

## Financial Ratios Affecting Performance of Participating Banking

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### Extensive Summary

#### Introduction

Participating banking is a type of banking which was developed with the claim of contribution to the increase of employment, production and economic development of countries. This aim seems reasonable as one of the funding methods of the participating banking is labor-capital partnership, which is called Mudaraba in Arabic, similar to the funding method of Venture Capital Investment Trust. Besides, it is seen that developed countries intensively used the venture capital investment trust as a financing model, especially during their developing stages, and benefited from increasing individual enterprise, production and economic development. However, when the funding methods of the participating banking are analyzed, particularly in Turkey, it is seen that the funding method of labor-capital partnership which is similar to that of venture capital investment trust, is hardly used. This condition might cause not to come true the expected benefit from the participating banking.

Especially, in order to attract savings of individual and institutional investors that are sensitive to interest to the economy, the participating banking which was started to be used in the World during the 1970s and in the Turkey during the 1980s grew up in the muslim countries. However, it also operates in non-muslim countries such as the united states and European countries.

While searching performance of the participating banking and identifying financial factors that have influence on its performance are crucial for guidance to the decisions of national and international investors, also might be seen significant in terms of contribution to managers of banking to perform their activities more effectively.

In this study, performance of the participation bankings on a country basis is determined by using Data Enveloped Anlysis method and the financial ratios that are effective on these performances are tried to be identified by using Panel Data Analysis method. This research covers yearly data of 7 countries for the 2011-2015 period. For the data enveloped analysis, while collected funds, fixed assets, equity capital and

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<sup>1</sup>Bu araştırma “İslam Ülkelerinde Faaliyet Gösteren Katılım Bankalarının Performanslarının Karşılaştırılması ve Performansları Üzerinde Etkili Olan Finansal Oranların Belirlenmesi” adlı doktora tezinden türetilmiştir.

personel removals are used for input variables, funds provided and the other active assets are used as output variables. For the panel data analysis, while efficient scores found by data enveloped analysis and indicate performances of the participating bankings on the country basis are used as dependent variable, asset profitability ratio, equity profitability ratio, loan deposit ratio and debt asset ratio are used as independent variables.

In the literature, similar studies have been done by using data enveloped analysis and panel data analysis in both Turkey and the other countries. The studies we examined for the literature review mainly use one of the financial ratios of market value, asset profitability and equity profitability as dependent variable. However, in order to differentiate our analysis, after finding the efficient scores by performing data enveloped analysis, we used these efficient scores in the panel data analysis as dependent variable.

### **Method and Data**

Data enveloped analysis and panel data analysis are used as methods in the study.

Data enveloped analysis method is applied under the assumption of variable return to scale and input- oriented. This analysis comprise the term of 2011-2015 and seven countries, namely, Malayzia, Saudi Arabia, Katar, Kuwait, Iranian, United Arap Emirates and Turkey. The data consist of four input variables and two output variables. These variables and their explanations are as follow;

#### ***Input Variables:***

Collected funds: The fund collected by participation banks as profit/loss partnership

Fixed assets: Fixed assets of the participation banks

Equity capital: Equity of owners of the participation banks

Personel removals: The amount paid to the personnel of the participation banks

#### ***Output Variables:***

Funds provided: The fund provided by participant banks with the methods of muşaraka, mudaraba, murabaha ect.

The other active assets: Include investment property, investments in associates, investment securities, ect.

For the panel data anlysis, the tests and regression analysis carried out are Levin, Lin & Chu (LLC) unit root test, Breusch-Pagan Lagrange multiplier test, Breusch-Pagan / Cook-Weisberg test, Wooldridge test and the least square regression.

The data used in the panel data analysis comprise seven countries and 2011-2015 period as stated before. The variables and their explanation are as below:

#### ***Dependent Variable:***

Efficient Scores (es): The scores found by the data enveloped analysis

#### ***Independent Variables:***

Asset profitability ratio (**ako**): Net profit devided by total assets

Equity profitability ratio (**oko**): Net profit divided by total equity

Loan deposit ratio (**kmo**): Collected fund divided by fund provided

Debt asset ratio (**bo**): Total debt divided by total assets

The data used in this study was collected from financial statements of participation banks, central banks of these countries, The Participation Banks Association of Turkey, Islamic Financial Services Board and Orbis Banks.

### Findings

The efficient scores used as independent variable in the panel data analysis and found by the model of data enveloped analysis are below;

	2011	2012	2013	2014	2015
Katar	0.799	0.833	0.887	0.923	0.875
Kuwait	1	1	0.834	0.976	0.912
Iranian	1	1	1	1	1
Turkey	0.813	0.882	0.762	0.739	0.962
Saudi Arabia	0.921	0.941	1	0.993	0.989
United Arab Emirates	1	1	0.992	0.963	0.951
Malayzia	1	1	1	1	1

Results of unit root test performed by Levin, Lin & Chu (LLC) test are shown below;

Variables	Statistic Value	Probability Value
lges	-1.72934	0.0419
lg_ako	-6.87776	0.0000
lg_oko	-11.7759	0.0000
lg_kmo	-10.5972	0.0000
lg_bo	-4.05235	0.0000

Findings of the Breusch-Pagan Lagrange multiplier test which is executed to test the existence of unit root are seen below;

Predicted Results: $lges[\text{crossid},t] = Xb + u[\text{crossid}] + e[\text{crossid},t]$		
	Var	sd = sqrt(Var)
lges	.0077407	.0879811
e	.0019062	.0436596
u	.0003908	.0197694
Test: $\text{Var}(u) = 0$		
Ki-kare(01) = 0.01		
Prob(Ki-kare) = 0.4676		

Results of the Breusch-Pagan / Cook-Weisberg test are as below;

Step 1	Step 2
chi2(1) = 4.25	F(1, 33) = 5.20

<b>Prob &gt; chi2</b> = 0.0393	<b>Prob &gt; F</b> = 0.0291
<b>Step 3</b>	<b>Step 4</b>
<b>chi2(1)</b> = 4.77	<b>chi2(4)</b> = 14.81
<b>Prob &gt; chi2</b> = 0.0290	<b>Prob &gt; chi2</b> = 0.0051

The outcome of the Wooldridge test is as below;

<b>F-Value (1,6)</b>	<b>Probability</b>
0.990	0.3581

Results of the pooled least square regression are as below;

lg <sub>es</sub>	Coefficient	Standard Error	T-Value	P-Value
lg_ako	.2572332	.1171744	2.20	0.036
lg_oko	-.2864737	.1218991	-2.35	0.026
lg_kmo	-.5220309	.0883076	-5.91	0.000
lg_bo	2.339223	.7930749	2.95	0.006
_cons	.6419211	.3554113	1.81	0.081
<b>F( 4, 30) = 25.92</b>				
<b>R<sup>2</sup> Değeri = 0.7003</b>				
<b>Prob &gt; F = 0.0000</b>				
<b>Root MSE = .05128</b>				

### Conclusion and Discussion

At the end of the panel data analysis, which was performed to determine financial ratios affecting performance of the participating banking, it is seen that four financial ratios have impact on the efficient scores of the participation banking.

It has been found that asset profitability ratio has 0,25 positive impact on the efficient scores. Hence, it can be said that the increase of asset profitability ratio mean that efficient score, that is, funds provided of the bank and the other active assets increase. And also, it can be thought that this is a reasonable result.

It has been found that equity profitability ratio has -0,28 negative impact on the efficient scores. Therefore, it can be said that increase of equity profitability ratio means that efficient score, that is, funds provided of the bank and the other active assets decrease. And also, it can be thought that this is a reasonable result. As the increase of equity profitability takes place because of the decrease of equity, while equity decreases, funds provided of the bank and the other active assets might be decrease and the relation between equity profitability and efficient scores could be reverse.

It has been found that loan deposit ratio has -0,52 negative impact on the efficient scores. So, it can be said that increase of loan deposit ratio means that efficient score, that is, funds provided of the bank and the other active assets decrease. In the case of decrease in both deposit and equity, increase of loan deposit ratio may cause decrease in funds provided of the bank and in the other active assets.

It has been found that debt asset ratio has 2,3 positive impact on the efficient scores. Therefore, it can be said that increase of debt asset ratio means that efficient score, that is, funds provided of the bank and the other active assets increase. It can be said that increase of debt asset ratio might cause increase of debts and as a result of this,

by the decrease of assets other than funds provided and the other active assets, might cause increase of efficiet scores, namely, increase of funds provided and the other active assets.

In order to form a good investment strategy, it is crucial to interpret the effect of financial ratios on the performance.

We hope that this study contributes development of participation banking sector and guides investors to make reasonable decisions at national and international levels.