International Journal of Business and Economic Affairs (IJBEA)
6(3), 150-163 (2021)
DOI: 10.24088/IJBEA-2021-63004
ISSN: 2519-9986

A Comparative Study for Determinants of Financial Performance Across Banking and Non-Banking Institutions in Pakistan

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Abstract: Non-Banking Financial Institutions (NBFIs) have lower profitability as compared to banking institutions, which is one of the important reasons for sluggish growth and NBFI's contribution to economic development. Previous studies investigated the factors contributing to the financial performance of conventional and Islamic banks, but scant literature is available on the determinants of performance of non-banking financial institutions, especially in comparison to banking institutions. The present study provides detailed insight into internal determinants for the performance of Non-banking financial institutions in Pakistan. Secondary data was extracted from financial statement analysis of SBP and annual reports of selected conventional banks, Islamic bank, modaraba, and leasing companies for the period of 2007 to 2016. Size (Sz), Capital Adequacy (CA), Credit Risk (CR), Efficiency (Eff), and Liquidity Risk (LR) have been taken as independent variables, and financial performance of FIs was measured through dependent variables of Return on Assets (ROA) and Return on Equity (ROE). Ratio analysis was done, and statistical techniques of correlation, regression were applied to identify the relationship among variables. Analysis was done for all sample institutions as a whole and separately for each type as well. It brought an immense variety in the analysis and result, which shows the different impact of independent variables on the dependent variable for different types of institutions. The factors contributing towards slow and negative growth of non-banking financial institutions have not been analyzed as much as it should be done. It is the novelty of this work is to recognize problematic areas of non-banking financial institutions of the country.

Keywords: CA, LR, Financial performance, NBFIs

Received: 23 March 2021 / Accepted: 14 May 2021 / Published: 29 July 2021

INTRODUCTION

The association, which is an intermediary party between surplus finance unit and deficit finance unit, is known as Financial Institution (FI). This organization attains money from deposits/investments and earns money from loans. Financial institution primarily acts as a middle man in channeling funds from lenders to borrowers, or from savers to investors. It may be formed as a single-member company, partnership, a joint-stock company in private or public ownership, or a state-owned institution (Dogar & Khan, 2016).

Different kinds of business entities are working as financial institutions and organizations in Pakistan supervised by two regulatory bodies State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP). SBP looks after Scheduled Banks (Conventional or Islamic and Domestic or Foreign), Development Financial Institutions, Micro Finance banks and Specialized Banks. On the other hand, SECP is regulatory authority for Modaraba Companies, Insurance Companies and Non-Banking Finance Companies (NBFCs). NBFCs include Assets Management Companies, Pension Funds, Real Estate Investment Trust Management Companies, Private Equity Funds, Investment Advisors, Leasing Companies, Housing Finance Companies and Investment Finance Companies i.e. Investment banks engaged in Investment Finance Services.

Banking institutions in Pakistan have shown remarkable performance over the years, for example assets of banks stood at Rs. 14.3 trillion in March, 2016 as compared to Rs. 12.1 trillion 12 months back. There were some other notable improvements as well, like impaired loans to gross loans ratio trimmed down to 11.40% from 12.30%.

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Banks also raised capital to assets ratio to 16.30% in contrast to the minimum requirement level of State Bank of Pakistan that is 10.25% (Ministry of Finance, 2015-16).

In contrast to banking institutions, non-banking organizations are on a declining trend, it is evident by decline in number of Modaraba and leasing companies in Pakistan. These companies were incorporated after constitution of relevant laws in 1980s. The Modaraba companies were 52 at one time, but they have decreased 25 (Malik, 2015). First leasing company in Pakistan was instituted in 1984, afterwards their number reached to 41but now positioned at 10 (Assad, 2015). Other types of NBFIs are facing the same dilemma as their numbers have also reduced; investment banks have reduced from 16 in 2000 to 03 in 2015. Housing finance companies (04 in 2000), Discount houses (04 in 2000) and venture capital companies (02 in 2000), all are NIL now (K. A. Hassan, 2015). Assets held by commercial banks worth Rs. 13347964 million, whereas Modaraba and Leasing companies had assets worth Rs.71331 million for the financial year 2015. These figures manifest that non-banking financial institutions possess only 0.5% of assets held by commercial banks (KPMG Taseer Hadi & Co., 2015; NBFI and Modaraba Association of Pakistan, 2015). Commercial Banks dominate financial sector and Non-Banking Finance Companies (NBFCs) yet to fully exploit their potential. The banking institutions have more finance and same types of loans like non-banking institutions, hence they are making life difficult for the later. There is a decline in their numbers and earnings despite the expansion in their assets (State Bank of Pakistan SBP, 2016).

Another notable aspect of assets breakup between financial institutions of Pakistan is the fact Muslim community in the country is 96.28% of total population (Pakistan Bureau of Statistics, 2016). Islam prohibits Riba, but allows trade. According to Islamic principles of finance, profit and risk sharing are preferred over fixed returns. Majority of Islamic literates and scholars agree that interest offered by conventional banks is the Riba which has been prohibited in Islamic shariah (Siddiqi, 2004). Non-Banking Financial Institutions (Modaraba and Leasing) offer such financial products which are closed to Islam, but could not satisfy investors and borrowers.

Pakistan is one of those countries who initiated Islamic banking, Meezan bank was the first one who started its operations in 2002. At present 05 full-fledged licensed Islamic banks are working and a large number of commercial banks have obtained permission for Islamic banking window. Share of Islamic banking is rising with the passage of time until December, 2015 it was 11.40% of total banking assets (Aziz, Husin, & Hashmi, 2016). Number of full-fledged Islamic banks rose to 7 in 2012, but due to mergers and acquisition it has reduced to 4 as of December 2016. Only Meezan Bank's financial performance is satisfactory others are facing ups and downs (KPMG Taseer Hadi & Co., 2015).

Establishment of Non-Banking Financial Institutions (NBFIs) contributes a great deal in economic development of any country. They can open the new doors for the economic development of Pakistan through asset financing and generating new business opportunities (Dogar & Khan, 2016). Non-Banking Financial intermediaries and equity markets tend to be greater in richer countries (Beck & Demirguç-Kunt, 1999). They contribute in economic development and financial stability. NBFIs offer specialized financial products which have more risk forbearance for them and borrowers. It is due to fact that these products are highly liquid, dividable and proficient. Whereas conventional banking institutions focus on short term financing with limited sort of asset finance (Sufian, 2006).

In case of an economy with underdeveloped NBFIs, banking institutions will have to presume more investment risks. It can be shared by a developed stock market or collective investment schemes and insurance companies. Otherwise, there are more chances of bank failure, this weakness is to enable investors to be risk leniency without bank's finance. In the absence of this multiplicity, conventional banking system will be exposed to financial disasters (Sufian, 2006). A study by Greenspan evaluated Thailand economy's currency crises and its consequences. He concluded that it would have been less harsh if capacity of capital markets to put up with risk would have been higher than banking system (Greenspan, 1999).

Problem Statement

In the light of arguments for the importance of Non-Banking Financial Institutions, it is necessary to go into the causes and factor of slow and negative growth of this sector in Pakistan in contrast to Banking institutions. The present study provides detailed insight of internal determinants for the performance of Non-banking financial institutions in Pakistan.

Research Objectives

The presented has the following research objectives:

1. To analyze the factors contributing towards slow and negative growth of non- banking financial institutions of Pakistan.
2. To recognize problematic areas of non-banking financial institutions of Pakistan.

Significance of the Study

Factors or determinants and comparative studies of performance of banking institutions have been researched in a variety of dimensions. But, the factors contributing towards slow and negative growth of non-banking financial institutions have not been analyzed as much as it should be done. It is novelty of this work is to recognize problematic areas of NBFIs of country.

LITERATURE REVIEW

Bank profitability is a commonly researched topic, consequently enormous literature is available having a discussion about factors influencing the profitability of banks. These studies elaborated performance of banks of various countries and cross country as well. This is a vast area of research which has analyzed performance of conventional and Islamic banks, individually and comparatively. Performance analysis of non-banking institutions is lesser available in literature as compared to researches on banking sector. Literature review has been elaborated in two groups in the following pages.

NBFIs

Some of the recent studies on NBFIs include S. A. Khan, Khaleequzzaman, Ishfaq, and Khan (2017) who looked into comparative risk and return analysis of Islamic and Conventional financial institutions in Pakistan. They found unsatisfactory performance on account of Modaraba companies and Islamic mutual funds. Hossain and Shahiduzzaman (2002); Gupta, Afsana Yesmin, and Khan (2013) and R. Hassan (2013) studied role benefits and problems of NBFIs in Bangladesh, whereas Sufian (2006) in Malaysia.

A few studies i.e. Andaleeb, Abbasi, Naqvi, and Ali (2018); Ahmed, Siddiqui, and Mufti (2013); Alam, Raza, Farhan, and Akram (2011) have been exclusively conducted on capital structure, problems and performance of leasing industry of Pakistan, Dalfard, Sohrabian, Najafabadi, and Alvani (2012) in Iran and (Marta, 2009) in Italy, whereas T. Khan et al. (1996) evaluated the same for Modaraba companies in Pakistan. Afza and Asghar (2014) studied the profit efficiency, technical efficiency and cost efficiency of modaraba and leasing companies in Pakistan. Sufian and Habibullah (2009) studied intellectual capital performance and its impact on corporate performance: empirical evidence from modaraba sector of Pakistan

Banking Institutions

In contrast to the research work done on non-banking institutions, vast literature is available on banking institutions. These institutions have been researched from a variety of facets and in various geographies. Since this study focuses on financial performance analysis with the help of accounting ratios, work done this aspect of banking institutions was searched and examined. After going through literature on determinants of performance of financial institutions, mainly conventional and Islamic banks, five independent and two dependent variables were finalized for analysis.

Performance

Financial performance of any organization can be judged in a number of ways, most common is profitability. Amount of profit earned by a financial institution is return on their activities of lending, investment and financial services. This amount can be converted into financial rations for performance analysis. In this study two of the widely used ratios were considered appropriate to designate financial performance of financial institutions. These are ROA and ROE, these shows how well assets and owner's equity has been utilized by the financial institutions. These two dependent variables were used by a large number of researchers in their studies.

Batten and Vo (2019); Darayseh and Chazi (2018); Daly and Frikha (2017); Faizulayev and Bektas (2018); Le (2017); Petria, Capraru, and Ihnatov (2015) used ROE and ROA to analyze performance of banking system. Equity is the net worth of owners of bank and ROE shows "ratio of net profit after tax with equity" in unity, it means for one rupee how many rupees are earned by shareholders. Whereas ROA is "ratio of net profit after tax to total assets", it is expressed in percentage and provides results in terms of profit due to usage of assets.

Size of Institute (Sz)

Total assets or net assets denote the size of the institution. Hefty amounts of literature suggest that assets of financial institutions have a noteworthy relationship with their performance. Ali, Akhtar, and Ahmed (2011); Batten and Vo (2019); Le (2017); Faizulayev and Bektas (2018); Zeitun (2012) observed negative, while Daly and Frikha (2017); Gul, Irshad, and Zaman (2011) identified negative association between size and performance of banks. As per findings of Dietrich and Wanzenried (2011) and Sufian and Habibullah (2009) the impact was not uniform, Petria et al. (2015) found no relation among size and ROE, while a weak positive relation with ROA.

H1: Size of Institute has negative relationship with performance of financial institutions.

CA

Financial institution is middleman between supplier and user of funds, he can be termed as trader of money or finance. But owners of financial institution have to employee their own funds in the business. This is required at the time of incorporation and later banking regulator also sets targets of minimum capital requirements. Literature has thrown light on significance of amount of capital on performance of financial institutions. Majority of studies concluded positive relation between capital and profitability of banks measured in terms of ROA and ROE. Anbar and Alper (2011); Batten and Vo (2019); Dietrich and Wanzenried (2011); Darayseh and Chazi (2018); Daly and Frikha (2017); Faizulayev and Bektas (2018); Gazi, Rahaman, Waliulllah, Ali, and Mamoon (2021); Zaman et al. (2011); Le (2017); Petria et al. (2015); Zeitun (2012) are some of them. However, well capitalized bank performed better and this relation improves in long run. Le (2017); Dietrich and Wanzenried (2011) also observed negative association in some cases.

H2: CA has positive impact on performance of financial institutions.

CR

A CR arises due to failure on the part of borrower to repay agreed payments of loans, it is the risk of default on a debt. It disrupts organizational cash flows and increases costs of collecting loans, at the same time and in the first resort, the risk is that of the lender and includes lost principal and interest.

Majority of studies like Ali et al. (2011); Batten and Vo (2019); Dutta, Jain, and Gupta (2020); Dietrich and Wanzenried (2011); Faizulayev and Bektas (2018); M. K. Hassan and Bashir (2003); Petria et al. (2015); Olson and Zoubi (2011); Athanasoglou, Brissimis, and Delis (2008) detected negative impact of CR on performance of banks. Le (2017) concluded an insignificant and Sufian and Habibullah (2009) found positive impact.

H3: CR has negative impact on performance of financial institutions.

EF

EF of financial institution is another determinant of their performance found in literature. EF has different definitions and aspects; it can be explained in terms of quality or quantity. In financial analysis, EF is earning maximum revenue at minimum possible costs or operating expenses. Measurement of EF of financial institutions has been done in various ways and dimensions. Since this study focuses on financial performance EF has been operationalized as "ratio of cost to income" of organization.

It is an interesting fact that almost all work gone through showed negative impact of EF on bank's profitability, some of them are (Batten & Vo, 2019; Darayseh & Chazi, 2018; Dietrich & Wanzenried, 2011; Faizulayev & Bektas, 2018; M. K. Hassan & Bashir, 2003; Olson & Zoubi, 2011; State Bank of Pakistan SBP, 2016; Petria et al., 2015; Sufian & Chong, 2008; Zeitun, 2012). Only Ali et al. (2011) pointed out positive but insignificant impact on ROA only.

H4: EF has a negative impact on performance of financial institutions.

LR

Inability to meet short term financial obligations is known as LR. An organization or bank may be short of funds to meet them due to shortage of liquid assets. Cash or near cash items can be obtained immediately but for this loss of capital or income may take place. CR occurs due to the inability to convert a security or hard asset to cash or marketable assets.

Anbar and Alper (2011); Le (2017); Daly and Frikha (2017); Darayseh and Chazi (2018); Olson and Zoubi (2011); M. K. Hassan and Bashir (2003); Gul et al. (2011); Naceur (2003); Zaman et al. (2011), Sufian and Habibullah (2009) observed a positive relation of LR with ROA and ROE with a few exceptions. Weak economy, high risk loans and more dependence on one asset were identified as unfavorable elements of LR.

H5: LR has positive impact on performance of financial institutions.

Model Framework

After going through the research methodologies and econometrics models adopted by the analysts of financial performance evaluated for financial institutions, followings regression equations were developed for this study. This model can accurately explore impact of independent variables on dependent variables. It will also help in performance analysis and comparison of Banking and NBFIs working in Pakistan.

$$ROA_{it} = \alpha_i + \beta_1 SZ_{it} + \beta_2 \overline{CA}_{it} + \beta_3 CR_{it} + \beta_4 EF_{it} + \beta_5 LR_{it} + \varepsilon_{it}$$
$$ROE_{it} = \alpha_i + \beta_1 SZ_{it} + \beta_2 CA_{it} + \beta_3 CR_{it} + \beta_4 EF_{it} + \beta_5 LR_{it} + \varepsilon_{it}$$

Where as Dependent Variables are ROA and ROE respectively and Independent variables are "SZ, CA, CR, EF, LR" respectively, whereas α and β are fixed quantities, i.e. the parameters of the model and e stands for error term.

RESEARCH METHODOLOGY

Population of the Study

Population for this study is Scheduled banks (Conventional and Islamic) and NBFIs (Modaraba and Leasing Companies) working in Pakistan.

As per list available at SBP website 25 conventional and 5 Islamic banks working in the country. NBFI and Modaraba Association of Pakistan (2015) reveals that there are 25 operational Modaraba Companies and 10 active Leasing Companies in Pakistan.

Sampling Techniques

The probability sampling technique is being adopted to select samples randomly out of the population. (KPMG Taseer Hadi & Co., 2015), divides Pakistan banking sector into large, medium and small size Banks. This division is on the basis of their capacity, size, deposits, assets, loan and financing to other banks.

Large and Medium banks have not been taken in the analysis with Modaraba and Leasing Companies due to the huge difference in life span, equity, assets size and profitability. For instance, paid up capital of all 10 leasing companies in the year 2015 is Rs. 5613 Million, whereas lowest equity of one large size bank that is Bank Alfalah worth Rs. 54093 Million. On the other hand, total equity of all Modaraba companies is Rs. 10112 Million. Same is the case with reference to asset size and profitability of large banks. Their figures are having huge difference as compared to Modaraba and Leasing companies.

Sample Size

In this study 04 institutions of each group have been taken due to the fact that there are four full-fledged Islamic banks in Pakistan. 04 conventional banks of small size and all 04 Islamic Banks have been taken as samples from the banking institutions.

As far as NBFIs are concerned, 04 leasing and 04 Modaraba of the same size have been selected as sample as per data available on NBFI and Modaraba Association of Pakistan year book 2015. Large size Modaraba and Leasing companies with reference to their profitability, assets, equity and credit rating have been selected. These institutions are Samba bank, Silk Bank, First Women Bank, Deusche Bank (Conventional Banks), Meezan Bank, Albaraka Bank, Bank Islami Pakistan and Dubai Islamic Bank (Islamic Banks), Allied Rental Modaraba, First

National Bank Modaraba, Standard Chartered Modaraba, BRR Guardian Modaraba, Orix Leasing Pakistan, Saudi Pak Leasing Limited, Pak-Gulf Leasing Company Limited and NBP Leasing Limited.

Research Tools

This research is based on the quantitative approach which includes a collection of the data and statistical descriptive analysis with the assistance of statistic software of Excel Sheet in Microsoft office. Data was analyzed appropriate applicable statistical software of E-Views. Regression Model has been designed for empirical analysis of performance as dependent variable and internal factors affecting the performance as independent variables.

DATA COLLECTION AND ANALYSIS

Secondary data was collected from the financial statements of sample financial institutions (conventional banks, Modaraba companies and Leasing Companies) for a period of 10 years, 2007-2016 which will be used in this research.

Measurement of Variables

Performance (Dependent Variable) measured in terms of ROA = Net Profit/Average Assets, ROA = Net Profit/Average Equity

Determinants of Performance (Independent Variables) 1. Institute Size (SZ) = Log of Total Assets, 2. CA = Equity/Total Assets 3. CR = Non Performing Loans/Gross Loans 4. EF = Cost/Income 5. LR = Loans/Total Assets

Descriptive statistics are used to explain the central and core features of huge data set. It describes the main characteristics of complete data set that is under discussion.

Descriptive Statistics

To summarize the large amount of data descriptive statistics are used. Numerical representation of data is done by using descriptive. The table below shows the main features of selected variables. The descriptive statistics tends to provide the nature of data utilized in the study.

The Table 1 shows that there are 160 observations against each measured variable. The variable ROA has minimum value -0.411 and maximum value 0.277 with mean value 0.009 and standard deviation 0.062. The negative value explains that Saudi Pak Leasing Company was in loss with reference to the ROA in the year 2012.Variable ROE has minimum value -14.743 and maximum value 2.779 with mean value -0.056 and standard deviation 1.233. However, the negative values in ROE represents that Silk bank's ROE was in loss in 2009. This heavy loss accompanied by other organization's losses resulted in negative mean of ROE. The variable Size has minimum value 15.804 and maximum value 24.421 with mean value 19.740 and standard deviation 2.272. Variable CA has minimum value -0.549 and maximum value 0.906 with mean value 0.036 and standard deviation 1.223. Negative value depicts that ROE of Saudi Pak Leasing Company remained negative in the year 2016. The variable CR has minimum value 0.000 and maximum value 0.875 with mean 0.106 and standard deviation 0.146. The variable EF has minimum value -0.770 and maximum value 9.170 with mean 0.400 and standard deviation 0.951. Similarly, the variable LR has the minimum value 0.000 and maximum value 10.356 with mean value 0.647 and standard deviation 1.430.

Table 1: Descriptive statistics

Variable Name	*N*	Mean	Minimum	Maximum	Standard Deviation
ROA	160	0.009	-0.411	0.277	0.062
ROE	160	-0.056	-14.743	2.779	1.233
SIZE	160	19.740	15.804	24.421	2.272
Cap. Adequacy	160	0.036	-0.549	0.906	1.223
CR	160	0.106	0.000	0.875	0.146
EF	160	0.400	-0.770	9.170	0.951
LR	160	0.647	0.000	10.326	1.430

Correlation Analysis

Correlation analysis of the data in Table 2 shows relationship between two variables. ROA and ROE has positive association with each other but it is very minor. It shows that change in ROA will bring about negligible change in ROE. Size, CA and EF has positive correlation with both ROA and ROE. Whereas, CR and LR are inversely linked with them. It gives an idea that changes in SZ, CA and EFF has positive influence in profitability of financial institutions, while CR and LA has opposite effect on it. Strongest positive association is between Capitals of financial institution with that of ROA. On the other hand, LR has most negative relationship with ROE.

Table 2: Correlation analysis

	ROA	ROE	SIZE	CAD	CR	EF	LR
ROA	1.000						
ROE	0.095	1.000					
SIZE	0.117	0.101	1.000				
CAD	0.488	0.063	0.027	1.000			
CR	-0.233	-0.074	0.130	0.063	1.000		
EF	0.043	0.019	-0.116	0.018	-0.020	1.000	
LR	-0.127	-0.351	-0.102	-0.053	0.066	-0.040	1

Regression Analysis

To determine the magnitude of effect of one variable on the other, variable regression analysis technique is utilized. This statistical technique is widely used by management sciences, social sciences, business applications etc. In regression analysis response variable is estimated by using the one or more predictor variables. Regression analyses are applied on the basis of the nature of the data.

Primarily there are three main types of data time series, cross sectional and panel data. In present research the nature of time is classified as panel data and its regression includes Ordinary least square, fixed effect and random effect models. Furthermore, regression analysis can be used for different purposes like description of data, to check the control of variables on other and also for the estimation of future behaviour of the variables. As discussed in previous chapter, for this study the purpose is to estimate the dependent variables ROA and ROE. The predictor variables are Institute size (SIZE), CA, CR, EF and LR. Usually there are three types of Regression Models (Pooled OLS Model/Fixed Effect Model/Random effect Model) are used and which one is applicable is depends upon the nature of data being used. In our study we used the fixed effect model as it does not pool all the variables used to estimate the explained variable, but provides intercept values for each explanatory variable. The selection of fixed effect model is based on the Housman test.

Table 3: Banking and Non-Banking Sector
(Conventional & Islamic banks, Leasing & Modaraba Companies in Pakistan)
Results of Fixed Effect Model
Dependent Variable: ROA (Model 1) & ROE (Model 2)

	Model 1			Model 2		
Variables	Coefficients	Standard Error	*t*-statistic	Coefficients	Standard Error	*t*-statistic
Constant	-0.107	0.040	-2.675***	0.163	0.278	0.586
Size	0.007	0.002	3.305***	-0.113	0.014	-8.071***
CA	0.008	0.004	2.000***	0.965	0.250	3.867***
CR	0.092	0.030	3.032***	0.392	0.209	1.86**
EF	0.001	0.005	0.2000***	0.098	0.032	2.803***
LR	-0.017	0.003	-5.255***	-0.050	0.0223	-2.257***
Adj. R^2	0.236		Adj. R^2	0.605		
		Panel Diagnostics				
F- Statistic	9.499			*F* - Statistic	305.262	
H – Test	110.845			*H* – Test	125.852	

Measures to check the EF of the models are given in the Table 3. Table 3 shows that all the independent variables that are used to estimate the dependent variable ROA have the *p* values less than 0.05, so all the variables are significant, except EF for ROA. Some independent variables like Size and CA have strong and positive impact on dependent variable ROA. EF has positive but insignificant effect on Dependent variable ROA. Similarly, the independent variable LR and CR have negative influence on the dependent variable ROA.

The statistic *R* square used to measure the variation in the dependent variable due to the independent variables. Panel diagnostics of model 1 shows that the value for the *R* square is 0.236 which means that 23.6% variation in the dependent variable ROA is due to the independent variables (SZ, CA, CR, EF, LR).

To check the autocorrelation in the model Durbin Watson Test statistic is used. If the value of Durbin Watson is between 0 and 4 which means that there is no autocorrelation. The Durbin Watson value of our model is 1.5724 which is greater than zero and less than 4, so there is no autocorrelation present in the model.

The regression model 2 for ROE and it explains that all the independent variables that are used to estimate the dependent variable ROE have the *p* values less than 0.05, so all the variables are significant. Some independent variables like CA, CR and EF have positive impinge on Dependent variable ROE. However, CR has week effect on the dependent variable ROE. Similarly, the independent variables Size and LR have negative relationship with the dependent variable ROE. According to the findings given in the table we can observe that the regression coefficient CA has maximum effect on the dependent variable ROE, so it has most importance for the estimation of ROE.

The statistic *R* square used to measure the variation in the dependent variable due to the independent variables. Panel diagnostics of model 2 has the value for the *R* square is 0.605 which means that 60.5% variation in the dependent variable ROE is due to the independent variables (SZ, CA, CR, EF, LR).

To check the autocorrelation in the model Durbin Watson Test statistic is used. If the value of Durbin Watson is between 0 and 4 which means that there is no autocorrelation. The Durbin Watson value of our model is 1.8785 which is greater than zero and less than 4, so there is no auto-correlation present in the model.

Table 4: Results (Conventional Banks)
Results of Fixed Effect Model
Dependent Variable: ROA (Model 1) & ROE (Model 2)

	Model 1			Model 2		
Variables	Coefficients	Standard Error	*t*-statistic	Coefficients	Standard Error	*t*-statistic
Constant	0.143	0.051	2.804***	7.926	7.459	1.063
Size	-0.008	0.003	-2.685***	-0.822	0.441	-1.864**
CA	0.081	0.022	3.682***	-0.514	0.224	-2.295***
CR	-0.237	0.031	-7.645***	-7.574	4.617	-1.640
EF	0.001	0.0004	2.672***	0.110	0.057	1.930**
LR	0.0001	0.00004	2.388***	-0.026	0.014	-1.857**
Adj. R^2	0.723		Adj. R^2	0.265		
		Panel Diagnostics				
F- Statistic	15.689			*F*- Statistic	300.36	
H – Test	125.759			*H* – Test	135.003	

Table 4 has been prepared from data of sample conventional banks by regressing independent variables on dependent variable ROA and ROE. Results in above table shows that some independent variables like CA and EF have positive consequences on dependent variable ROA. Similarly, the independent variable Size and CR have negative relationship with the dependent variable ROA. The regression coefficients are shows that the independent variable LR has positive but very weak effect on dependent variable ROA as compared to the other independent variables. *R* square for ROA is 0.723 which means there is 72.3% change in ROA of conventional banks due to independent variables of SZ, CA, CR, EF and LR.

Table 5 was prepared from the data of 4 full-fledged Islamic banks in Pakistan. Here in Model 1 shows interesting results, Size and EF has positive impact on Islamic Banks performance when measured in terms of ROA. Whereas CA, CR and LR have negative cause with ROA. *R* square is 0.427, reflects 42.7% change in dependent variables due to independent variables.

Table 5: Results (Islamic Banks)
Results of Fixed Effect Model
Dependent Variable: ROA (Model 1) & ROE (Model 2)

	Model 1			Model 2		
Variables	Coefficients	Standard Error	*t*-statistic	Coefficients	Standard Error	*t*-statistic
Constant	-0.108	0.050	-2.160***	-1.897	0.449	-4.225***
Size	0.007	0.002	3.000***	0.110	0.230	4.783***
CA	-0.002	0.038	-0.053	0.667	0.344	1.948*
CR	-0.171	0.088	-1.965**	-0.954	0.495	-1.927*
EF	0.059	0.024	2.458***	0.005	0.003	1.667
LR	-0.025	0.013	-1.964***	-0.227	0.118	-1.928**
Adj. R^2	0.427		Adj. R^2	0.568		
		Panel Diagnostics				
F- Statistic	8.356			*F*- Statistic	309.157	
H – Test	100.658			*H* – Test	124.663	

Table 6: Results (Modaraba Companies)
Results of Fixed Effect Model
Dependent Variable: ROA (Model 1) & ROE (Model 2)

	Model 1			Model 2		
Variables	Coefficients	Standard Error	*t*-statistic	Coefficients	Standard Error	*t*-statistic
Constant	-0.709	0.351	-2.020***	5.119	1.258	-4.070***
Size	0.031	0.016	1.976***	0.231	0.057	4.053***
CA	0.298	0.056	5.321***	0.760	0.200	3.800***
CR	-0.065	0.035	-1.854*	-0.242	0.126	-1.921*
EF	0.005	0.002	2.500***	0.013	0.007	1.857*
LR	-0.0002	0.006	-0.026	-0.017	0.022	-0.772
Adj. R^2	0.568		Adj. R^2	0.455		
		Panel Diagnostics				
F- Statistic	11.586			*F* - Statistic	275.658	
H – Test	104.689			*H* – Test	119.147	

Model 2 ROE of Islamic bank is positively influenced by Size, CA and Efficiency and negatively by CR and LR. *R* square for ROE here is 0.568 explains that 56.8% change was noted in ROE due to independent variables.

Table 6 demonstrates regression analysis of Modaraba companies selected as sample in the study. Results are different as compared to banking institutions. Here independent variables Size, CA and EF have positive outcome on ROA as reflected in Model 1. CR has negative while LR has no effect on ROA. *R* square 0.568 which means there is 56.8% change in dependent variable due to independent variables.

Model 2 which is for ROE shows that CR is negatively and LR is insignificantly influencing ROE, whereas Size, CA and EF have positive impact on ROE, however EF is weak in influence on ROE. *R* square in model 2 is 0.455 which reflects 45.5% change in dependent variable due to independent variables.

Table 7 shows regression results for leasing companies, one of the non-banking sectors included in the study. Model 1 is for ROA, it illustrates that Size and CA has positive, whereas CR is negatively affecting ROA. EF is insignificant, whereas LR has no effect with dependent variable ROA. *R* square in model 1 is 0.175, means 17.5% change in ROA due to independent variables.

Model 2 for leasing companies reflects regression of independent variables with dependent variable ROE. Here Size and CR are negative whereas CA has positive impact on ROE. EF and LR remained as insignificant independent variables for dependent variable ROE. *R* square for model 2 is 0.291, shows that independent variable brings 29.1% change in dependent variable.

Table 7: Results (Leasing Companies)
Results of Fixed Effect Model
Dependent Variable: ROA (Model 1) & ROE (Model 2)

	Model 1			Model 2		
Variables	Coefficients	Standard Error	*t*-statistic	Coefficients	Standard Error	*t*-statistic
Constant	-0.141	0.073	-1.932*	3.532	2.956	1.195*
Size	0.009	0.004	2.250***	-0.433	0.233	-1.858*
CA	0.052	0.026	2.000***	1.785	0.773	2.309***
CR	-0.088	0.046	-1.913**	-9.175	4.807	-1.909**
EF	0.001	0.001	0.739	0.010	0.090	0.112
LR	0.000	0.000	0.000	-0.036	0.020	-1.800
Adj. R^2	0.175		Adj. R^2	0.291		
		Panel Diagnostics				
F- Statistic	16.357			*F*- Statistic	298.365	
H – Test	145.658			*H* – Test	129.651	

Discussion

This study is undertaken to look into the determinant of performance of financial institutions. On the basis of license these can be categorized into banking and non-banking institutions. Conventional and Islamic banks were taken as banking, while Modaraba and Leasing companies as non-banking institutions. Effects of five variables found in literature have already been elaborated in previous section of this chapter. These results confirm that performance of financial institutions is affected by Size (Assets), CA (Equity to Assets ratio), CR (Non-Performing Loans to Total Loans ratio), EF (Cost to Income ratio) and LR (Loans to Assets ratio). Analysis has been done for all institutions as one unit as well as each of the four types of institutions.

Size has positive impact on Financial institutions (as a whole) Islamic banks, Modaraba Companies and Leasing Companies with reference to ROA. Same observations has already been given by Ali et al. (2011); Daly and Frikha (2017); Gul et al. (2011). Our result for the influence of same variable on performance of selected conventional banks is negative. This is in line with majority of studies found in literature like (Batten & Vo, 2019; Faizulayev & Bektas, 2018; Le, 2017; Zeitun, 2012). With reference to ROE Size has negative effect on financial institutions (overall), Conventional banks and Leasing companies. This is identical with (Ali et al., 2011; Faizulayev & Bektas, 2018) and (Sufian & Habibullah, 2009). On the other hand ROE is negatively influenced by Size in Islamic banks and Modaraba companies alike (Faizulayev & Bektas, 2018; Dietrich & Wanzenried, 2011; Zeitun, 2012).

Second variable CA showed positive impact on ROA of Financial institutions (as a whole), Conventional banks, Modaraba companies and Leasing companies. It is similar to the studies conducted by Batten and Vo (2019); Darayseh and Chazi (2018); Daly and Frikha (2017); Faizulayev and Bektas (2018). CA confirmed negative but insignificant influence on ROA of Islamic banks, it is matching with Zeitun (2012) who elaborated that in comparison to conventional banks Islamic banks showed weaker effect of CA on ROA. Anbar and Alper (2011); Zaman et al. (2011) noticed that only well capitalized banks show positive changes in profitability. When analyzed with ROE, CA influenced it positively for Financial institutions (overall), Islamic banks, Modaraba companies and Leasing Companies. Same trend was detected by Faizulayev and Bektas (2018); Dietrich and Wanzenried (2011); Le (2017). On the other hand ROE of Conventional banks is negatively affected by CA. Similar tendency was identified by (Faizulayev & Bektas, 2018; Batten & Vo, 2019) who argued that it can improve in long run, whereas (Petria et al., 2015) recognized that CA is insignificant for ROE.

Third variable CR has negative impact on both ROA and ROE for all types of Financial institutions individually that is Conventional banks, Islamic banks, Modaraba companies and Leasing companies. It is in identical to the hypothesis and available literature for example (Ali et al., 2011; Athanasoglou et al., 2008; M. K. Hassan & Bashir, 2003; Olson & Zoubi, 2011; Petria et al., 2015). Interestingly in line with Sufian and Habibullah (2009) Financial institutions (overall) have positive influence of CR on Profitability.

Fourth variable EF positively affect profitability of financial institutions, but insignificantly for Leasing companies and Islamic banking. Islamic banks are experiencing negative impact of EF on ROA. It is in contrast to available literature, where Eff shows negative effect on financial performance if financial institutions, some of these studies are (Ali et al., 2011; Batten & Vo, 2019; Darayseh & Chazi, 2018; Dietrich & Wanzenried, 2011; Faizulayev & Bektas, 2018; M. K. Hassan & Bashir, 2003; Olson & Zoubi, 2011; Petria et al., 2015; Sufian & Chong, 2008; Thompson, 2021; Zeitun, 2012). Among all these studies only Ali et al. (2011); Majeed and Zainab (2021) observed positive influence of Eff on ROA, but they also declared it insignificant.

Fifth variable considered in the study was LR, which has negative impact both on ROA and ROE for overall Financial institutions, Conventional banks & Islamic Banks. Only exception is conventional banks having positive influence of LR on ROA. For Modaraba and Leasing Companies effect is positive for ROA and Negative for ROE, but insignificant in both cases.

CONCLUSION

This study is based on the analysis of data of 16 sample financial institutions, 4 each from Conventional banks, Islamic banks, Modaraba Companies and Leasing Companies. There are 160 observations are considered from the year 2007 to 2016 from each type. It is first attempt of its kind to compare performance of Banking and Non-Banking institutions. The Conventional banks, Islamic banks, Modaraba companies and Leasing Companies are suffering due to CR and LR. Although CB are having positive LR on ROA, but their performance is hampered by Size.

Which is having positive impact on performance all other FIs. EF is a factor which is positively or insignificantly influencing performance of FIs. It is due to the fact that non-banking institutions are having lesser operating costs and taxation as compare to banking institutions. Major source of finance for Non-Banking institutions is Capital, which is later used to lend fund for earnings. Hence, it has fruitful impact on their performance. On the other hand, CB and IB are allowed to accept deposits which are later used as a source of financing. These banking institutions do not rely on capital only. History tells that Conventional banks in Pakistan are growing in numbers and size, while all other types of financial institutions are shrinking and dying. There is need to analyse this situation to look for the ways to develop all types of financial institutions. NBFIs in particular are shrinking in size and numbers, majority of them is suffering losses. This study tried to identify determinants of slow or negative growth of NBFIs as compared to banks. It is first effort of its kind and explored a new avenue of research.

Practical Implications

1. Present study unfolded the determinants of slow or negative growth of NBFIs as compared to banks. Therefore, its results will help the policy makers to address the growth issues of NBFIs.

2. Present study identified the grey areas for the top management of the NBFIs. Therefore, it will help the top management to develop its goals and strategies on the basis of findings of this study.

Limitations of the Study

1. The study used smaller sample size to address the problem statement of this research.

2. The research used the data between 2007 to 2016 due to unavailability of data after 2016.

Future Directions of the Study

This study tried to identify determinants of slow or negative growth of NBFIs as compared to banks. It is first effort of its kind and explored a new avenue of research. The future studies can extend this research using bigger sample size of banking and non-banking institutions of Pakistan.

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