EUROPEAN ACADEMIC RESEARCH
Vol. V, Issue 2/ May 2017

Impact Factor: 3.4546 (UIF)
DRJI Value: 5.9 (B+)

ISSN 2286-4822
www.euacademic.org

Impact of products diversification on financial stability of Islamic banks Longitude study (2001 to 2013)

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Abstract:

This study aims to investigate the impact of products diversification and unrestricted investment accounts on financial stability of Islamic banks. To get perfect result the study follows multi level model which is based on quantitative and qualitative analysis.

The results showed that products diversification reduce withdrawals risk, and increase financial stability. There is a negative &weak relationship between Z Score and long term investments, unrestricted with 93% confidence.

Key words: Z score, long-term investment, unrestricted deposits account

1- INTRODUCTION:

Islamic banks are characterized by the compliance to Islamic laws and practices, the main ones being the prohibition of interest and loans trading. Remarkably, during the 2008-2009 financial crisis, when a large number of conventional banks have announced bankruptcy, no single Islamic bank failure has been reported. However, there is no clear consensus in the literature on question how Islamic banks save their stability. So this study tries to analyze Islamic bank performance to discover factors which are affecting positively on financial

stability in Islamic Banks, specially the study focuses on product diversification ,unrestricted deposits accounts and long-term investment, so that to investigate their effect on financial stability of investigated banks.

2- LITERATURE REVIEW :

2-1- Financial stability background:

The purpose of the study is to review research in the area of financial stability in the Islamic banks.

The segment of FS literature that looked into how the term can be defined come the conclusion that the term is very complex to have it defined clearly and comprehensively and it is even harder to measure (Allen and Wood 2005, Schinasi 2007, and Gadanecz and Jayaram 2009). As a result, three main approaches have been followed to overcome this stalemate: (i) to ignore the definition altogether, (ii) to define FS through its antithesis (i.e. financial instability) and finally (iii) some sort of a definition that follows certain route and fulfills special purpose.

Following the latter approach there is a general consensus that FS should reflect 'the smooth functioning of a complex nexus of relationships among financial markets, infrastructures and institutions operating within the given legal, fiscal and accounting frameworks. (Čihák, 2006; Oosterlooa and Haan, 2004 and Gadanecz and Jayaram, 2009). However, when it comes to putting such a general consent into a well-defined and policy useful definition, the views differ considerably. This difference in views has been translated into the emergence of at least three main approaches: the broad, the narrow, and what I may call the 'listing' exposition. The broad definition of the FS term concentrates on the system-wide assessment. The attempt, in this regard, is to capture the stability aspects of the entire system rather than singling out an individual component of it**.** In planning for the

aforementioned 1985 conference the organizers defined FS as: "the soundness of depository institutions involved in the provision of monetary assets". According to this view, 'the important criterion was not the numbers of bank failures *per se*, but the degree to which liquidity and solvency crises would reverberate beyond individual institutions' (FRBSF, 1985). It should be noted here that the very long historical record of financial crises reveal an established fact about banks and the banking industry. This type of financial intermediaries has been at the heart of almost all financial turbulences that the conventional system has suffered from. Therefore, not surprising that most of the policy and empirical literature have devoted much of their efforts:

- As for the broad definition, the Reserve Bank of Australia (the Australian Central Bank), for instance, defines FS as a situation in which "financial intermediaries, markets and market infrastructure of the financial system facilitate the smooth flow of funds between savers and investors and by doing so, helps promote growth in economic activity", (Alawode and Al Sadek 2008).
- The 'listing' approach can be viewed as an extension or an elaboration of the broad way of defining FS. The main rationale behind such an elaboration has been to overcome some of the shortcomings of the narrow approach and the difficulties that surround the development of a broad definition. The authors who have followed this route identified a number of elements and/or desired features which they consider as important 'raw materials' for the make-up of a 'good' FS definition. Among the aspects pointed out (Allen and Wood 2006, and Schinasi 2004) are the following:
  - The definition should be broad in nature. Thus, it should encompass the different aspects of the financial system: infrastructure (including the legal

system and official frameworks for financial regulation, supervision, and surveillance), institutions, and markets. Some advocates of this view went beyond the financial system to emphasize the importance of encompassing shocks that hit the real sector, but have dire consequences on the functioning of the financial system.

- The definition should not limit the FS scope of the financial system to resources and risks allocation, mobilizing savings, and facilitating wealth accumulation, development, and growth; it should also imply that the systems of payment throughout the economy functions smoothly.
- The FS concept should relate not only to the absence of actual financial crises but also to the ability of the financial system to limit, contain, and deal with the emergence of imbalances before they constitute a threat to itself or economic processes. In a well-functioning and stable financial system, this occurs in part through self-corrective, market-disciplining mechanisms that create resilience and prevent problems from festering and growing into system-wide risks

Financial stability measurement:

The Z score model had developed to measure financial strength which indicates the stability of institutions .This model first developed in 1968, Altman's primary improvement over prior methods was to apply discriminates analysis which simultaneously took into account multiple variables to ascertain financial strength .as an open system users enjoy the benefits without the additional cost incurred with the proprietary black box system. No hidden magic –only solid financial analysis.

The Z score has continued to evolve over time with new version developed specifically for private companies. It gained wide acceptance from auditors, management accountants courts, and data base systems used for loan evaluation. The formula's approach has been used in a variety of contexts and countries. Forty years of public scrutiny speaks to its validity.

The method examines liquidity, profitability, reinvested earnings and leverage which are integrated into a single composite score. It can be used with past, current or project data as it requires no external inputs such as GDP or market price.

Z score = **6.56 (x1) + 3.26(x2) +6.72(x3) + 1.05(x4).** Altman, Edward I. (May, 2002)

Where:- Z = a proxy variable of insolvency risk
X1= working capital /total assets
X2= retained earnings /total assets
X3 = earnings before interest &tax /total assets
X4= total book equity / total liabilities.

A higher score indicates greater financial strength with a lower probability of default and vice versa.

The method examines liquidity, profitability, reinvested earnings and leverage which are integrated into a single composite score. It can be used with past, current or project data as it requires no external inputs such as GDP or market price.

Zones of discriminations:
Z > 2.6 -"Safe" Zone
1.1 < Z < 2. 6 -"Grey" Zone
Z < 1.1 -"Distress" Zone . .

2-2- Latest studies:

There are several workers had outlined the financial stability in Islamic banks. Most of them search about the stability of Islamic banking and its comparison with conventional banking such as: Vasleios Pappas, Marwan Izzeldin, Ana Maria Fueles (dec,2012)

They defined failure risk (credit risk, deposit withdrawal risk, operational risk), they compared Islamic and conventional banks regarding the sensitivity of failure risk. They demonstrated that: Islamic banks well capitalized ,characterized by large liquidity levels, and lower leverage ,have large operational risk, failure risk of Islamic banks is significantly lower than that of conventional banks ,Islamic banks have lower insolvency risk and loan default risk, this result is complements recent findings (Cihk and Hesse,2010) ,also they demonstrated that expansion in loan portfolio is not associated with a larger probability of failure Martin Cihak, Heiko Hesse (Dec,2010) they found that small Islamic banks tend to be financially stronger than small commercial banks, large commercial banks tend to be financial stronger than large Islamic banks, small Islamic banks tend to be financially stronger than large Islamic banks which may reflect challenges of credit risk management in large Islamic banks. Pejman Abedifar, Philip Molyneux, Amine Tarazi (3 April, 2011) demonstrated that: Islamic banks have low credit risk as compare to their conventional counterparts .also They had showed that Islamic banks in general have lower degree of stability compared to the conventional counterparts. Hassan B. Ghassan, Stefano Fachin, Abdelkarim A. Gundoz, (2013) they used Z score stationary around some long-run desired level determined by total asset, credit to assets ratio concentration of the banking sector and share of Islamic banking their findings: individual heterogeneity matter more than the conventional or Islamic nature of the bank regarding financial stability. Pejman Abedifar, Philip Molyneux, Amine Tarazi, (May 2012). They

had demonstrated that small Islamic banks appear more stable; loan quality of Islamic banks is less responsive to domestic interest rates compared to conventional banks.

Elzahi Abd Elrhman, 2010, have investigated the impact of banks 'structure on financial stability ,he found that : positive relationship between bank market power and financing portfolio risk; equity capital was positively related to stability ;Islamic banks might take more risks in connection with the more variations in economic development .

3- METHODOLOGY:

The study follows multi level model (mixed) which include quantitative by employing data content analysis after collecting secondary data from published annual reports for the period 2000—to 2013 .so that to measure financial stability for studied banks by using Z score model for each year, it allow for time series test . Also this model includes qualitative analysis to analyze primary data which is collected from employees (risk management, credit& investment departments) by using Structure questionnaire form consisting of two parts constructed to collect the necessary data from employees, which was distributed to respondents. The first part focuses on Demographic information of the respondents which include: age, occupation, experience, number of workshops and training course and education. The second part focuses on employees believe about the effects of depositors' types, rising of retained earnings on financial stability of the banks. Moreover , this model includes observation survey from security market reports to determine the lowest share price of the Sudanese Islamic banks (Elneel bank) ,then compare it to Fisal Islamic bank as the highest bank 'share price (the most financial stable bank).Then the case study(investigated banks) was chosen.

The study uses Z-Score model to explain quantitative data then examine the relation between proposed factors as

independent variables and Z score as dependent variable . To undertake analysis the study uses statistical tools such as: Chi-Square.

Organization:

This study consists of four parts: part one shows general frame work(research design) of the study ,part two shows financial stability background (definition, measurement) and literature review related to financial stability, part three explains data analysis ,and the last part presents preliminary findings to stimulate discussion and elicit comments.

4- RESULT AND DISCUSSION :

The study uses Z-Score model to explain quantitative data. Then examine the relation between proposed factors including long term investment, unrestricted investment accounts as independent variables and Z score as dependent variable . To undertake analysis the study uses statistical tools such as Chi-Square, and time series test curve estimation.

Hypothesis one: product diversification effect on financial stability of Islamic banks.

This hypothesis answered by using nonparametric test for original data which is collected from high level of management in two Islamic banks (Fisal bank and Elneel bank) .table (1) and (2) shows the result

Table 1: shows the answer of question: whether services diversification increases financial stability for the banks or not.
Table 1 shows descriptive features of the answers

Cumulative Percent	Valid Percent	Percent	Frequency		
7.7	7.7	7.7	3	neutral	Valid
38.5	30.8	30.8	12	agree	
100.0	61.5	61.5	24	strongly	

				agree	
	100.0	100.0	39	Total	

Source: researcher from analytical data

services diversification increases financial stability for the banks	
17.077	Chi-Square(a)
2	df
.000	Asymp. Sig.

Table (2) shows goodness of fit test

a =0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 13.0. (There is no literature focused on this issue) gap

Hypothesis2:

Result (Raising retained earnings ratio increases financial stability of Islamic banks.) This hypothesis also answered by using nonparametric test. Tables (3) and (4) show the result.

Table 3: shows the answers of question whether raising retained earnings ratio increases financial stability for the bank.

Valid Percent	Percent	Frequency		
2.6	2.6	1	strongly disagree	Valid
10.3	10.3	4	disagree	
23.1	23.1	9	neutral	
35.9	35.9	14	agree	
28.2	28.2	11	strongly agree	
100.0	100.0	39	Total	

Source: researcher from analytical data

Table 4 shows goodness of fit test

raising retained earnings ratio increases financial stability for the bank	
14.205	Chi-Square(a)
4	df
.007	Asymp. Sig.

Source: researcher from analytical data

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 7.8.

*raising retained earning lead to financial stability, consistent with Elzahi 2010, who said that equity capital had positively related to stability .

Hypothesis 3: opening account for different institutions increase financial stability of Islamic banks. This hypothesis also is answered by using nonparametric test. Tables 5, 6and 7 show the results:

Table 5: shows the answers of question: whether opening current A/c for different companies decreases withdrawals

Valid Percent	Percent	Frequency		
2.6	2.6	1	strongly dis agree	Valid
10.3	10.3	4	disagree	
2.6	2.6	1	neutral	
53.8	53.8	21	agree	
30.8	30.8	12	strongly agree	
100.0	100.0	39	Total	

Source: researcher from analytical data

Because Vasleios Pappas, Marwan Izzeldin, Ana Maria Fueles (dec,2012) had defined failure risk (credit risk, deposit withdrawal risk, operational risk)**,** therefore we can say different kind of clients means provide different banking services to them ,thus leads to lower withdrawal risk ,hence Islamic bank will be more stable .

Table 6: shows the answers of question whether opening current A/C for government institutions decreases withdrawals

Valid Percent	Percent	Frequency		
2.6	2.6	1	strongly disagree	Valid
17.9	17.9	7	disagree	
48.7	48.7	19	agree	
30.8	30.8	12	strongly agree	
100.0	100.0	39	Total	

Source: researcher from analytical data

Table 7: shows the answers of question whether opening A/C for different organizations increases financial stability for the bank.

Valid Percent	Percent	Frequency		
5.3	5.1	2	strongly disagree	
5.3	5.1	2	disagree	
10.5	10.3	4	neutral	
52.6	51.3	20	agree	
26.3	25.6	10	strongly agree	
100.0	97.4	38	Total	
	2.6	1	System	
	100.0	39	Total	

Source: researcher from analytical data

Table 8: shows the goodness of fit test

opening A/C for big organizations increases financial stability for the bank	opening current A/C for government institutions decreases withdrawals	openning curent A/c for company decreases withdrawals	
30.947	17.923	38.308	Chi-Square(a,b,c)
4	3	4	df
.000	.000	.000	Asymp. Sig.

source: researcher from analytical data

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 7.8.
b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.8c 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 7.6.

Hypothesis 4: there is a relation between Z score and long term investment, unrestricted investment account of Islamic banks.

This hypothesis answered by using the time series test curve estimation table 9 shows the result:

Table 9: Model Summary and Parameter Estimates

MOD_5	Model Name	
Z Score	1	Dependent Variable
Linear	1	Equation
Case sequence	Independent Variable	
Included	Constant	
bank name	Variable Whose Values Label Observations in Plots	

Dependent Variable: Z score

The independent variable is long term investments.

Source: researcher from analytical data

Table 10: Model Description

Parameter Estimates		Model Summary					Equation
b1	Constant	Sig.	df2	df1	F	R Square	
-.642	7.673	.074	24	1	3.491	.127	Linear

Dependent Variable: Z score

The independent variable is long term investments

Figure 1: shows curve fit between long term investment as independent variable and Z score as dependent variable

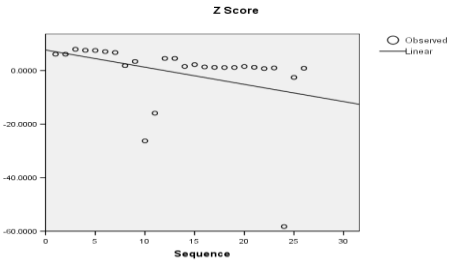


Table 11: shows Model Description

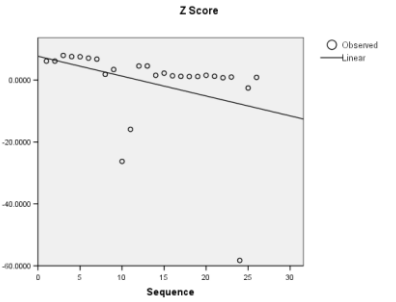
MOD_6	Model Name	
Z Score	1	Dependent Variable
Linear	1	Equation
Case sequence	Independent Variable	
Included	Constant	
bank name	Variable Whose Values Label Observations in Plots	

Table 12: shows Model Summary and Parameter Estimates

Parameter Estimates		Model Summary					Equation
b1	Constant	Sig.	df2	df1	F	R Square	
-.642	7.673	.074	24	1	3.491	.127	Linear

Dependent Variable: Z score

Figure 2: shows curve fit between unrestricted investment accounts as independent variable and Z Score as dependent variable



CONCLUSIONS:

Results:

- Products diversification increase financial stability of Islamic banks.
- Rising retained earnings ratio increase financial stability of Islamic banks.
- Opening accounts for different institutions reduce withdrawals and increase financial stability of Islamic banks at the same time.
- There is a negative relationship between Z Score and long term investments with 93% confidence.
- There is a negative relation between Z score and unrestricted investment accounts with 93% confidence.

Lessons learned:

- Islamic banks should be focus on fund mobilization through banking services promotion to different kind of

clients (individual, government institutions, NGOs, and private sector institutions), therefore to reduce withdrawal risk.

- Islamic banks should reduce their long term investment, because it does not increase their financial stability, but affect negatively to their Fs.
- Islamic banks should increase their retain earnings ratio, because it can be affect positively on their Fs.
- Islamic bank should follow good strategy for un restricted investments A/cs, so that to improve their income which can be affect positively on their Fs.

REFERENCES:

1. Abd Elrahman Elzahi Saaid, 2010, Islamic Banking structures: implications for Risk and Financial Stability, discussion paper series, Islamic Research and Training institute .
2. Ahmed Beloufi, 15, Dec-2012, Islamic finance and financial stability, A working paper for monthly video conferencing series, University of Paris 1, Sorbonne, Islamic Economics institute, King Abdulaziz university.
3. Alawode, A. A. and Al Sadek, M. 2008. 'What is Financial Stability?', *Financial Stability Paper Series* No. 1/March 2008, Central Bank of Bahrain.
4. Allen, W.A. and Wood, G. 2006. 'Defining and achieving financial stability'. *Journal of Financial Stability*, 2 (2006) 152–172,
5. Čihák. M. 2006. 'Central Banks and Financial Stability: A Survey of Financial Stability Reports'. Seminar on Current Developments in Monetary and Financial Law Washington, D.C., October 23-27, 2006, the IMF.

6. Gadanecz, B. and Jayaram, K. 2009. 'Measures of financial stability –a review'. *IFC Bulletin* No 31, pp. 365-380.
7. Oosterlooa, S. and Haanb, J. D. 2004. 'Central banks and financial stability: a survey'. *Journal of Financial Stability* 1 (2004) 257–273.
8. Schinasi, G. J. 2007. 'Understanding Financial Stability: Towards a Practical Framework1'. February 2007, the IMF, Washington D C.
9. Hassan B.Ghassan, Stefano Fachin, Abdelkarim A. Gunoz, 2013, financial stability of Islamic and conventional banks in Saudi Arabia, WP series issn: 2279—7491, Sapienza university, Roma. Italia, available at :http:www.dss.uniromal.it
10. Martin Cihak, Heiko Hesse (Dec,2010), Islamic banks and financial stability an empirical analysis ,Journal of financial services research, vol, 38, issue 2-3/pp.95---113
11. Pejman Abedifar, Philip Molyneux, Amine Tarazi, (3 April, 2011) risk and stability in Islamic banking, Bangor Business school, Bangor university,Wales,LL572DG,Uk
12. Vasleios Pappas, Marwan Izzeldin, Ana Maria Fueles (dec,2012), A survival analysis of Islamic banks failure risk, Cass business school, City university, London ,UK