



The Determinants of Profitability of Modarabah Companies: Empirical Evidence from Pakistan

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Abstract- Islamic finance industry in Pakistan achieved the tremendous growth during the several years with strong potential because of its large Muslim population. Modarabah companies are playing a significant role in economy through resource allocation by providing funds to investors. This study tries to assess the factors that affect the profitability of Modarabah companies. We applied ordinary least square method over period from 2008-2010. The findings indicates operational efficiency, gearing ratio and asset management ratio has significantly affect the profitability of modarabah companies. The external factors such as GDP, CPI and FDI also affect the profitability of modarabah companies.

Keywords: Modarabah; operational efficiency; gearing ratio; asset management ratio; GDP

JEL Classification: M20

I. INTRODUCTION

Islamic finance got the tremendous growth from the last four decades in all over the world. Beside the Muslim countries the western countries are also accepting and identifying the viability and usefulness of this substitute financial system. In the recent financial crisis the Islamic financial system has proved its credibility due to its asset backed nature as more practical and established system. The scope and variety of Islamic products has also broadened substantially over the years and Islamic financial institutions are currently accommodating to most of the financial need of the assorted sector of the economy.

Islamic finance industry in Pakistan also accomplished the tremendous growth during over a few years. Pakistan has strong aptitude for Islamic finance because of its large Muslim population which make it one of the most dynamic and operative player in global Islamic finance industry remaining at the frontage in maturing and promoting Islamic finance. The Islamic financial industry in Pakistan is characterized by Islamic banks, Shariah complaint mutual funds, Takaful companies and Modarabah companies. The Mudarabah sector is the first in delivering the financial services in Pakistan and takes into account an important segment of financial sector. Modarabah companies are taking part as an important role through resource allocation in our economy by providing funds to the investors and have a vital role in economic framework. Modarabah has ascertained itself as a well implied sharia complaint instrument of financing in Pakistan.

Currently, there are 25 Modarabah companies operating in Pakistan with a paid up capital of 12 billion rupees and total equity of 21 billion (year book 2017). The total assets are 44 billion with profits of 1.57 billion (year book 2017). The asset growth rate of Modarabah companies is 19 percent. On the other side the assets of banking sectors are 18.53 trillion with growth rate of 15 percent and after tax profits of 59 billion (SBP report, 2017). These statistics shows that Modarabah companies are far behind from banking sector in term of asset accumulation and profitability. But its growth rate is more than banking sector; it shows that this sector has a lot of potential to expand further. So it is essentially important to explore the factors that may influence the profitability of Modarabah companies in Pakistan for its further improvement then it may be able to compete with banking sector in Pakistan.

Unfortunately, the academic researchers have totally ignored this sector. Most of the researches have been done on banking industry and several determinants have been explored that impact the profitability of banking sector (Gul et al. 2011, Dawood 2014, Khan et al. 2014, Shah & Khan 2017, Yao et al. 2018). So the target of this study is to identify the important aspects that have impact on the profitability of the Modarabah companies in Pakistan.

The rest of the paper is organized as follows: Section 1; defines the history of modarabah companies in Pakistan. Section 2; presents the literature pertaining to my study and the terms related to modarabah. Section 3; discusses the data and empirical methodology. Section 4; discusses the results and finally Section 5; concludes the paper with some recommendations.

History of Modarabah companies in Pakistan:

In 1997 a process is organized that named as islamization of economy .This process is totally based upon Islamic ideology council. A few changes are introduced in banking ordinance by Govt. of Pakistan and propagated an Islamic contract based companies named as Modarabah companies. That is based on flotation and administrative ordinance of 1980 that provides a legal infrastructure for the system that based on Islam. This is a significant step in transforming the notion of Modarabah financing into an Islamic financial institution to enable modarabah to function as a legal entity. As all activities following modarabah rules accomplish in these companies few other financing activities based on Ijarah, Musharaka, Murabah, Diminishing Musharakah, Istisna and other Salam also performed in modarabah companies. These companies that are based on Islamic contracts are performing from last 30 years in Pakistan that are act as unique models of Islam base which have no substitute in any other country of the world as the Modarabah companies of Pakistan are.

Research gap

The non-banking finance companies have a significant role in the economic development and employment generation. But unfortunately this sector has been ignored by academic researchers especially the Modarabah sector. A bundle of studies have been done on banking sector and explore many determinants of their profitability. The Modarabah sector in Pakistan is far behind from banking sector but it has a lot of potential to grow and can compete the banking sector. So there is a dire need to conduct studies on this particular area for their betterment and further enhancement in Pakistan. To the best of my knowledge this is the first paper in Pakistan which empirically investigates the sources that are involved in profitability of Modarabah companies in Pakistan.

Objective of the Study

Following are the objective of the study:

1. To examine the impact of company specific factors on the profitability of Modarabah companies.
2. To examine the impact of macroeconomic factors on the profitability of Modarabah companies.

II. LITERATURE REVIEW

This section discusses the literature pertaining to our topic. Company specific factors are very important for the success of any firm . These factors are managed and control by the firm management and have varied by firm to firm . Its is very important for financial companies to understand which internal factors helps them in the achievement of desired performance . Similarly external factros are also responsible for the success of financial firms in the economy. Afza & Asghar (2014) studied the efficiency of modarabah companies in Pakistan over the period of 2005 to 2010. They applied the stochastic frontier approach (SFA) . Theier results revealed that modarabah companies are 87.2 % profit efficient , 51.2 technical effcient and 96.1 % cost efficient. Gremi (2013) studied the profitability of banking sector of Albania during the period of 2005 to 2012. Their sample consists of 12 different private banks of Albania. Bank profitablity measured through the indicator of Return on Assets (ROA). Their results shows that there is a strong significant relationship between internal factors and and banks profitablity. Brahmaiah & Ranajee (2018) studied the performance of indian private banks. They used the pannel data of 89 banks performing in india over the period of 2005 to 2015. Return on equity (ROE) and Return on asset (ROA) were used as a proxies of profitablity measurement. Their results indicates that strength of equity and capital have positve impact on bank profitablity while bank size have no influence over profitablity of banks in india. Akoto et. al., (2013) studied the profitablity of financial firms in Ghana. They selected 13 fiancial firms operating in Ghana during the period 2005 to 2009. They finds a significant positive relation between Current assets ratio, Size and Current assets turnover with profitablity of banks in Ghana . Sayafri (2012) investigates the profitablity of Indonesian banks operating during 2002 to 2011. His sample comprised of both public and private banks in Indonesia. They finds negative retalionship between loan to equity ratio and Total asset turnover ratio with bank profitablity. However they found positive relationship between bank operational efficiency and profitablity. Ijaz & Aslam (2014) studied the impact of internal and macroeconomic factors on banks profitablity . They used the sample of islamic banks in Pakistan over the period of 2007 to 2014. Their findings reveals that gearing ratio (GR) , Asset mangement Ratio(AM) and Operational efficieny (OP) has positively related to profitablity. On the other hand GDP also positive related to bank profitablity where as inflation has negative related to profitablity. Similarly Gul et. al., (2011) explore the determinents of banks profitablity in Pakistan . They applied the ordinbary least square method over the data of 15 commercial banks operated duirng period 2005 to 2009. They finds that Bank size, Bank loans and deposits are important determinents of bank profitablity. Their finding also reveals that GDP, Inflation and Market capitalization (MC) significantly impacts the profitablity of banking sectors. Khan et.al.(2014)

studied the determinants of Islamic banks . They found that both internal and external factors significantly impact the profitability of islamic banks in Pakistan. GDP has positive relationship with banks profitability whereas Inflation negatively related to bank profitability.

Hypothesis of the study:

As we seen in literature very few empirical studies have been done on modarabah companies. Most of the studies have been done on banking sector and other financial institutions. So most of the hypothesis is taken from the literature related to other financial institutions. On the basis of the literature following hypothesis is formulated for this study..

H1: Internal factors analyzed in this study have significantly related to profitability of Modarabah companies.

H1a: *Size* has significantly related to modarbah companies profitability.

H1b: *Asset management ratio* has significantly related to modarbah companies profitability.

H1c: *Operational Efficiency* has significantly related to modarbah companies profitability.

H1d: *Gearing ratio* has significantly related to modarbah companies profitability.

H1e: *Current ratio* has significantly related to modarbah companies profitability.

H2: External factors analyzed in this study have significantly related to the profitability of Modarabah companies:

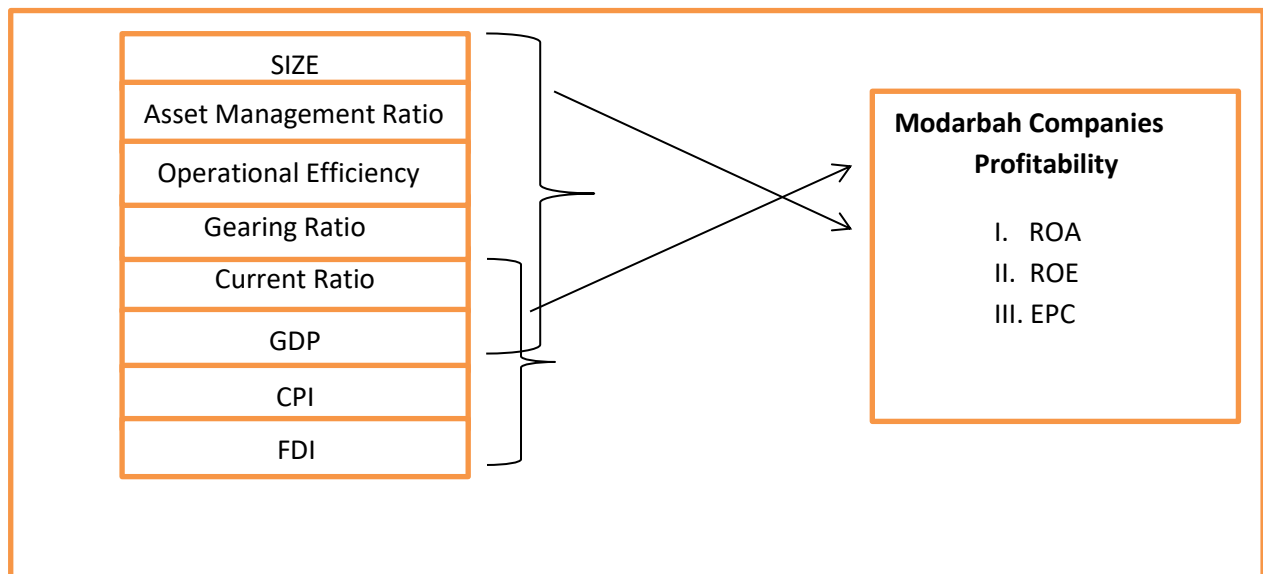
H2a: *GDP* has significantly related to modarbah companies profitability.

H2b: *CPI* has significantly related to modarbah companies profitability.

H2c: *FDI* has significantly related to modarbah companies profitability.

Research Framework

Determinants of Modarabah Companies Profitability



Variable	Symbol	Measure	References
Return on Assets (Y1)	ROA	Annual income/net total /Average Assets	Hassan & Bashir 2003; Siddiqui,2008; ; Sufian & Habibullah, 2009; Ostadi & Monsef, 2014;Alharbi, 2017
Return on Equity (Y2)	ROE	Annual income/net total /Average Equity	Hassan & Bashir, 2003; Alkassim, 2005; Olson & Zoubi, 2011; Ostadi & Monsef, 2014
Earning per Share (Y3)	EPS	Net income/no. of shares	Brigham & Houston, 2009; Uddin, 2009; Raza, 2010

Bank Size(X1)	SIZE	Log of total assets	Smirlock, 1985; Goddard et al. 2004; AlTamimi, 2005; Wum et al., 2007; Flamini et al. 2009
Assets mangment ratio(X2)	AM	Operating efficiency/ Total Assets	Ijaz & Aslam, 2014
Operational Effieincy(X3)	OE	Operating expenses/Total assets	Naceur & Goaid,2001
Gearing ratio(X4)	GR	Total libalities/Total Equity	Wum et al., 2007
Current ratio(X5)	CR	Current assets/Current liabilities	Akoto, Awunyo-vitor, & Angmor(2013)
Gross Domestic Product(X6)	GDP	Annual GDP	Molyneux & Thornton, 1992; Demirguc-Kunt & Huizinga, 1999; Wum et al., 2007; Kosmidou & Zopunidis, 2008
Consumer Price Index(X7)	CPI	Annual CPI	Short, 1979; Gul, Irshad & Zaman, 2011s
Foreign direct investment(X8)	FDI	Annual data of foreign investment	M.Buch & Lipponer, (2007) Papi & Revoltella(1999)

III. METHODOLOGY:

3.1. Sample and Data Collection:

The obseravtions of this study is related with the currently operating modarbah companies in Pakistan. The source of data is the reports published by NBF, reports publish by SBP and the annual report of each year of every firm. Our sample compromised of all the Modarbah companies operated in Pakistan. Currently there are 25 modarabah companies operating in Pakistan . The time span of study is ten years. Unbalanced pannel data is collected over the period of 2008 to 2018. There is an advantage of using pannel data that a large no. of observations on explantory variables are at hand (Hsiao , 2007). Fallowing are the companies included in our data sample: *Allied Rental Modarabah, Awwal Modarabah, B.F.Modarabah, B.R.R.Modarabah, Cresecent Standard Modarabah, First Al Noor Modarbah, First Elite Capital Modarabah, First Equity Modarabah, First Fidelity Leasing Modarabah, First Habib Modarabah, First IBL Modarabah, First Imrooz Modarbah, First National Bank Modarabah, First Pak Modarabah, First Paramount Modarabah, First Prudential Modarbah, First Punjab Modarabah, first Treet Manufacturing Modarabah, First UDL Modarabah, KASB Modarabah, Modarabah Al-Mali, ORIX Modarabah, Popular Islamic Modarabah, Sindh Modarabah and Trust Modarabah*. Data relating to company specific variables are collected from the balance sheets issued by the companies while the data of external variables is collected from the website of State Bank of Pakistan (SBP).

3.2. Empirical methodology

Ordinary Least square method and correlation analysis is applied for the data analysis . The research model proposed for the the analysis is as fallows.

$$Y_{it} = \alpha + \beta X_{1it} + \beta X_{2it} + \beta X_{3it} + \beta X_{4it} + \beta X_{5it} + \beta X_{6it} + \beta X_{7it} + \beta X_{8it} + \mu_{it} \quad (1)$$

Where;

Y_{it} represents Return on Asset (ROA), Return on equity (ROE) and Earning per certificate (EPC).

X_{1it} represents natural logarithm Total Assets (Size) for companies i in at time t .

X_{2it} represents Asset management ratio (AM) for companies i in at time t .

X_{3it} represents Operational Efficiency (OE) for companies i in at time t .

X_{4it} represents Gearing ratio (GR) for companies i in at time t .

X_{5it} represents Current ratio (CR) for companies i in at time t .

X_{6it} represents Gross Domestic product (GDP) of Country at time t .

X_{7it} represents Gross Domestic product (GDP) of Country i at time t .

X_{8it} represents consumer price index (CPI) of Country i at time t .

X_{9it} represents foreign direct investment (FDI) of Country at time t .

IV. RESULT AND DISCUSSION

This section discusses the findings of the study . Its is divided into two parts ; first part presents the descriptive statistic of the study while second part presents the inferencial statistic of the study.

4.1 Descriptive Analysis

Table no. 1: Summary of the Variables

Variables	No. of Obs.	Mean	Median	Std. dev.	Maximum	Minimum
ROA	181	3.16	1.14	4.85	33	0.00
ROE	181	7.74	6.41	8.37	55	0.002
EPC	181	1.61	0.80	2.30	14	0.002
SIZE	181	8.83	8.70	0.65	11	7
Operational Efficiency	181	0.85	0.85	0.06	1	0.58
Gearing Ratio	181	0.97	0.95	0.09	1.22	0.78
Current Ratio	181	1.06	0.95	0.07	1.33	0.88
Asset management Ratio	181	0.78	0.79	0.10	1.03	0.40
GDP	181	4.13	4.06	1.07	5.38	0.36
CPI	181	7.38	4.50	4.85	24.6	2.90
FDI	181	3.28	3.33	0.21	3.73	2.91

Table 1 provides the descriptive statistic of all dependent and independent variables. The average return on asset is 3.16 percent annually and average return of equity is 7.74 annually. The average earning per certificate is 1.61 percent annually during over sample period. The average operational efficiency is 85 percent which indicates modarbah companies in Pakistan are less operational efficient. The average gearing ratio is 97 percent which shows that modarbah companies using high leverage for supporting their operation. The average current ratio is 1.06 which indicates that modarbah companies have enough assets to cover short term liabilities. The average asset management ratio is 78 percent which shows that they are efficiently uses assets to generate income for their shareholders. The mean GDP rate is 4.13 percent annually and average inflation rate is 7.38 percent annually.

4.2. Inferential Statistic

Table no. 2: Multi Collinearity among explanatory variables:

Variables	Size	Operational Efficiency	Gearing Ratio	Current Ratio	Asset management	GDP	CPI	FDI
Size	1.00							
Operational Efficiency	-0.30	1.00						
Gearing Ratio	0.30	0.34	1.00					
Current ratio	-0.56	-0.12	-0.69	1.00				

Asset Management	0.15	0.22	0.32	-0.25	1.00			
GDP	-0.04	0.07	-0.02	-0.05	-0.01	1.00		
CPI	0.07	-0.09	0.07	0.05	0.04	-0.81	1.00	
FDI	-0.02	-0.02	-0.05	0.10	0.008	0.21	-0.01	1.00

Table no. 2 provides the results of correlation analysis of all explanatory variables in our study. It clearly show that multi collinearity does not exist in our independent variables. The value of correlation coefficient are less than 0.5 , showing a very low level of multi collinearity among explanatory variables. These statistics allow us to go for regression analysis because the problem of multi collinearity does not exist in our data set.

Table no. 3 Regression analysis Internal Factors

Dependent Independent Variables	ROE (1)		EPC (2)		ROA(3)	
	Coefficients	Prob.	Coefficients	Prob.	Coefficient	Prob
Size	-0.64	0.40	-0.52*	0.06	0.78*	0.06
Operational Efficiency	3.48 *	0.09	4.38*	0.07	1.74**	0.04
Gearing Ratio	18.07 ***	0.02	7.11 ***	0.001	12.25	0.12
Current Ratio	-19.43***	0.003	-2.07	0.16	-6.88	0.26
Asset management	17.29***	0.002	6.75***	0.000	5.65	0.31
R- Square		0.68		0.58		0.64
Durbin Watson		1.98		1.86		1.77

, **, * indicates the significant level at 10, 5 and 1 percent level.*

Table 3 presents the OLS results. Return on equity (ROE) , Return on asset (ROA) and Earning per certificate (EPC) are dependent variable. The coefficients of explanatory variables present the positive and negative impact on dependent variables. The operational efficiency has positive impact on our dependent variables in our all models and these results are significant at 10 percent significance level. Gearing ratio also has positive impact on profitability in all our models but these results are significant in our first two models , however in our third model it's found positive but not significant. Asset management ratio also has positive impact on profitability in our all three models and the results are significant at 5 percent significance level except in model 3. Companies size negative effect the ROE and EPC but positively affect the return on assets ROA. However, current ratio negative effects the profitability of modarbah companies in our all modes but the results are non-significant. The R square value indicates that our both models are well fitted and Durbin Watson statistic are close to 2 which indicates our models do not have problem of auto correlation.

V. CONCLUSION

Islamic finance got the tremendous growth from the last four decades in all over the world. The Islamic financial industry in is characterized by Islamic banks, Shariah complaint mutual funds, Takaful companies and Modarabah companies. The Modarabah sector is the first in delivering the financial services in Pakistan and takes into account an important segment of financial sector. But unfortunately the academic researcher from all over the world gives less attention to this emerging sector. Most of the existing studies have focused on financial intuitions but non- financial companies like Modarbah companies have been ignored. So the aim of this study was to explore the determinants of Modarbah companies. Our findings conclude that operational efficiency (OE), Asset management ratio (AM), Gearing ratio (GR) and current ratio (CR) positively impact the profitability of Modarabah companies where as Size of the does not matter on Company profitability . On the other hand GDP and FDI has direct relationship with Modatbah companies profitability where as Inflation negatively impact the profitability of Modarabah Companies.

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