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**Title** Determinants Of Profitability Of Islamic Banks Of Pakistan -A Case Study On Pakistan's Islamic Banking Sector

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## Determinants of Profitability of Islamic Banks Of Pakistan -A Case Study on Pakistan's Islamic Banking Sector

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### Abstract

*The purpose of this study is to find out the determinants of Islamic banks of Pakistan. The authors collected data of five Islamic banks of Pakistan over ten years extending from 2006-2015. The independent variables were GDP, Size, Inflation & Liquidity whereas dependent variables was Return on Asset. By using STATA software and employed panel regression the researcher found that in fixed model effect, there are two significant variables at 5% i.e., size of Islamic banks and liquidity. Liquidity has positive whereas size has negative relationship with the profitability of Islamic banks.*

**Keywords:** *Islamic Banks, Size, GDP, Inflation, Liquidity, Return on Assets*

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## **Introduction**

Banks are playing vital role in our society, and it is impossible to imagine a life without banking. In other words, banks are supposed to be oxygen of an economy. Government of any country strengthens their economy through “Monetary Tools” via banking system. Furthermore, all financial and individual business transactions that we are being involved in are done through banks. In spite of advantages of conventional banking, disadvantages have also come out from it. As we noticed, financial and economic crisis of twenty first century has occurred mainly due to conventional banking system. The frequency of such financial crisis has been started due to existence of Capitalism where interest rate is allowed.

Although, Islamic banking in Pakistan started three decades ago, but the serious efforts have been taken by State Bank of Pakistan in January 2000 when SBP constituted a Commission for Transformation of Financial System (CTFS) to introduce Shar’iah compliant modes of financing and on 15 September 2003, when SBP established the Islamic Banking Department. In January 2002, Meezan Bank Limited was permitted as first Islamic Bank which was certify by the State Bank of Pakistan to work as completely fledged Islamic bank in Pakistan. There are only five Islamic banks in which some of them have started working recently, whereas conventional banks are much larger in size and numbers, and most of them are in service for more than a decade.

The objective of this study is to study the impact of financial and macroeconomic determinants of Islamic banks in Pakistan on bank’s profitability. The Islamic banking sector plays a crucial role as financial intermediaries to smooth the progress of the flow of finances from investor to borrowers.

Sadaqat, Akhtar and Ali (2011) found that the financial market of Pakistan is among the most unstable market of world. The reason to choose banking sector of Pakistan can be best warranted with the information that an increasing heighten can be observed in a State Bank of Pakistan’s report recorded 23.3 percent year-on-year growth in deposits of Islamic banking industry to Rs 1.070 trillion in 2014. The industry’s deposits stood at Rs 868 billion in 2013. According to Economic Survey, 2015-16 released by Finance Minister, Ishaq Dar here on Thursday, the deposits of the IBI reached to Rs 1.4 trillion in 2015. Pakistan's Islamic Banking deposits are expected to reach Rs 4 trillion by 2020 attaining a market share of 20 percent of the local banking sector. The research findings will be helpful for banking sector to understand the determinants of profitability closely and set their policies accordingly. Also, it will be helpful for investors, debtors, creditors and other business individuals to evaluate the risk of their investment in both sectors of banking in Pakistan

## **Literature Review**

### **Theoretical Background:**

#### ***Inflation:***

According to the **theory of Perry** (1992), it can be assumed that Islamic banks could not anticipate the inflation and thus the inflation cost has decreased its profitability.

**Size:**

According to Boyd and Runkle (1993), the size of a bank is often associated with the concept of economies of scale. **Economic theory** explained that if an industry is subjected to economies of scale, the institution could be more efficient to produce at lower cost. It is expected that economies of scale or bank size is positively related to bank's profitability.

**GDP:**

According to **Francis (n.d.)**, Gross domestic product, or economic growth is adopted as a control for cyclical output effect. It is expected to be positively in relation with banks' profitability.

**Liquidity:**

A negative relationship has suggested by **Francis (n.d.)** that lower liquidity could enhance a banks' profitability. When banks have lower liquidity, it reflects the banks are holding less money and lending more to public. Therefore, the banks could generate interest income and imply growth in business.

**Previous Studies:*****Size of the firm:***

Abbas et al (2016) computes various elements of performance, including efficiency and effectiveness, and finds out the factors of variation in each component of performance by using the Tobit regression. Overall performance of Islamic banks was influenced positively by age, capitalization, size, non-markup expenditure, minimum capital requirement and gross domestic product (GDP) growth rate, whereas profitability, concentration and inflation had a negative relationship.

Kashif et al (2016) find the main factors/determinants that affect the profitability of Islamic bank in Pakistan for the period of 2007 to 2014. These factors are broadly classified into three big groups. That is, internal factors, industry specific and external factors.. The study was conducted on the performance of Islamic banks of Pakistan. The data about internal factors was collected from the quarterly income statements and balance of Islamic banks of Pakistan. State bank of Pakistan and IMF source is used for external factors data. This study was conducted to find the determinants of profitability of Islamic banks of Pakistan. Based on the results of regression we can conclude that the determinants of both ROA and ROE are not same. Size, deposits, financing, share, GDP and Inflation are the factors that are insignificantly affect over ROA and ROE. Size, financing and market share positively impact over ROA and ROE whereas Deposits, GDP and Inflation negatively impact over ROA and ROE.

Asma et al (2011) studied the determinants of nine Islamic banking institutions profitability in Malaysia. The author took the panel data over the period from 2007 -2009. They found that only the bank's size has a positive significant impact on profitability of Malaysian Islamic banks. Haron (2004) tested the factors that have an effect on the Islamic banks performance. The author found that liquidity,

total expenditures, funds invested in Islamic securities, size of the bank and the percentage of the profit-sharing ratio have a positive and significant impact on profitability of Islamic Banks. Al-Tamimi (2005). Using results of two regression models, the study concluded that the bank portfolio combination and bank size have extremely significant relation with return on assets and return on equity. Srairi (2009) found size has a positive relationship with profitability of conventional banks and Islamic banks.

Sehrish et al (2011) examined the relationship between bank- specific and macroeconomic characteristics over bank profitability by using data of top fifteen commercial banks of Pakistan over the period 2005-2009. The authors found that only ROA has positive insignificant relationship with the size of the firm.

Pasiouras et al (2007) concluded that there is a positive relationship between bank size and profitability. Bashir (2003) found that size has negative impact on the profitability of banks. Wasiuzzaman and Ahmed Tarmizi (2010) tested the impact of bank specific and macroeconomic determinants on the profitability of Islamic banks in Malaysia. . The researchers did not find a significant relationship between Islamic banks size and profitability of Malaysian Islamic banks studied hence it was dropped from the study.

#### ***GDP:***

Scott and Arias (2011) The relationship was clearly identified in the data analysis that GDP has positive effect on profitability of banks. Sufian (2011) found that the impact of GDP on ROA is mixed. It was found that the coefficient of GDP was negative, but it becomes positive when we have power over for both the crisis and calm periods. Khrawish (2011) found that there is a negative impact of GDP and inflation with ROA and ROE. Evans Ovamba (2014) analyzed the effect of macroeconomic variables on commercial banks profitability in Kenya. It was the case study of Equity Bank Limited. The estimated result showed that GDP has positive insignificant effect on profitability. Sehrish Gul et al (2011) found that Gross Domestic Product (GDP) has positive relationship with Return on Asset. Dietrich et al (2009) results showed that the GDP growth rate affects bank profitability in Switzerland positively.

#### ***Liquidity:***

Number of researches on the determinants of bank profitability found that liquidity is one of the important determinants of bank profitability. Examples include Guru & Eichengreen and Gibson (2001, Bourke, (1989), Bashir, (2000), Karasulu, (2001). According to Eichengreen and Gibson (2001), The higher profitability could be expected if we tied up less funds in liquid investments. Haron (2004) that liquidity has positive relationship with the profitability of Islamic banks. Bourke (1989) found positive relationship between liquid assets and bank profitability. Molyneux et al (1992) found evidence of negative relationship between liquidity and profitability of banks. Asma et al (2011) found that there is no relationship between liquidity and profitability of the Malaysian banks.

#### ***Inflation:***

Driver et al (2009) Inflation affects companies' pricing behavior. Sehrish Gul et al (2011) inflation (INF) shows the direct relationship with ROA. Saksonova and

Solovjova (2011) authors concluded that Inflation (INF) had negative relationship with profitability (ROA).

Waseem et al (2014) a strong positive relation has found among the variables, i.e. inflation over bank's performance. Alfani et al (2013) analyzed the impact of inflation on profitability of the private banks of Indonesia. The researcher found that inflation does not have a significant impact to the banking profitability.

Scott et al (2014) employed panel data estimation techniques to investigate the effects of economic openness and inflation on commercial banks' profitability in Nigeria. The empirical analysis indicated that Inflation and bank size observed to have had insignificant impact on banks' profitability in the study period. Mahmood et al (2014) tries to assess factors that affect the profitability of Islamic banking industry over the period of 2007 to 2014. Findings of the study indicate that measures of Islamic banking profitability are significantly affected by bank-specific factors such as gearing ratio, asset management, deposit ratio, and NPL ratio and external factor such as CPI (Inflation).

### **Research Hypotheses:**

**Null Hypothesis 1:** GDP has no impact on profitability of Islamic Banks.

**Null Hypothesis 3:** Size of the bank has no impact on profitability of Islamic Banks.

**Null Hypothesis 3:** Liquidity of the bank has no impact on profitability of Islamic Banks.

**Null Hypothesis 4:** Inflation has no impact on profitability of Islamic banks.

### **Methodology**

#### **Research Design:**

The research design of this study is descriptive. The panel data of five Islamic banks over a period of ten years, i.e. 2006-2015 are taken from their financial statements. Independent variables of the study are inflation, liquidity, Gross domestic product and size of the firm whereas dependent variable is a profitability which is represented as ROA i.e. Return on Assets. The multiple regression technique will be used to analyze the data of Islamic banks.

#### **Survey Population:**

Total 22 Commercial banks, five Islamic Commercial Banks have been included into the sample of this research study. There are five Islamic banks in Pakistan, which are working under Shariah Compliant mode, taken as sample of Islamic banks in this study are:

1. Al-Baraka Islamic Bank.
2. Bankislami Pakistan Limited
3. Burj Bank Limited
4. Dubai Islamic Bank Pakistan Limited
5. Meezan Bank Limited

#### **Conceptual Framework:**

The Islamic bank model or equations have been developed for this study. It will be helpful to understand that which variable is significant or insignificant for the profitability of Islamic bank. The equation and model are as below:

**Model 1: Impact of Macroeconomic & Financial Indicators on profitability of Islamic Banks.**

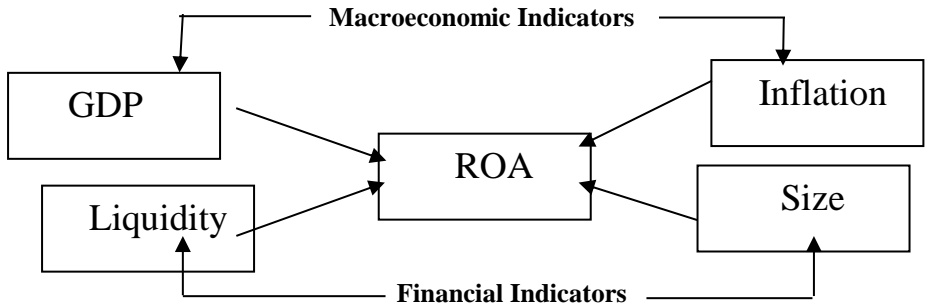


Figure # 1

**Equation:**

$$PF = B_0 + B_1GDP + B_2INF + B_3LQ + B_4SZ + \sigma$$

Where, PF = Profitability of Islamic banks

GDP = Gross Domestic Product

INF = Inflation

SZ = Size of Islamic banks

LQ = Liquidity of Islamic banks

**Variables:**

The author has chosen those variables which are mostly found significant in previous researchers. Furthermore, the above variables are the most commonly used by authors of researches which are included in the literature review.

**Dependent Variable:**

The author selects profitability as the dependent variable. There are various variables which may represent profitability of the firm but the researcher has selected ROA ratio as the dependent variable.

**(a) ROA:**

ROA stands for Return on Assets. It is a ratio calculated by dividing the net income over total assets. ROA have been taken mostly as profitability measurement from the banks. Van Horne (2005) stated that Return on assets indicates the profitability on the assets of the firm after all expenses and Taxes.

**Table 1: Dependent Variable and their Assessment.**

Variable	Variable Name	Assessment
ROA	Return On Assets	Net Income/Total Assets

**Independent Variables:**

The researcher has selected four independent variables in which two are financial and two are macroeconomic variables. The financial variables are the size of the firm and liquidity whereas GDP and inflation are chosen as macro-economic variables. The details of each independent are given below:

**(a) GDP:**

GDP stands for Gross Domestic Product. It is the quantitative tool which represents the total production of goods and services over a specified period of time within a nation's border.

**(b) Inflation:**

The rate at which the general level of prices for goods and services is rising and subsequently purchasing power is falling.

**(c) Size:**

Size of the bank can be defined as the total assets of the firm.

**(d) Liquidity**

The liquidity of a commercial bank is its ability to fund all contractual obligations as they fall due. The author uses Total loans to deposit ratio as liquidity ratios to indicate the liquidity ability of the bank.

**Table 2: Independent Variables & Their Assessments.**

Variables	Variables Name	Assessment	Hypothesized relationship with profitability
LIQ	Liquidity	Total Loans/Total Deposits	+/-
SZ	Size of the Bank	Total Assets	+/-
INF	Inflation	CPI	+/-
GDP	Real Gross Domestic Product	Annual Growth Rate of Economy	+/-

**Transformation of Variables:**

The author has used log log variable transformation equation in order to fulfill assumption of panel regression analysis. It is one of the important remedy to get rid of hetroskedasticity issue in the data of panel analysis.

The equation of both models will be as below:

**(a) For Islamic Banks:**

$$(Log)PF = B_0 + B_1(Log)GDP + B_2(Log)INF + B_3(Log)LQ + B_4(Log)SZ + \sigma$$



**Instruments for Data Collection:**

These are the methodologies used to identify data, information sources and collect information during the evaluation. The data of financial and economic variables (dependent and independent variables) are collected from secondary sources which include State Bank of Pakistan Reports, published Final Reports or financial statements of banks on their websites, Pakistan Statistics Bureau reports and Economic Survey of Pakistan reports. The author collects data from secondary sources via hard copies of reports of various sources and soft copy of them on their respective websites.

**Results**

**Panel Test for Islamic Banks:**

The author employed STATA software to run panel regression. STATA is most powerful tool for panel data analysis. First, the author has developed panel setting for fixed and random effects models which are shown as below:

**Panel Setting:**

```
xtset Bank Year
    panel variable: Bank (unbalanced)
    time variable: Year, 2005 to 2014
    delta: 1 unit
```

**Fixed Effect Model Results for Islamic Banks:**

The result of fixed model effect is as below:

**Table # 3: Fixed Effect for Islamic Banks**

<pre>. xtreg lnROA lnliquidity lnsize lngdp lninflation , fe</pre>			
<pre>Fixed-effects (within) regression Number of obs      =          48 Group variable:    Bank Number of groups   =           5</pre>			
R-sq: within	=	0.2602	Obs
per group: min	=	8	
between	=	0.0883	
avg =		9.6	
overall	=	0.1125	
max =		10	
<pre>F(4, 39) = 3.43</pre>			
corr(u_i, Xb)	=	-0.2278	Prob
> F	=	0.0170	

```

-----
-----
      lnROA |      Coef.   Std. Err.      t    P>|t|
[95% Conf. Interval]
-----+-----
      lnliquidity |   2.011519   .8405947    2.39   0.022
.3112553   3.711782
      lnsize |  -.6842416   .2498151   -2.74   0.009
-1.18954   -.1789427
      lngdp |  -.0185074   .3665933   -0.05   0.960
-.7600124   .7229975
      lninflation |  -.4785313   .8727629   -0.55   0.587
-2.243861   1.286798
      _cons |   3.147271   3.392723    0.93   0.359
-3.71516   10.0097
-----+-----
-----
      sigma_u |   1.5247605
      sigma_e |   1.8525438
      rho |   .40385097   (fraction of variance due
to u_i)
-----
F test that all u_i=0:      F(4, 39) =      5.44
Prob > F = 0.0014
. estimates store fix
    
```

In fixed model effect, the author found that there are two significant variable at 5% i.e., size of conventional banks and liquidity. Here, liquidity has positive whereas size has negative relationship with the profitability of Islamic banks. Afterwards, the author runs random effect for Islamic banks model.

**Random Effect Model Results for Islamic Banks:**

The random effect model results for Islamic banks are as below.

**Table # 4: Random Effect Results for Islamic Banks**

```
. xtreg lnROA lnliquidity lnsize lngdp lninflation , re
```

```
Random-effects GLS regression                Number
of obs      =          48
```

```
Group variable: Bank                        Number
of groups   =           5
```

```
R-sq:  within = 0.2551                      Obs per
group:  min =           8
```

```
        between = 0.0237
```

```
avg =           9.6
```

```
        overall = 0.1372
```

```
max =           10
```

```
chi2(4)      =          12.15                Wald
```

```
corr(u_i, X) = 0 (assumed)                 Prob >
```

```
chi2         =          0.0162
```

```
-----+-----
lnROA |      Coef.   Std. Err.      z    P>|z|
[95% Conf. Interval]
```

```
lnliquidity |  2.181193   .8208816    2.66   0.008
.5722943    3.790091
```

```
lnsize | -.5560853   .2382232   -2.33   0.020
-1.022994  -.0891764
```

```
lngdp | .042169    .3686038    0.11   0.909
-.6802812   .7646192
```

```
lninflation | -.4186151   .8869643   -0.47   0.637
-2.157033   1.319803
```

```
_cons |  2.247411   3.432535    0.65   0.513
-4.480234   8.975057
```

```
-----+-----
sigma_u |  1.1170932
sigma_e |  1.8525438
```

```
rho | .2666552 (fraction of variance due to
u_i)
```

```
. estimates store ran
```

In random effect model, the author again found that liquidity and size are significantly associated with the profitability of conventional banks. Both variables are significant at 5%. Liquidity has a positive whereas size has a negative relationship with the profitability of conventional banks. In Panel regression, it is important to select any suitable model by applying Hausman Test. The author has used the same test to select appropriate model among both of them.

**Hausman Test:**

Hausman Test is used to select the most appropriate or fit model among random and fixed effect models.

**Table # 5: Hausman testing for selection of Random and Fixed Effect Model**

```

hausman fix ran

          ----- Coefficients -----
          |          (b)          (B)          (b-B)
sqrt(diag(V_b-V_B))
          |          fix          ran          Difference
S.E.
-----+-----
lnliquidity |    2.011519    2.181193    -.1696742
.1809771
lnsize |    -.6842416    -.5560853    -.1281563
.0752151
lngdp |    -.0185074    .042169    -.0606764
.
lninflation |    -.4785313    -.4186151    -.0599163
.
-----
                                b = consistent under Ho and Ha;
obtained from xtreg
                                B = inconsistent under Ha, efficient under Ho;
obtained from xtreg

Test:  Ho:  difference in coefficients not systematic

                chi2(4) = (b-B)' [(V_b-V_B)^(-1)] (b-B)
                =          218.30
Prob>chi2 =          0.0000
(V_b-V_B is not positive definite)
    
```

The P-value is less than 0.05 which suggests that fixed model is more suitable than random effect model.

***Testing for cross-sectional dependence/contemporaneous correlation: Using Breusch-Pagan LM test of independence***

According to Baltagi, cross-sectional dependence is a problem in macro panels with long time series (over 20-30 years). This is not much of a problem in micro panels (few years and large number of cases). The null hypothesis in the B-P/LM test of independence is that residuals across entities are not correlated.

***Table # 6 Breusch-Pagan LM test of independence***

```
. xttest2

Correlation matrix of residuals:

    ___e0      ___e1      ___e2      ___e3      ___e4
___e0  1.0000
___e1  0.1494    1.0000
___e2 -0.4308   -0.3027    1.0000
___e3 -0.2110   -0.3814    0.2449    1.0000
___e4 -0.1708   -0.5662    0.5649   -0.0021    1.0000

Breusch-Pagan LM test of independence: chi2(10) =
9.748, Pr = 0.4629
Based on 8 complete observations over panel units
```

P-value 0.4629 gives the evidence that, there was no Cross-sectional Dependence in our model.

***Wald Test for Group wise Heteroskedasticity:***

It is important to check the validity of results therefore the author decided to check heteroskedasticity existence through modified Wald test for group wise heteroskedasticity which is used for fixed effect regression model.

**Table #7: Wald Test for Group wise Heteroskedasticity**

```
. xttest3
```

Modified Wald test for group wise heteroskedasticity in fixed effect regression model

H0:  $\sigma(i)^2 = \sigma^2$  for all i

```
chi2 (5) = 6.72
```

```
Prob>chi2 = 0.2420
```

Insignificant value of test gives the evidence that, there was no problem of heteroskedasticity in our data.

### **Testing for Serial Correlation:**

Serial correlation is another important issue in panel data estimation. The existence of serial correlation may endorse regression results spurious. Due to above reason, the author used Wooldridge test for autocorrelation in panel data.

**Table #8: Wooldridge Test for Autocorrelation**

```
. xtserial lnROA lnliquidity lnsize lngdp lninflation
```

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

```
F( 1, 4) = 0.539
```

```
Prob > F = 0.5036
```

Test value suggested that, there was no problem of Serial correlation in the designed model. Therefore, we can say that results are valid as it does not contain any issue of heteroskedasticity, Serial correlation and cross sectional dependence in Islamic banks model

### **Conclusion & Discussion**

In Table 3 the author has found that there are only two variables which are significantly associated with the profitability of Islamic banks of Pakistan i.e. liquidity and size of the bank. Liquidity has positive coefficient i.e. 2.01, therefore the researcher concluded that liquidity has a positive and significant relationship with the profitability of Islamic banks. It means a one percent increase in liquidity will lead to increase the level of profit by 2.01%. Result are inconsistent with Economy Theory of size of the firm and Francis (n.d) theory for liquidity. The result of the relationship between liquidity and profitability is inconsistent with the study of Eichengreen and Gibson (2001), Bourke (1989), Molyneux et al (1992) & Goddard et al (2004).

The result of liquidity is consistent with the findings of Haron (2004) who found a positive relationship between liquidity and profitability & Asma et al (2011) studied the determinants of nine Islamic banking institution's profitability in Malaysia. The researchers found that there is no relationship between liquidity and profitability of the Malaysian banks.

Islamic banks are younger than conventional banks therefore they may set their liquidity management more effective because initially financial institutions started to introduce short term financing options in order to full fill short term liabilities and cash obligations.

More liabilities wiped out the portion of profitability of any organization because they have to pay interest and principal amount monthly or periodically. It is very rare skill among financial institution in Pakistan to get benefit from liabilities by implementing feasible plans which will be helpful to earn an excess amount to repay debt installments easily and retain remaining portion of income. According to Eichengreen and Gibson (2001), the fewer the funds tied up in liquid investments, the higher we might expect profitability to be. Therefore, it is very easy to understand the inverse relationship between profitability and liquidity.

In Pakistan, Islamic banks are adopting less risky policies and issuing short term loans which are also less profitable than issuing long term loans. These are the reasons which help us to understand the impact of liquidity on profitability of Islamic banks. These short term loans are the important determinant of profitability for Islamic banks of Pakistan.

Table 3 also shows that the size of the bank has a significant and negative impact on profitability of the Islamic banks of Pakistan. The significant and negative impact of size on the profitability is consistent with the research findings of Wasiuzzaman and Ahmed Tarmizi (2010) & Bashir (2003). The result are inconsistent with the study findings of Pasiouras et al (2007), Al-Tamimi (2005), Srairi (2009) & Athanasaglou et al (2005).

The size of the bank has positive coefficient i.e. -0.68 therefore the researcher concluded that the size of the bank has a negative and significant relationship with the profitability of Islamic banks. It means a one percent increase in size of the bank will cause the level of profit to be decreased by -0.68 percent.

It is logical that every firm or organization aims to enhance their size because larger the size, higher the opportunities for the firm to invest their capital in order to generate more profit. Large organizations have more areas to produce income rather than an organization of small size. Islamic banks are smaller than conventional banks, according to the size that's why the profitability of conventional banks is higher than Islamic banks in terms of size. Islamic banks require more time to develop their size in terms of assets.

Other two variables, Gross Domestic Product (GDP) and Inflation (INF) are insignificant and have no impact on profitability of the Islamic banks. Francis (n.d) proposed different behavior of GDP with profitability of banks. As we know that, Islamic banking system has started their operations not more than a decade ago therefore we can say that they require more time at market to absorb the shocks of the economy. The economic crisis is irrelevant to newly established banks up to some extent because it is common in the initial stage that they are unable to shorten their payback period. Gross Domestic Product (GDP) have not been varied a lot in the last ten years, therefore we can say that Islamic banks have not faced any abnormal increase or decrease in GDP therefore it is insignificantly associated to their profitability.

The result of an insignificant relationship between Gross Domestic Product (GDP) and profitability is consistent with the research conclusion of Sufian (2011) & Evans Ovamba (2014). Evans Ovamba (2014) tested the effect of macroeconomic indicators on commercial bank's profitability in Kenya. It was the case study of Equity Bank Limited. The researcher estimated result showed that GDP has a positive insignificant effect on profitability therefore it did not reject the null hypothesis that economic growth (real GDP) does not affect bank profitability in Kenya with equity bank in focus. Panel regression results revealed that the impact on GDP on ROA is mixed. Sufian (2011) It was observed that the coefficient of GDP was negative, but it becomes positive when we control for both the crisis and tranquil periods. However, the coefficient of the variable was not statistically significant in any of the regression models estimated.

Inflation (INF) is also insignificantly associated with profitability (ROA) of conventional banks of Pakistan. Previous researches found the same results (Francis, 2012; Khrawish, 2011; Saksonova & Solovjova, 2011; Sufian 2011). It indicates that Inflation (INF) has no impact on the profitability of Islamic banks of Pakistan.

### ***Recommendation for Future Researchers***

This research could be expanded by future researchers by analyzing the impact of financial and economic indicators on performance based rather than profitability based. Furthermore, the future researchers could include more variables to analyze their impact on profitability of the banking sector.

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