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Correlation analysis between the corporate governance and financial performance of banking sectors using parameter estimation

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Abstract: Present paper deals with problems of determining the relationship between the variables of corporate governance and financial performance of Islamic banks, where we dealt the corporate governance in the banking sector, where increasing the importance of corporate governance, due to their special nature, as the bankruptcy of banks affects not only the relevant parties from customers, depositors and lenders, but affect financial stability and then the economy as a whole. Through this paper we dealt to the specificity of governance in Islamic banks, which face Double Governance: Anglo-Saxon governance system and Islamic Governance System. In addition, we focused our attention to measure the impact of corporate governance variables on financial performance through an empirical study on a sample of Islamic banks during the period 2005-2012 in the GCC region. Our present study implies that there is a very strong relationship between the variables of governance and financial performance of Islamic banks, where there is a positive relationship between return on assets and the composition of the Board of Directors, the size of the Board of Directors, the number of committees in the Council, as well as the number of members of the Sharia Supervisory Board, while it is clear that there is a negative relationship between return on assets and concentration ownership variable.

Keywords: Correlation analysis, parametric estimation, corporate governance, financial performance, financial stability, conventional banks, bankruptcy, Islamic governance system

1. Introduction

Recent trends in corporate governance has significantly influenced in business community of the world. The past events experienced by the global economy put the concept of governance on top of the interest of the business community and international financial institutions, since 1997 the date of the Asian financial crisis, through the scandal of "Enron" company in 2003, leading to the current financial crisis, all the crises highlighted the importance of corporate governance as a platform optimized for the treatment and prevention of crises. Several number of previous researchers [1,5,6,7,8,9,10,11] and references therein applied different statistical tools and techniques to explore a variety of conclusive results in this direction or its version. Past and recent researchers [2,3,4,12,13,14,15] agree that corporate governance play an important role in the development of the level of performance and reduce the degree of risk-related to administrative and financial corruption at the level of institutions and nations too.

The applications of corporate governance are more important in the banking sector from other sectors because banks include a set of elements and inter relationships that do not exist in other sectors and greatly affects the nature of the governance system. This concept perhaps became more important and complex in Islamic banks; because of the complex of banking operations which are vary in form and substance from the conventional banking operations, in addition to the presence of two boards: the Board of Directors and *Shariah* Supervisory Board.

2. Methodology and Hypotheses

2.1. Problematic

Through the above concept we can put the following question:

What is the nature of the relationship between the variables of corporate governance and financial performance of Islamic banks?

2.2. Research Hypotheses

In order to answer this question, we have formulated the following hypotheses based on feasibility and relevancy:

- There is a statistically significant relationship between the variables of corporate governance and financial performance of Islamic banks;
- There is a positive relationship between the composition of the Board of Directors and committees of the Council, and the return on assets;
- There is a negative relationship between the size of the Board of Directors and the ownership concentration and financial performance of Islamic banks;
- There is no relationship between the number of members of the Sharia Supervisory Board and the financial performance of Islamic banks.

3. Corporate Governance in Banking Sectors

In this section, the concept and importance of corporate governance in the banking sectors have been presented. The concept of governance in the banking perspective is the way of managed the affairs of the bank through the role of management and the Board of Directors; including influences in determining the objectives of the bank and taking into account the rights of creditors and protect the rights of depositors. The importance of corporate governance increasing in banks, compared to other institutions due to their special nature; because the bankruptcy of the banks does not affect only the relevant parties of the customers and depositors and lenders ; but also affect the stability of other banks through various relationships existing between them known as Interbank Market; then affect the financial stability of the banking sector and the economy as a whole, especially after the global transformations that have occurred from globalization and technological developments and financial liberalization policies; which inevitably led to rise the size of the risk at the level of the banking sector, for more details we refer Ghazi Louizi [2].

It has been experienced based on facts and recent trends that the problem of governance is considered the most complicated in the banking sector than other sectors, because banks have a set of elements not found in other sectors such as deposit insurance, management of systemic risk, estimation of capital for borrowers and internal control system, as well as the capital structure which is formed generally a large proportion of debt and a small percentage of equity, and the sources of funds in the bank to be mostly in the form of deposits required to be made available upon request by depositors; while the assets of the bank and loans are mostly in the form of medium and long term.

In this context, Mehram [12] proposed that monitoring are more stringent of banks compared with other institutions; where characterized by conflict of interests between the different parties intricately; then there must be a clear and well system of governance contribute to clarifying the rights and obligations of all concerned parties. Subsequently in 2007, Sebastian [15] asserted that the well application of the principles of corporate governance in banks leads to increase operational efficiency by reducing the costs of inputs and maximizing the profits of outputs; which allows an increase in the market value of the financial institution.

4. Determinants of Implementation of Corporate Governance in Banks

The application the good quality of governance of bank depends categorically on two sets of parameters:

- *Internal Determinants:* The rules and principles that determine the way of decision-making and the distribution of powers between the General Assembly and the Board of Directors and managers; leading to the reduction of conflict between the interests of these parties**.**
- *External Determinants:* The organizational elements include the overall investment climate in the country; which includes laws regulating the market, the efficiency of the financial sector which provide the necessary funding for the projects and the degree of competitive of goods market and factors of production, the efficiency of regulatory institutions and investment companies in the capital markets and special items include stakeholders and private institutions and professionals from accountants, auditors, legal and others.

5. The Role of Central Banks in Corporate Governance

The central banks are playing key role in activating and establishing governance at the level of the banks; through the procedures of banking supervision and prevention, and internal control enough to achieve adequate protection of the assets of financial and banking institutions and the rights of depositors, and ensure the safety of its financial position and strengthen their financial and administrative stability, we refer Jean-Pierre [3]

6. Governance of Islamic banks and Conventional Banks

Islamic banks differ in form and content for traditional banks; which Islamic bank based on a set of principles that cannot be waived, or they lost its identities, and these mainly principles are:

(i) The principle of profit and loss sharing;
(ii) The principle of trading on the basis of the property and not on the basis of debt;
(iii) The principle of Commitment to the rules of Islamic *Shariah*.

While the traditional bank relies on the principle of pre-determined interest, so we find that the contracts which are based on the principle of participation in profit and loss is characterized by a high degree of risk compared to the contracts which are based on pre-determined interest; which requires fair and effective management and clear transparency in the rights and obligations of each party.

The principle of compliance with the Islamic law is not seen only as a matter of applying the principle of profits and losses sharing or non-financing of forbidden project, but also be seen as a matter of the commitment of persons engaged in the bank to the principles of Islamic law in their behavior and their actions.

Through the composition of the basic elements of governance we find that the traditional banks include mainly four elements- the shareholders, board of directors, executive management and other stakeholders , while we add to the Islamic banks the fifth element that is the *Shariah* supervisory board which ensures the control of the compatibility of the bank's activities with the principals of the Islamic law , so the system of governance in Islamic banks are different from the system of governance in traditional banks , when we can say that the Islamic banks are facing a *Double Governance* based on the principles of Anglo-Saxon corporate governance imposed by the non-Muslims shareholders and customers and the international institutions, and the of Islamic governance system imposed by the Muslims shareholders and customers as well as *shariah* supervisory comities. In this connection we refer past research work of Mohammed and Ahmad [13].

7. Main Characteristics of Governance in Islamic Banks

Governance in Islamic banks including the following characterizes:

- Islamic banks are obliged to apply more the principals of corporate governance to take into account the interests of investment depositors based on the principle of profit and loss sharing which means high degree of risk compared to depositors in the conventional banks;
- The presence of bi-governance resulting from the presence of two different boards: the Board of Directors in order to monitor the administrative side of the bank, and *Shariah* Supervisory Board to monitor the Islamic side of the banking operations;
- The presence of two different aims in the same bank can increase the severity of conflict of interest, and of course it may generate some difficulties in the activity of the Islamic bank.

8. Empirical Study of Islamic Banks

8.1. Variable Parameters of the Study

The model includes a dependent variable is the return on assets (ROA), which reflects the financial performance of Islamic banks, and six independent variables reflect five of them on the key variables of corporate governance, which consist principally of composition of the Board of Directors variable which can be measured by the number of members independent of the Council, the size of the Board of Directors variable, which is expressed through a number of managers in the Council, a number of board committees variable, concentration of ownership variable, which is measured by the percentage of shares owned by major shareholders, the size of the *Shariah* Supervisory Board, which is measured by a number of members, and the last one called variable of control is the size of the bank measured by the logarithm of total assets, which can be illustrated more in the following table:

Table 1. *Variables of the study*

Type of he variable	Name of the variables	Symbol	Measurement
The dependent variable	Performance	ROA	Net profit/ total assets
Independent variables	The composition of the Board of Directors	BCM	The number of independent members of the Board
	The size of the Board of Directors	BSZ	The number of managers in the Council
	Board Committees	CBD	The number of committees in the Board of Directors
	Concentration of ownership	OCN	Percentage of shares owned by major shareholders
	Size of the Sharia Supervisory Board	SSB	Number of members of the Sharia Supervisory Board
	The size of the bank (variable control)	SZE	Logarithm of total assets

8.2. Measurement Model Using Correlation Analysis

For the purpose to measure the impact of corporate governance variables in the performance of Islamic banks; we use here correlation analysis method according to the following equation:

$$ROA_{it}= \alpha0+ \beta_1 BCM_{it}+ \beta_2 BSZ_{it}+ \beta_3 CBD_{it}+ \beta_4 OCN_{it}+ \beta5SSB_{it}+ \beta_5 SZE_{it}+ \varepsilon_{it}$$

- (ROA_{it}): the dependent variable that shows the financial performance of Islamic banks;
- (β_1-β_5): coefficients of independent variables;
- BCM_{it}: the number of independent members of the Board;
- BSZ_{it}: the number of managers in the Council;
- CBD_{it}: the number of committees in the Board of Directors;
- OCN_{it}: percentage of shares owned by major shareholders;
- SSB_{it}: size of the Sharia Supervisory Board;
- SZE_{it}: the size of the Islamic bank;
- ε_{it}: random error.

9. The Sample for Empirical Study

The sample studied composed from 12 Islamic banks have been selected on the basic of availability of data represented in the following table:

Table 2. *The study sample*

No	Country	Name of Bank	Period
1		Dubai Islamic Bank	2005- 2012
2	Emirates	Abu Dhabi Islamic Bank	2005- 2012
3		Emirates Islamic Bank,	2005- 2012
4		Sharjah Islamic Bank	2005- 2012
5		Kuwait Finance House,	2005- 2012
6	Kuwait	Kuwait International Bank	2005- 2012
7		Al-Rajhi Bank	2005- 2012
8	KSA	Bank Al Bilad	2005- 2012
9		Qatar Islamic Bank	2005- 2012
10	Qatar	Qatar international Islamic Bank	2005- 2012
11		Bahrain Islamic Bank	2005- 2012
12	Bahrain	Shamil Bank of Bahrain	2005- 2012

The data were obtained through the annual reports of Islamic banks under study and *ZAWYA* Company during the period 2005-2012. We can summarize the evolution of the average variables Islamic banks under study during the period 2005-2012 in the following table:

Table 3. *Evolution of the average variables of the study during 2005-2012*

Year	ROA	BCM	BSZ	CBD	OCN	SSB	SZE
2005	0.4	2	4	2	0.17	2.5	4.53
2006	0.5	3	5	2	0.19	3.5	5.04
2007	0.6	3	6	3	0.21	3.5	6.02
2008	0.4	3	6	3	0.25	4	6.24
2009	0.8	4	7	4	0.28	4.5	5.12
2010	0.6	6	9	4	0.31	5	6.64
2011	0.7	8	10	5	0.36	5.5	7.28
2012	0.6	8	10	5	0.35	5.5	8.59

In order to illustrate more specific information for the evolution of the study variables during the period 2005-2012, relevant graph has been plotted in the following figure:

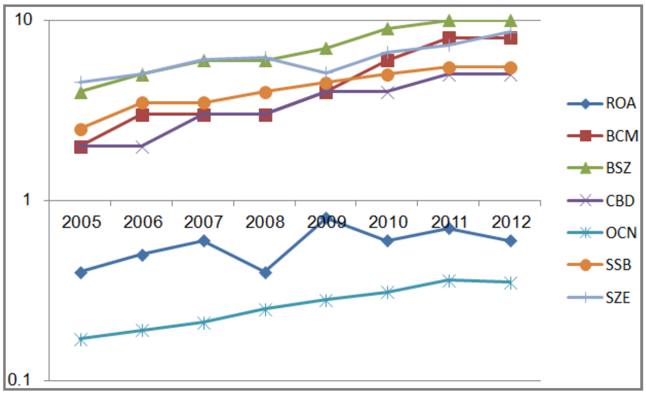

Figure 1. *The evolution of the study variables during the period 2005-2012*

10. Statistical Data for Empirical Study

Table 4. *Statistical data for the variables of the study*

Variable	Lowest value	Greatest value	Average	Standard deviation
ROA	0.40	0.80	0.57	1.069
BCM	2.00	8.00	4.62	2.386
BSZ	2.00	5.00	3.50	1.195
CBD	4.00	10.00	7.12	2.295
OCN	0.17	0.36	0.26	0.072
SSB	2.5	5.5	4.25	0.123
SZE	4.53	8.59	6.18	1.331

Following table 4 shows the most important statistical data for the variables used in the study; where it is clear that the average of dependent variable return on total assets(ROA) estimated at about 57%, and the average of composition of the Board of Directors variable (BCM) about 4.62; means an average of 5 independent members of the Board of Directors; meaning that there is an acceptable number of independent members; which increases the independence and transparency of the Council; then the effectiveness of corporate governance.

As for the size of the Board of Directors variable (BSZ) it is clear that the average number of managers in the Council is estimated at 3.5. As for board committees variable (CBD) estimated the average number of committees in the Board of Directors about 7 committees, which is close to the average number of committees recommended by corporate governance rules.

For concentration of ownership variable (OCN) it is clear that the average proportion of shares owned by major shareholders is estimated at about 26% of the total stock, that means any one does exceed 50%, a ratio showing the inability of the major shareholders to control the decisions of the bank and directed to their own interests; which helps on the application of the principles of corporate governance; then the performance of the banks.

With regard to the size of the *Shariah* Supervisory Board variable (SSB) it is clear that the average number of members is estimated at about 4 members; which facilitates the work of the *Shariah* Supervisory Board.

11. Estimation of Involved Parameters

Table 5 shows the results of estimating correlation function between the return on total assets, which reflects the financial performance of Islamic banks under study and corporate governance variables, were using the least squares method.

Table 5. *Estimation of Parameters*

Dependent Variable: ROA				
Method: Least Squares				
Date: 09/28/13 Time: 13:04				
Sample: 2005 2012				
Included observations: 8				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.763170	0.086734	8.798979	0.0720
BCM	0.019878	0.018890	1.052300	0.4838
BSZ	0.014649	0.034275	0.427384	0.7429
CBD	0.341764	0.041028	8.330054	0.0761
OCN	-7.602260	1.109676	-6.850885	0.0923
SSB	0.268057	0.054682	4.902080	0.1281
SZE	-0.114079	0.015003	-7.603836	0.0832
R-squared	0.995627	Mean dependent var		0.575000
Adjusted R-squared	0.969386	S.D. dependent var		0.138873
S.E. of regression	0.024298	Akaike info criterion		-4.926265
Sumsquaredresid	0.000590	Schwarz criterion		-4.856753
Log likelihood	26.70506	F-statistic		37.94270
Durbin-Watson stat	2.493449	Prob(F-statistic)		0.123636

12. Results and Observations of the Study

Table 5 shows the estimated coefficients of the model, the value of the ***t***-statistic, the standard deviation, the probability of error, the results show that the value of the determination coefficient (R^2) is estimated at 0.99; meaning that there is a very strong relationship between the return on assets (ROA) and the variables of corporate governance, the results show that the coefficient Durbin Watson have reached statistical value of 2.49; it is clear that there is no problem of autocorrelation**.**

Through coefficients of independent variables it is clear that there is a positive relationship between return on assets (ROA) and all of: the composition of the Board of Directors, the size of the Board of Directors variable, number of committees in the Council variable as well as a number of the members of the Sharia Supervisory Board variable**,** while it is clear that there is a negative relationship between return on assets (ROA) and concentration of ownership variable; means that the high percentage of shares owned by major shareholders decrease performance of Islamic banks.

13. Conclusions and Recommendations

Here, a measurement model for correlation analysis between the variables of corporate governance and financial performance of Islamic banks has been successfully attempted. The importance of corporate governance evident from its objectives, which is to achieve transparency, justice and grant accountability of Manager; then achieve protection for shareholders, taking into account the interests of employers and workers reduce of abuse of power in the public interest; lead the development of investment, savings and maximize profitability of institutions.

The existence of an effective and capable system of providing trust and anti-corruption in the Islamic financial institutions will return them further success, and will support the expansion of its operations, but that requires the support of the other departments related to governance within the financial institution such as management commitment, internal audit and legal department, as well as *sharia* supervisory committees of both types Internal and external.

The application of the principles of corporate governance in Islamic banks imperative through the analysis of the contracts and determine the terms and conditions carefully, both religious and organizational; including moving away from any fraud or foolishness or tricked. Islamic banks will be efficient if managers succeeded in achieving two goals at the same time, a financial goal to meet the demands of shareholders and investors; and religious goal to conform the banking operations to the Islamic principles.

The empirical study found to the following results:

- There is a positive relationship between the financial performance of Islamic banks (ROA) and the composition of the Board of Directors (the number of independent members);
- There is a positive relationship between the financial performance of Islamic banks (ROA) and the size of the Board of Directors (number of director) ;
- There is a positive relationship between the financial performance of Islamic banks (ROA) and the number of committees in the Board of Directors;
- There is a positive relationship between the financial performance of Islamic banks (ROA) and the number of members of the Sharia Supervisory Board;
- There is a negative relationship between the financial performance of Islamic banks (ROA) and the concentration ownership (the ratio of shares owned by major shareholders).

As for as its future scope is concerned, with passing remarks we suggest that the present study can be expended for other regions of Asian, European and African countries.

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