03093***	−0.01171***	−0.06004***	−0.01049***	−0.00178**	−0.01939***
	(0.00811)	(0.00228)	(0.00000)	(0.00971)	(0.00399)	(0.01622)	(0.00390)	(0.00070)	(0.00490)
Net Loans Dep STFundi	0.01070	0.00034	0.00000	0.00946	−0.00200	−0.01493	0.00352	−0.00047	−0.00029
	(0.01015)	(0.00266)	(0.00000)	(0.00926)	(0.00265)	(0.01066)	(0.00553)	(0.00100)	(0.00410)
Cost to income ratio	−0.28871***	−0.05488**	0.00000	−0.03853**	−0.00312	−0.02286	−0.01204	−0.00678***	−0.00764
	(0.08746)	(0.02509)	(0.00000)	(0.01699)	(0.00374)	(0.02758)	(0.00738)	(0.00133)	(0.00648)
Age	−0.15717	−0.03590	0.00000	−0.04687	0.02738	−0.00244	0.09853**	0.02333***	0.10150*
	(0.18755)	(0.04958)	(0.00000)	(0.09819)	(0.02703)	(0.14408)	(0.04855)	(0.00874)	(0.05302)
Boone indicator	239.36798**	59.88244**	0.00000	55.27994**	20.30769***	−14.94297	−10.74755	−1.59425	48.17434**
	(94.27275)	(24.99043)	(0.00000)	(23.10310)	(5.11791)	(10.81878)	(10.75595)	(1.93396)	(20.56005)
Board size of SSB	−1.01134	0.21016	0.00000	1.17310	1.03445***	9.19691***	0.18007	−0.04083	−0.33637
	(0.77583)	(0.21236)	(0.00000)	(1.76060)	(0.40016)	(1.57291)	(0.48140)	(0.08649)	(0.41736)
Nber of session per year	0.07022	0.18349*	0.00000	−0.59961	0.16736	1.77607***	0.07805	−0.01760	−0.33666
	(0.39343)	(0.10479)	(0.00000)	(0.39535)	(0.11512)	(0.65129)	(0.12319)	(0.02212)	(0.27255)
BODSIZE	1.74969***	1.51732***	0.00000	0.53668	0.39086*	0.42265	−0.78306***	−0.24062***	1.00688***
	(0.67087)	(0.17562)	(0.00000)	(0.62032)	(0.20795)	(1.69903)	(0.28833)	(0.05181)	(0.28391)
Inflation	−0.09774	−0.04729**	0.00000	−0.18790	−0.09258	−0.27832***	0.66834***	0.07465***	−0.09311
	(0.08772)	(0.02317)	(0.00000)	(0.33849)	(0.07527)	(0.10742)	(0.14305)	(0.02570)	(0.12916)
GCC	24.48099***	2.70559	0.00000	0.55290	4.02419	0.82818	3.95394*	0.45908	−24.84428***
	(8.37629)	(2.27106)	(0.00000)	(4.82886)	(13.43883)	(9.90263)	(2.19117)	(0.39480)	(2.34089)
Mena	28.89783***	3.48621	0.00000	33.28833***	14.51918	49.51335***	−0.09020	−0.36829	−13.66397***
	(11.04330)	(2.94611)	(0.00000)	(12.92099)	(12.71501)	(12.76386)	(2.59887)	(0.46707)	(2.33421)
Others	0.00000	0.00000	0.00000	18.54389	9.94314*	0.00000	0.49251	−0.15346	9.44235
	(0.00000)	(0.00000)	(0.00000)	(12.55562)	(5.20315)	(0.00000)	(4.40358)	(0.79072)	(6.25488)
West Europe	80.85029***	2.47271	0.00000	10.05575	4.34925	0.00000	0.00000	0.00000	0.00000
	(28.66898)	(8.00596)	(0.00000)	(9.51838)	(13.27529)	(0.00000)	(0.00000)	(0.00000)	(0.00000)
Constant	5.18158	2.20801	0.00000	−17.96715	−12.37527	−33.03177**	−16.68524***	−2.50553**	−6.25630
	(21.62133)	(5.65770)	(0.00000)	(13.51190)	(11.04806)	(16.23272)	(6.21643)	(1.12003)	(7.98125)
Observations	26	25	17	33	33	23	176	175	105
Number of pan_id	17	17	11	19	19	13	50	50	31
Wald chi 2	257.73***	903.77***	–	212.33***	341.94***	1472.38***	130.44***	120.63***	246.81***

Standard errors in parentheses. ***P<0.01, **P<0.05, *P<0.1

Table 7: Ownership structure and mechanisms of governance during crisis

Variables	ROAE	ROAA	NIM
Managerial firm	−0.05286	0.60538	−9.51226**
	(3.82276)	(1.28369)	(4.13764)
Controlled firm	2.76367	3.22485***	21.27757***
	(3.83186)	(0.95131)	(4.08621)
Family owned firm	23.16529***	8.31284***	4.70171
	(5.81345)	(2.01405)	(6.80390)
Public owned firm	-	-	-
log_SIZE	2.09738	−0.32648	−1.21063***
	(1.32485)	(0.31272)	(0.39811)
EQTA	8.46963	4.50096	−10.82960**
	(6.14066)	(2.85698)	(4.71714)
Net Loans Tot Assets	−0.03093***	−0.01171***	−0.06004***
	(0.00971)	(0.00399)	(0.01622)
Net Loans Dep STFundi	0.00946	−0.00200	−0.01493
	(0.00926)	(0.00265)	(0.01066)
Cost To Income Ratio	−0.03853**	−0.00312	−0.02286
	(0.01699)	(0.00374)	(0.02758)
AGE	−0.04687	0.02738	−0.00244
	(0.09819)	(0.02703)	(0.14408)
Boone indicator	55.27994**	20.30769***	−14.94297
	(23.10310)	(5.11791)	(10.81878)
Board size of SSB	1.17310	1.03445***	9.19691***
	(1.76060)	(0.40016)	(1.57291)
Nber of session per year	−0.59961	0.16736	1.77607***
	(0.39535)	(0.11512)	(0.65129)
BODSIZE	0.53668	0.39086*	0.42265
	(0.62032)	(0.20795)	(1.69903)
Inflation	−0.18790	−0.09258	−0.27832***
	(0.33849)	(0.07527)	(0.10742)
GCC	0.55290	4.02419	0.82818
	(4.82886)	(13.43883)	(9.90263)
MENA	33.28833***	14.51918	49.51335***
	(12.92099)	(12.71501)	(12.76386)
Others	18.54389	9.94314*	0.00000
	(12.55562)	(5.20315)	(0.00000)
West Europe	10.05575	4.34925	0.00000
	(9.51838)	(13.27529)	(0.00000)
Constant	−17.96715	−12.37527	−33.03177**
	(13.51190)	(11.04806)	(16.23272)
Observations	33	33	23
Years dummies	Yes	Yes	Yes
Wald chi2	212.33***	341.94***	1472.38***
Regions dummies	Yes	Yes	Yes
Number of pan id	19	19	13

Standard errors in parentheses ***P<0.01, **P<0.05, *P<0.1

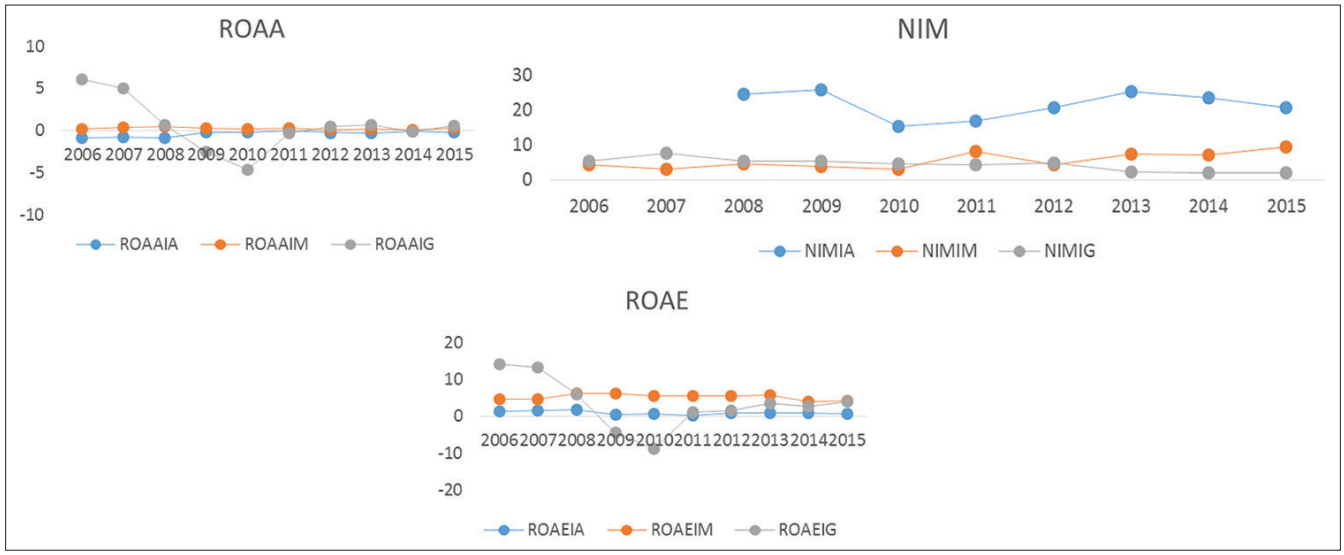
As we can see in Table 7, during 2008/2009 financial crisis SSB's size is significantly and positively linked to performance (ROAA, NIM), the explanation may be related to sharia scholar presence, which is gradually increasing year after year, and their role in advising and delivering fatwas, especially during this period. In literature, large board (with increasing member of directors) may sometime impact negatively performance, because of lack of monitoring, agency cost and efficient control. The number of session held by the BOD is negatively and significantly linked to performance (ROAE, NIM), it suggests that costs allocated to all those meetings during this period may be too much, need to be reduced. As far as BOD' size is concerned, the regression displays a positive and significant relationship between performance (ROAE, ROA, and NIM) and the size of BOD during 2008/2009 financial crisis. This result is consistent with Fauzi and Locke' (2012) conclusions, who found that, large boards improve New Zealand firms' performance by providing greater monitoring, increasing the independence of the board and counteract management entrenchment. So these findings follow literature' view in case which the more directors are in the board, greater will be the monitoring despite agency costs. Regions (GCC, Mena) are negatively and significantly related to IBs' performance (ROAA, NIM) during the crisis, this link suggests that regions matter in IBs' performance and the financial crisis influenced this relationship. Before financial crisis the relationship between region (GCC, Mena) and performance (ROAA) was positive and significant may be due to specific rules settled down by main schools of Islam which intervene in those regions, their fatwas may influence IBs activity. The positive link may suggest that the return on investment might be higher in those regions than others in which relationship might be statistically and significantly negative.

Figure 2 above shows how different performance indicators (ROAA, ROAE, and NIM) are among regions (ASEAN, MENA, GCC). As far as ROAE is concerned, Mena has a better trend during and after financial crisis, whereas some GCC's IBs recorded negative ROAE and ROAA during financial crisis, we can observe it on graph (ROAE and ROAA). Net interest margin or Net profit margin, is higher in ASEAN than GCC and MENA, this trend is persistent before, during and after the 2008/2009 financial crisis. We can also compare IBs' performance indicators with their counterparts (CBs), the Figure 3 below shows out this comparison:

Before financial crisis (2006-2007), IBs' ROAA is higher than CBs' ROAA due to the strong growth of Islamic finance industry which started in the early 2000s, including: Strong demand in many Islamic countries for sharia-compliant products, growing demand from conventional investors for diversification purposes, development of financial instruments that meet most of the needs of individual and corporate investors, and the real progress in strengthening the legal and regulatory framework also contributes to the strong IBs growth.

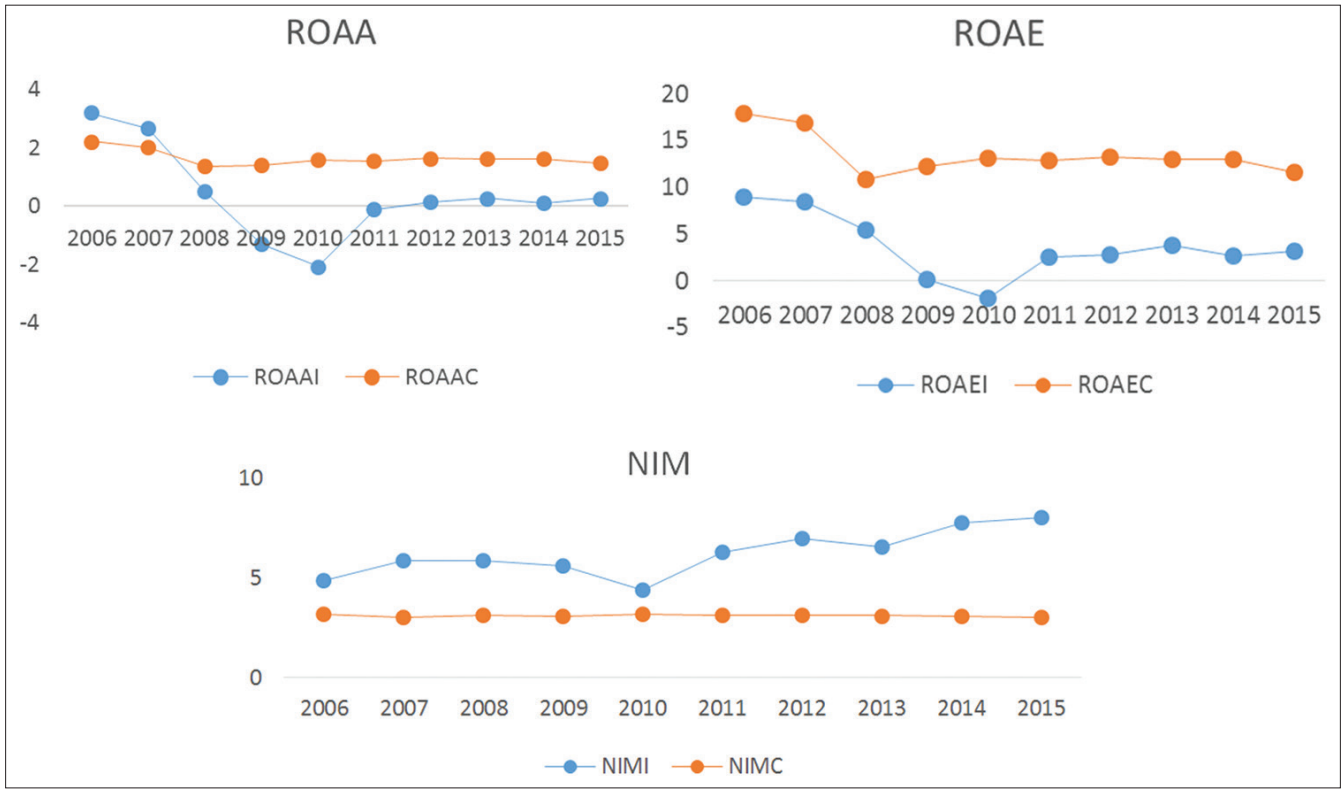
During financial crisis (2008-2009), the average ROA fell to 0.48 for IBs and to 1.34 for CBs. Then, as the crisis spread to the real economy, the economic impact of the crisis leads to reduce ROAA to −1.31 for IBs and slightly improve to 1.37 for CBs in 2009. Taking into account the full sample over the study time, ROAA for IBs is 0.35 whereas CBs' one is 1.63. These results point out the way both IBs and CBs faced crisis is different. First, about the time of reaction to the financial crisis, ROAA' and ROAE' graph (Figure 3) show that CBs initially weather the shock better, whereas IBs' performance started directly to decrease at the beginning of the financial crisis. So the time pattern of response is relative shorter in CBs' performance (ROAA and ROAE) than IBs' performance (ROAE and ROAA), this observation may be explained by the nature of this financial crisis, the business model of banks, the specificities of the regions and even the banks' age. The average banks' age is around 26 years for IBs and 52 years for CBs, this difference may also matter in the way of facing the crisis. Our main explanation should may be come from IBs' products. Most of the IBs has avoided the subprime exposure, because Islamic finance is based on a close link between financial

Figure 2: Comparison ROAE-ROAA-NIM' trend among GCC-ASEAN-MENA



Source: Author's graph

Figure 3: Comparison ROAA-ROAE-NIM' trend between IBs and CBs



Source: Author's graph

and productive flows (El Said and Ziemba, 2009), but the duration of the crisis affected IBs as well not because they have a direct exposure to derivative instrument but because IBs' contracts are based on asset-backed transactions (Maher and Jemma, 2010). The spread of the crisis in the real economy (market property for instance) in many countries where IBs have a significant presence, has contributed to a negative impact of IBs' performance. The shape of the GCC' curve in Figure 2 (ROAA and ROAE) is fairly the same in Figure 3, because largest IBs is located in GCC, and this region is well-represented in our sample (34/89). So, the persistence of the real difficulty to come back to the pre-crisis performance (ROAA) may be due to the persistence of erosion in the value of collateral especially in GCC' countries which were highly leveraged (Maher and Jemma, 2010).

5. ROBUSTNESS CHECKS

To check out the robustness of results displayed by different regression models that we used and also to address the issue of endogeneity and omitted values bias which might affect results, we

Table 8: System GMM estimation of ownership structure and performance

Variables	ROAA	ROAE	NIM
ROAA=L,	0.49451***	0.36316***	0.39642***
ROAE=L, NIM=L	(0.00120)	(0.00307)	(0.01986)
EQTA	13.41857***	11.94095***	0.82721
	(0.35441)	(0.86286)	(2.41590)
Inflation	−0.15762***	−0.36474***	−0.12588
	(0.00763)	(0.00992)	(0.10156)
OVERHEADS	−0.00636***	−0.00614***	0.00245**
	(0.00064)	(0.00043)	(0.00115)
Number of session	2.06987***	−0.92205***	0.04016
per year	(0.02291)	(0.07862)	(0.21416)
Board size of SSB	−2.97735***	−1.91116***	−5.27135**
	(0.22113)	(0.34251)	(2.43945)
Managerialfirm1	6.69302***	0.00000	−10.42405
	(1.78449)	(0.00000)	(7.39037)
Controlledfirm2	3.90451**	−3.50909**	−14.99804
	(1.53456)	(1.38972)	(9.17982)
Familyownedfirm3	5.68166**	6.24370*	0.00000
	(2.88563)	(3.77403)	(0.00000)
Publicownedfirm4	0.00000	4.33281	−21.56407**
	(0.00000)	(2.67839)	(10.75744)
GCC	3.97410	−4.84656	−10.27242**
	(6.43665)	(13.10327)	(4.79159)
MENA	22.50555***	20.00444	−20.18074***
	(7.84639)	(16.97491)	(4.60418)
Others	−10.70577	−38.68413***	−79.76201
	(9.03662)	(14.89057)	(105.85213)
West Europe	−2.42628	28.59013	0.00000
	(6.73887)	(25.07371)	(0.00000)
Constant	−15.43698**	0.00000	48.26011***
	(6.39442)	(0.00000)	(13.82730)
Observations	479	528	220
Number of pan_id	83	83	39
No.of instruments	81	81	81
Years dummies	Yes	Yes	Yes
AR1 P value	0.036	0.031	0.0863
AR2 P value	0.223	0.235	0.636
Sargan P value	0.000	0.000	0.000
Hansen P value	0.223	0.268	1.000

Standard errors in parentheses. ***P<0.01, **P<0.05, *P<0.1

follow Iannotta et al. (2007) and Poi Hun et al. (2016) by applying the Arellano and Bover (1995) and Blundell and Bond (1998)' two-step system GMM that uses lagged values of dependent variable in level and difference as well as lagged values of explanatory variables in level. Results reported in Table 8 suggest that our model fits the system GMM' estimators. Despite Hansen test appears to be no statistically significant, Sargan test and Wald chi^2 are statistically significant at 1%. The first-order auto-correlation appears to be statistically significant whereas the second one is not, which is true by construction. After controlling for endogeneity and omitted values' matter, EQTA, Inflation, Overheads and all ownership structure variables appear to be statistically significant. The estimation model confirms the persistence of banks' performance (ROAE,ROAA and NIM) during our study period as well, this result is consistent with Iannotta et al. (2007)' and Poi Hun et al. (2016)' findings.

6. CONCLUSION

In this paper we offered an empirical evidence of the relationship between ownership structure mechanisms and IBs' performance. In fact, this paper analysed the relationship between ownership concentration and IBs' performance in one side, and the identity of ownership structure and IBs' performance in another side, by taking into account bank-specify' factors and couple of corporate governance mechanisms as suggested by Charreaux (1991). This paper intended to check out if Charreaux' conclusions in ownership structure and performance matter in IBs?

As far as ownership concentration is concerned, our results suggested no relationship between IBs' performance and concentration measured by the percent of share held by the dominant shareholder. This result is persistent before, during and after 2008/2009 financial crisis and this, for all measures of performance (ROAE, ROAA and NIM). This result corroborates Charreaux (1991)' conclusions and follows the thesis of neutrality advanced by Demsetz (1983) and Demsetz and Lehn (1985), who stipulated that, ownership structure has no link with performance because performance of firms is essentially constrained by environments and conditions in which business is developed.

The identity of ownership (Family, Managerial, Public and Controlled) may be linked to IBs' performance. Our results suggest a positive and significant relationship between family owned IBs and their performance (ROAE) before, during and after 2008/2009 financial crisis. This result is consistent with Charreaux (1991)' conclusion about family Owned firms and performance (ROAE). We can also argue that, this relationship between Family owned IBs and performance is positive and statistically significant because Family shareholders may have better information compare to other types of shareholders because of their close relationship with leaders and administrators.

This study also suggests a positive and significant relationship between managerial ownership and IBs' performance during and after financial crisis. We also observe insignificant relationship during study period. The positive and significant relationship between managerial property and IBs' performance (ROE) is consistent with Charreaux (1991)', Soufeljil et al. (2016)'; Mueller and Spitz (2002)'; Donghui et al., (2007)' and Palia and Lichtenberg (1999)' findings. This link may be explained through the better decisions managers could take because of their positions and impact of these decisions on IBs' performance. This conclusion confirms the thesis of the convergence of interests, which stipulates that, the value of the firm increases with the proportion of control held by the managers. Controlled property is also positively and significantly linked to IBs' performance due sometimes to the monitoring role of institutional funds and their ability to maximize IB's profitability. GMM' regression displays a negative and significant relationship between public owned IBs and performance (ROAA), this result is consistent with Ongore (2011)' findings. In fact, according to him, public owned firms are governed by bureaucrats and politicians with no significant cash flow since all the profits generated by the firms are channelled to the government exchequer to finance the national budget.

We also noticed that, couple of corporate governance' factors influence the relationship between ownership structure and bank'

performance, factors like number of session held by the BOD, the size of BOD, the size of supervisory board of Sharia (SSB), also certain bank-specify factors (NLTA, NLDSTF, CIR, etc.) may influence this relationship. As we can see, our main hypotheses have been confirmed by these results.

Furthermore, our findings shed out the link between SSB and IBs performance and its role in the conceptual framework of Islamic corporate governance which suggests that Islamic financial institutions enjoy an extra layer of governance concerned with sharia rules and ethical behaviours that may reduce opportunistic actions leading to less agency conflicts.

Finally due to its limitations, this paper could be extended in many ways. Before crisis period 2006 to 2007 can be extended by starting from 2000 in order to really appreciate evolution of ownership structure' impact in IBs' performance. The scope of this study can also be extended to explain the comparative impact of ownership structure of both CBs and IBs' performance (e.g. Tobin Q) in many regions. The validity of the findings interpreted in this study is limited to the scope of the data and conditions of economics for the period of the data.

REFERENCES

Abbas, S.Z., Rahman, R.A., Mahenthiran, S. (2009), Ultimate ownership structure and performance of Islamic institutions in Malaysia. FMA International First Asian Conference.

Alman, M. (2012), Shari'ah Supervisory Board Composition Effects on Islamic Banks' Risk-Taking Behavior. Bamberg University, p44.

Arellano, M., Bover, O. (1995), Another look at the instrumental variable estimation of error-components models. Journal of Econometrics, 29-51.

Asadi, A., Pahlevan, M. (2016), The relationship between ownership structure and firms' performance in tehran stock exchange. Journal of Insurance and Financial Management, 1(2), 62-76.

Beck, T., Demirgüç-Kunt, A., Merrouche, O. (2013), Islamic vs. conventional banking: Business model, efficiency and stability. Journal of Banking and Finance, 37, 433-447.

Bektas, E., Kaymak, T. (2009), Governance mechanisms and ownership in an emerging market: The case of Turkish banks. Emerging Markets Finance and Trade, 45, 20-32.

Berle, A., Means, G. (1932), The Modern Corporation and Private Property. New Brunswick: Harcourt Brace and world, Inc.

Blundell, R., Bond, S. (1998), Initial conditions and moment restrictions in dynamic panel data models. Journal of Econometrics, 115-143.

Bonin, J.P., Iftekhar, H., Wachtel, P. (2004), Bank performance, efficiency and ownership in transition countries. Journal of Banking and Finance, 29, 31-53.

Bourkhis, K., Nabib, M.S. (2013), Islamic and conventional banks' soundness during the 2007–2008 financial crisis. Review of Financial Economics, 22(2), 68-77.

Bourkhis, K., Omri, A. (2016), Ownership concentration, risk and performance: Comparison between MENA islamic and conventional banks. Journal of Islamic Legal Studies, 2(2), 28-57.

Busta, I. (2007), Board effectiveness and the impact of the legal family in the European banking industry. Barcelona, Spain: Paper Presented at the Meeting of FMA EUROPEAN Conference.

Chapra, U. (2009), Global Financial Crisis: Can Islamic Finance help? A Book Chapter in the Issues of International Financial Crisis from Islamic Perpective. Saudi Arabia: Islamic Economy Research Centre.

Chapra, U., Ahmed, H. (2002), Corporate Governance in Islamic Financial Institution. Djeddah Saudi Arabia: Islamic Development Bank – Islamic Research Training Institute.

Charreaux, G. (1991), Structure de propriété, relation d'agence et performance financière. Revue Économique, 42(3), 521-552.

Classens, S., Djankov, S., Lang, L. (2000), The separation of ownership and control in East Asian corporations. Journal of Financial Econmics, 58, 81-112.

Demsetz, H. (1983), The structure of ownership and the theory of the firm. Journal of Law and Economics, 1983, 375-390.

Demsetz, H., Lehn, K. (1985), The structure of corporate Ownership: Causes and Consequences. Journal of political economy, 93(6), 1155-1177.

Donghui, L., Fariborz, M., Pascal, N., Tan, L-W. (2007), Managerial ownership and firm performance: Evidence from China's privatizations. Research in International Business and Finance, 21(3), 396-413.

Drukker, M. (2003), Testing for serial correlation in linear panel-data models. The Stata Journal, 2(3), 168-177.

El Said, A., Ziemba, R. (2009), Stress-testing Islamic Finance. Roubini Global Economics.

Ernst, & Young. (2016), World Islamic Banking Competitiveness Report. MENA: Ernst and Young.

Fama, E.F. (1980), Agency problems and the theory of the firm. Journal of Political, 88(2), 288-307.

Fama, E.F., Jensen, M.C. (1983a), Problems and residual claims. Journal of Law and Economics, 1983, 327-350.

Fama, E.F., Jensen, M.C. (1983b), Separation of ownership and control. Journal of Law and Economics, 1983, 301-326.

Fauzi, F., Locke, S. (2012), Board structure, ownership structure and firm performance: A study of New Zealand listed-firms. Asian Academy of Management Journal of Accounting and Finance, 8(2), 43-67.

Fazlzadeh, A., Hendi, A., Mahboubi, K. (2011), The examination of the effect of ownership structure on firm performance in listed firms of Tehran stock exchange based on the type of industry. International Journal of Business and Management, 3(6), 249-266.

Garas, S. N., Pierce, C. (2010), Shari'a supervision of Islamic financial institutions. Journal of Financial Regulation and Compliance, 18(4), 386-407.

Godard, L., Schatt, A. (2000), Quelles sont les caractéristiques optimales du conseil d'administration? La Revue du Financier, 127, 36-47.

Grais, W., Pellegrini, M. (2006), Corporate Governance and Shariah Compliance in Institutions Offering Islamic Financial Services. World Bank Policy Research Working Paper 4054, p38.

Hassoune, A. (2002), Islamic banks profitability in an interest rate cycle. International Journal of Islamic Financial Services, 4(2), 13-21.

Hutchinson, M. (2002), An analysis of the association between firm's investment opportunities, board composition and firm performance. Asia Pacific Journal of accounting and Economics, 9, 17-39.

Iannotta, G., Nocera, G., Sironi, A. (2007), Ownership structure, risk and performance in the European banking industry. Journal of Banking and Finance Elsevier, 31(7), 2127-2149.

Iqbal, Z., Mirakhor, A. (2004), Stakeholders model of governance in Islamic economic system. Islamic Economic Studies, 11(2), 1-10.

Jensen, M., Meckling, W. (1976), Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3(4), 305-360.

Khamis, R., Allam, M.H., Elali, W. (2015), The relationship between ownership structure dimensions and corporate performance: Evidence from bahrain. Australasian Business and Finance Journal, 9(4), 38-56.

Khamis, R., Wajeeh, E., Hamdan, A. (2015), Ownership structure and corporate financial performance in Bahrain bourse. Corporate Ownership and Control, 13(1), 413-434.

KKhizer, A., Akhtar, F.M., Zafar, A.H. (2011), Bank-specific and macroeconomic indicators of profitability empirical evidence from the commercial banks of Pakistan. International Journal of Business and Social Science, 6(2), 235-242.

Kusuma, H., Ayumardani, A. (2016), The corporate governance efficiency and Islamic Bank performance: An Indonesian evidence. Polish Journal of Management Studies, 13(1), 10-20.

Kuznetsov, A., Kapelyushnikov, R., Dyomina, N. (2010), The Impact of Concentrated Ownership on Firm Performance in an Emerging Market: Evidence from Russia. Moscow: The Russian Academy of Sciences, p40.

La Porta, R., Lopez□de□Silanes, F., Shleifer, A., Vishny, R. (2002), Investor protection and corporate valuation. Journal of Finance, 57(3), 1147-1170.

Lawriwsky, M. (1984), Corporate Structure and Performance. New York: St. Martin's Press.

Madani, W.E., Khlif, W. (2010), Effets de la structure de propriété sur la performance des entreprises tunisiennes. La Revue Des Sciences de Gestion, 3-4(243-244), 63-70.

Maher, H., Jemma, D. (2010), The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study. IMF Working Paper. Monetary and Capital Markets Department & Middle East and Central Asia Department.

Matoussi, H., Grassa, R. (2012), Is corporate governance different for islamic banks? a comparative analysis between the gulf cooperation context and the Southeast Asia context. Economy Research Forum, 734, 30-38.

McConnell, J.J., Servaes, H. (1990), Additional evidence on equity ownership. Journal of Financial Economics, 27, 565-612.

Mollah, S., Zaman, M. (2015), Shari'ah supervision, corporate governance and performance: Conventional vs. Islamic banks. Journal of Banking and Finance, 58, 418-435.

Morck, R., Schleifer, A., Vishny, R.W. (1988), Management ownership and market valuation: An empirical analysis. Journal of Financial Economics, 20, 293-315.

Mueller, E., Spitz, A. (2002), Managerial Ownership and Firm Performance in German Small and Medium-Sized Enterprises. Centre for Economic Performance London School of Economics and Political Science, p36.

Olson, D., Zoubi, T. (2016), Convergence in bank performance for commercial and Islamic banksduring and after the global financial crisis. The Quarterly Review of Economics and Finance, 65, 71-87.

Ongore, V.O. (2011), The relationship between ownership structure and firm performance: An empirical analysis of listed company in Kenya. African Journal of Business Management, 5(6), 2120-2128.

Palia, D., Lichtenberg, F. (1999), Managerial ownership and firm performance: A re-examination using productivity measurement. Journal of Corporate Finance, 5, 323-339.

Pathan, S., Faff, R. (2013), Does board structure in banks really affect their performance? Journal of Banking & Finance, 37(5), 1573-1589.

Pindado, J., Torre, C.D. (2004), Why is ownership endogenous? Applied Economics Letters, 11(4), 901-904.

Poi Hun, S., Shamsher, M., Ariff, M. (2016), Determinants driving bank performance: A comparison of two types of banks in the OIC. Pacific-Basin Finance Journal, 42, 193-203.

Pound, J. (1998), Proxy contests and efficiency of shareholder oversight. Journal of Financial Economics, 20, 237-265.

Rachdi, H. (2013), What determines the profitability of banks during and before the international financial crisis? Evidence from Tunisia. International Journal of Economics, Finance and Management, 4(2), 2307-2466.

Rashid, A., Jabeen, S. (2016), Analyzing performance determinants: Conventional versus Islamic Banks in Pakistan. Borsa Istanbul Review, 12(2), 92-107.

Reyna, J.M., Vazquez, R.D., Valdes, A.L. (2012), Corporate governance: Ownership structure and performance in Mexico. International Business Research, 5(11), 16.

Shleifer, A., Vishny, R.W. (1986), Large sharholders and corporate control. Journal of Political Economy, 94(2), 461-488.

Solé, J. (2007), Islamic Banking Makes Headway. IMF RESEARCH. Available from: https://www.imf.org/en/News/Articles/2015/09/28/04/53/sores0919a.

Soufeljil, M., Sghaier, A., Kheireddine, H., Mighri, Z. (2016), Ownership structure and corporate performance: The case of listed Tunisian firms. Journal of Business and Financial Affairs, 5(4), 8.

Srairi, S. (2013), Ownership structure and risk-taking behaviour in conventional and Islamic banks: Evidence for MENA countries. Borsa Istanbul Review, 13, 115-127.

Stančić, P., Čupić, M., Obradović, V. (2014), Influence of board and ownership structure on bank profitability: Evidence from South East Europe. Economic Research-Ekonomska Istraživanja, 17(1), 573-689.

Uwalomwa, U., Olamide, O. (2012), An empirical examination of the relationship between ownership structure and the performance of firms in Nigeria. International Business Research, 5, 208-215.

Warde, I. (2000), Islamic Finance in the Global Economy. Edinburgh: Edinburgh University Press.

Zouari, S.B., Taktak, N.B. (2012), Ownership structure and financial performance in islamic banks: Does bank ownership matter? The Economic Research Forum (ERF), Working Paper 713, p25.

APPENDIX

Appendix 1: Full sample

Variables	ROAE	ROAA	N.I.M
Managerialfirm1	0.83576	0.49473	−1.26309
	(1.53813)	(0.68409)	(1.78199)
Controlledfirm2	1.34894	0.03864	0.88938
	(1.28931)	(0.57562)	(1.62481)
Familyownedfirm3	8.06598***	1.63181	3.28646
	(2.47758)	(1.12802)	(2.86958)
Publicownedfirm4=o,	-	-	-
log_SIZE	0.55279**	0.12322	0.39474
	(0.25407)	(0.11508)	(0.30039)
Board size of SSB	0.90933***	0.00724	0.19757
	(0.30421)	(0.13585)	(0.31596)
BODSIZE	−0.56515***	−0.00106	0.75801***
	(0.19658)	(0.08869)	(0.23164)
Region=2, GCC	2.76789*	0.28790	−18.56365***
	(1.53090)	(0.67356)	(1.75414)
Region=3, MENA	6.90035***	0.55052	−15.88597***
	(1.68450)	(0.74233)	(1.90946)
Region=4, Others	3.80796*	0.31497	−13.15566***
	(2.10817)	(0.93489)	(3.13044)
Region=5, West Europe	−1.86822	−0.67377	0.00000
	(2.77635)	(1.46524)	(0.00000)
Constant	−1.05726	0.32979	10.30523***
	(3.62437)	(1.68221)	(3.97724)
Observations	667	614	276
Number of pan id	89	89	45
Wald chi2	90.97***	33.56**	155.78***

Standard errors in parentheses. ***P<0.01, **P<0.05, *P<0.1

Appendix 2: Regression with concentration as main ownership structure variable

Table 6: Performance and ownership structure	ROAE	PRECRISIS 2006-2007 ROAA	NIM	ROAE	CRISIS 2008-2009 ROAA	NIM	ROAE	POSTCRISIS 2010-2015 ROAA	NIM
Concentration	−0.22513**	−0.06756	−0.07603	0.06625	0.02542	0.11558*	0.01146	0.00216	−0.02126
	(0.11452)	(0.04582)	(0.16681)	(0.06317)	(0.01979)	(0.06755)	(0.02507)	(0.00448)	(0.01959)
log_SIZE	1.79434	−0.70998	−9.97552***	5.14584***	0.84313*	−1.84844**	1.79566***	0.29408***	2.84545***
	(2.52206)	(0.88292)	(3.25571)	(1.45409)	(0.45542)	(0.91702)	(0.61632)	(0.11018)	(0.61098)
EQTA	−10.18478	7.44178	0.80025	10.80362	8.12607***	9.01187*	11.17357*	6.34652***	11.88753**
	(14.75535)	(5.04034)	(17.13240)	(9.17916)	(2.87487)	(4.98801)	(6.55391)	(1.17086)	(5.24317)
Net loans tot assets	0.00605	0.00075	0.03782	−0.02900***	−0.00867***	−0.01035	−0.00862**	−0.00146*	−0.02113***
	(0.01220)	(0.00469)	(0.03033)	(0.00653)	(0.00205)	(0.00725)	(0.00423)	(0.00076)	(0.00502)
Net Loans Dep STFundi	0.04254**	0.01157*	−0.00697	0.00531	−0.00248	−0.02413***	0.00467	−0.00014	0.00262
	(0.01832)	(0.00636)	(0.01994)	(0.01511)	(0.00473)	(0.00894)	(0.00617)	(0.00110)	(0.00419)
Cost To income ratio	0.04030	0.03590	0.34379**	−0.04759**	−0.00882	−0.06879**	−0.00729	-0.00541***	−0.00788
	(0.09199)	(0.03222)	(0.14194)	(0.02094)	(0.00656)	(0.02805)	(0.00769)	(0.00137)	(0.00643)
AGE	−0.58792**	−0.22131***	0.27594	−0.17692	−0.00176	−0.15441	0.07114	0.01923**	0.09873**
	(0.25274)	(0.08591)	(0.31767)	(0.11834)	(0.03706)	(0.10441)	(0.05209)	(0.00932)	(0.05010)
Boone indicator	−153.35519	−78.77310**	−654.82350***	35.42825	14.93260*	−7.54434	−13.03779	−2.23101	48.65598**
	(96.36239)	(33.73603)	(113.17875)	(25.41627)	(7.96027)	(12.17518)	(11.54752)	(2.06290)	(19.83425)
Board size of SSB	−1.84907	−0.23808	−8.26975***	0.96024	0.54919	2.93570***	0.72822	0.02754	−0.36181
	(1.23116)	(0.43828)	(2.11190)	(1.36046)	(0.42609)	(0.92921)	(0.49910)	(0.08908)	(0.39963)
Nber of session per year	−1.46701***	−0.40718**	−5.07901***	−1.11191**	−0.25471*	−0.35141	−0.09646	−0.05000**	−0.19181
	(0.51315)	(0.17932)	(1.46246)	(0.46662)	(0.14614)	(0.75470)	(0.12625)	(0.02253)	(0.26501)
BODSIZE	−1.82920**	0.26524	2.68037**	−1.03940**	0.00182	0.01586	−0.83756***	−0.21310***	0.94464***
	(0.77319)	(0.26533)	(1.25053)	(0.51979)	(0.16280)	(0.45888)	(0.28252)	(0.05057)	(0.25354)
Inflation	−0.14962	−0.05557	0.32166**	−0.12453	−0.03232	−0.08306	0.85567***	0.07647***	−0.07123
	(0.14937)	(0.05041)	(0.14310)	(0.40078)	(0.12552)	(0.15232)	(0.13433)	(0.02402)	(0.10645)
GCC	12.77603	−1.11997	0.00000	0.80707	−0.72657	−18.48571***	1.82669	−0.04810	−25.06840***
	(9.76165)	(3.86847)	(0.00000)	(4.80030)	(1.50343)	(2.66131)	(2.35058)	(0.41954)	(2.26049)
MENA	−0.54792	−6.98593	−96.03885***	35.43988***	9.14907***	−4.95275	0.41094	−0.29451	−13.71426***
	(13.36328)	(4.99704)	(20.37422)	(7.55678)	(2.36675)	(4.64816)	(2.74938)	(0.49065)	(2.30530)
Others	0.00000	0.00000	0.00000	23.14869***	5.84279**	0.00000	−1.55320	−0.53687	9.48469
	(0.00000)	(0.00000)	(0.00000)	(8.95515)	(2.80471)	(0.00000)	(4.75476)	(0.84843)	(6.12293)
West Europe	−31.75415	−32.09626***	0.00000	16.93177	0.54974	0.00000	0.00000	0.00000	0.00000
	(27.22033)	(9.98770)	(0.00000)	(10.40915)	(3.26010)	(0.00000)	(0.00000)	(0.00000)	(0.00000)
Constant	41.88648*	16.59918*	91.12546**	−22.62149*	−7.70593*	31.69132***	−17.22256**	−2.27313*	−6.45049
	(25.28612)	(8.51132)	(45.36809)	(13.49585)	(4.22684)	(11.39581)	(6.93377)	(1.24381)	(7.44525)
Observations	26	25	17	33	33	23	176	175	105
Number of pan_id	17	17	11	19	19	13	56	50	31
Years dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wald chi 2	85.00***	195.09***	142.34***–	118.35***	80.95***	479.88***	88.23***	83.09***	248.31***