Risk Management: Impact on Financial Institutions in Pakistan
Iftikhar Ahmad* and Farzand Ali Jan†

Abstract
Financial Institutions work in a world full of risk and uncertainty. Financial organizations operate in environments where the future is insecure and uncertain. Risk management is all about managing successfully in the capricious and speculative world. It gets substantial responses due to recent financial catastrophe and the development of Basel II accord. Therefore, managing risk persist a momentous and challenging corporate function. This research aimed to investigate the relationship between risk management and the profitability of financial institutions working in Pakistan. Balanced longitudinal data was collected from annual published financial statements of 33 Banks over a period between 2006 to 2015. The data set was assessed through descriptive statistics, Pearson’s correlation and panel data regression model. As a result of the analysis, it became clear that risk management affect the profitability of all banking institutions. The impact of credit risk (NPLR) and Liquidity risk (LDR) revealed significant, but negative on return on assets. It was found that the relationships between Liquidity risk (cash & cash equivalent to total assets) and profitability indicator (ROA) were ascertained insignificant. The relationship among Operational risk (CAR) and profitability indicator (ROA) was found significant and positive. The overall finding of the analysis shows the significant impact of risk management on profitability at a reasonable level. The study result indicates that inadequate risk management practices have a negative impact on the financial institution’s performance, leading to failure and bankruptcy. Thus, it is concluded that there is a strong correlation between well-managed business and efficient risk management system. Therefore, it is suggested for financial institutions working in Pakistan to carefully manage risks and increase revenue levels.

Keywords: Credit Risk, Liquidity Risk, Operational Risk, Performance, Pakistan

Introduction
The term risk referred to the possibility and danger of loss, improbability and the elements of uncertainty that exist in any business activities in any

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form. Every simplest business decisions involve some level of risk. Risk management is all about managing successfully in the capricious and speculative world. Financial organizations operate in environments where the future is insecure and uncertain. The growth process in emerging countries like Pakistan relies on financial intermediation. Empirical research studies outlines the significant contribution of the financial industry in economic growth of a country. The performance and stability of the financial sector are important for achieving organizational goals and sustainable economic growth. The failure and its instability have a negative impact on economic development (Das & Ghosh, 2007).

The Financial industry is the biggest source of funds for businesses. Its efficiency as credit channels is important to provide low cost and uninterrupted fund. It benefactor economic growth, widening access to financial resources and contributing to poverty reduction. However, financial institutions face various risks. Identifying, understanding and effectively managing risks may contribute to better performance. Financial institutions are similar to other types of businesses to achieve high profitability. As a result, minimizing risk and effectively managing them becomes increasingly important.

In the field of finance, risk has many classes (e.g. Market, operational, liquidity, and credit risk). Credit risk is the likelihood of financial losses when the debtors lack the capacity or ability to fulfill the agreed terms and conditions. It is the cost borne by the financial institutions (Campbell, 2007; Hempel, Simonson, & Coleman, 1994). More than 50% of the total risk elements in the global financial market are credit risks alone. Therefore, managing credit risk becomes a central task. It protects the organization from damages and collapse (Heffernan, 2005). Credit risk management is the form of managing credit limits. It raised with the increase of bank lending, including making loans, taking deposits and making profits from the spread between lower deposit rate and higher lending rate (Wernz, 2014). Credit risk is momentous and one of the dominant risk exposures due to its profound relationship with the profitability of financial institutions. Important investment decisions involve lowest credit risk and expected a higher return. An effective mechanism for credit risk management not only enhanced the capability of the organizations, but also endorsed steadiness and profitable allocation of financial resources (Psillaki, Tsolas, & Margaritis, 2010). On the other hand, higher default rate decreases profitability and equity, and it increases the losses (Van Gestel & Baesens, 2009). Worldwide economic and financial crisis, increasing numbers of bankruptcies and the violation of accounting rules intensify the prominence of credit risk management. Effective management of credit risk helped to maintain
ahigh rate of return and control the credit risk exposure within normal parameters. It has a tremendous impact on financial performance and important for long-term survival and success. It is inevitable and essential part of the loan process.

According to Laker (2007), liquidity of the organizations is the cash flow, which is determined by the level of current assets or cash and cash equivalent held. The adequate liquidity position of the organizations is considered one of the essential management functions. It has a considerable impact on the organization’s performance and its market value. Liquidity risk arises when the institutions become unable to raise fund and satisfy the obligation with immediacy (Drehmann & Nikolaou, 2013). According to Jenkinson (2008), liquidity shortfall has been considered as a major cause of business failure. Therefore, the importance of an effective liquidity risk management become more visible in financial institutions.

Operational risk is very important, it is rooted in the organization’s strategy and operating system. This type of risk occurs due to worsening of internal processes, people, systems or external events. Technological development in the financial sector and increased transaction volume have increased operational risk events (Van Greuning & Brajovic-Bratanovic, 2009). Therefore, it is the need of the time to observe operational risk events on a prompt basis and developed reporting and tracking process within the organization.

Due to more competitive and uncertain environment, the organization has been reconsidering their business models and core strategies. “Getting wired” caters new opportunities, but bring misfortune and precariousness into the equation. Risk can potentially cripple the organizations if not managed in time. This needed that effective mechanism to manage risk should create with the aim to decrease inauspicious outcome. This pertains identification of potential risks, analyzing them and taking steps to eliminate or diminish them.

**Significance of the study**
This study covers the banking sector of Pakistan due to higher credit growth rate, which may increase concern about the stability of the financial system. Second, Pakistan attracts bankers and investors worldwide, which make Pakistan more susceptible to economic, financial and political stability. Thirdly, Pakistan is facing various changes, such as the opening of markets to foreign competitors and the increasing rate of bank lending. The concept of the current global economy extends the range of competition among countries in all fields. The financial sector of a country is considered a backbone for survival and growth.
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institutions in developing countries with a strong institutional structure have been successful in the world market. Financial institutions working in Pakistan need significant improvement in this regard. Therefore, it is crucial to examine the significance and impact of risk management on profitability of banking institutions working in Pakistan. Concerning the association between risk management and bank profitability, there are no empirical studies found which study the impact of risk management on bank profitability in Pakistan. The most recent example regarding the two important categories of risks, liquidity risk and credit risk includes (Abdullah & Khan, 2012; N. Ahmed, Ahmed, & Naqvi, 2011; M. F. Akhtar, Ali, & Sadaqat, 2011; Arif & Nauman Anees, 2012; Haneef, Riaz, Ramzan, Rana, Ishaq, et al., 2012; Iqbal, 2012; Ramzan & Zafar, 2014; Shafiq & Nasr, 2010). In all these research studies, however, credit risk and liquidity risk have been analysed thoroughly. This study has significant for stakeholders as well as academicians to further improve their understanding of various types of risks and their impact on financial institutions' performance. The study also contributes to the literature on the dynamic relationship between risk management and their impact on bank profitability in Pakistan. It also gives insight for investors, policymakers, and the field of financial market research.

The recent financial crisis during 2007 to 2008 was a big shock for the entire financial system. Such shocks cause problems for regulators and financial institutions. The expansion and emergence of financial security markets are becoming more complicated. This is because financial institutions involved in financial transactions without understanding the extent of risk, which leads to failure and destabilization of the entire financial system. In today's dynamic financial environment of competitions and shocking economic situations, the level of consumer and commercial debt has risen the chances of bankruptcies. Based on the nationwide experiences of the past few years, the success or failure of financial institutions depend on how well various types of risks are controlled and effectively managed in highly competitive, challenging and fast-changing economic environments. Various research studies (M. F. Akhtar et al., 2011; S. Akhtar, 2007; Anjum Iqbal, 2012; Haneef, Riaz, Ramzan, Rana, Hafiz, et al., 2012; Kabeer, Mumtaz, & Sayed, 2010; Khalid & Amjad, 2012; Nazir, Daniel, & Nawaz, 2012; Shafiq & Nasr, 2010) related to banking sectors, policies, liberalization, comparative analysis, and development of risk management practices have been done in Pakistan. This study aimed to investigate the impact of various types of risks such as credit risk, liquidity risk, and operational risk on banking institutions' performance.
Objectives of the study

- To analyze the effect of credit risk on the performance of banking institutions working in Pakistan.
- To analyze the effect of liquidity risk on the performance of banking institutions working in Pakistan.
- To analyze the effect of operational risk on the performance of banking institutions working in Pakistan.

Literature Review

Risk Management

Risk undoubtedly is a severe threat to financial institutions. Various researchers investigated the impact of risks on the profitability of financial institutions in several dimensions. According to Stulz (1996), risk management is a tool which reduces and protects the investors from negative impact and the possible lower-tail outcome situations. It helps the organization to sustain an optimal capital structure. The low level of risk encourages investors by protecting their investment and minimizes the insolvency cost. It also caters financial support in term of reducing taxes and variations in profitability. It helps to increase the rate of return in the unpredictable market situation. The organization which invests in research & development and focuses primarily on risk management, secure competitive edge (Essinger & Rosen, 1991; Jafari, Aghaei Chadegani, & Biglari, 2011). The description of risk management developed over the last twenty years. As a result, various factors such as an increase in bankruptcies, a large number of borrowers, more competitive margins on loans and growth in off-balance sheet instruments made its measurement more critical than before (Barrickman & McKinley, 1993). There are many aspects, which influence the operational activities of the financial institutions where the main one is the risks. These risks are either internal or external including market risk, credit risk, political risk, operational risk and liquidity risk (Al-Tamimi, 2002).

Credit Risk

According to Basel Committee on Banking Supervision (2000) Credit risk is defined as the possibility of a financial loss when a beneficiary becomes unable to satisfy financial obligations. Effective credit risk management improves the risk rate of return and sustains the risk vulnerability within tolerable boundaries. Banking institutions receive money deposited and offer credit services, which exposed them to credit risk (Fischer and Jordan, 1992). The prosperity of the financial institutions tremendously relies on the efficient management and
measurement of this considerable risk (Giesecke, 2004). In the words of Chen and Pan (2012) credit risk arises when there is a deviation in debt instruments. It also arises when the expected payment may not repay by borrowers at maturity (Coyle, 2000). It is the variability in asset value due to the inconsistency in the borrower’s ability to satisfy or fill their obligation (Pyle, 1999).

Various banking institutions have failed because of the poor performance of loans. This required effective management of its resources (Samy Ben Naceur, 2003). According to Aboagye and Otieku (2010) due to worldwide financial meltdown risk management becomes more important. They found that lending activities of the banks are the main sources of profit, which are mostly affected by credit risk. There is an unfavorable association between bank performance and credit risk (Kolapo, Ayeni, & Oke, 2012; Ruziqa, 2013; Takang & Ntui, 2008). Therefore, Prudent credit risk management practices are important for the protection of investors’ interest and bank resources.

According to Kargi (2011) credit risk adversely influences the profitability of banking institutions. Epure and Lafuente (2015) found a deleterious effect of the non-performing loan on bank net income. Higher NPLs ratio poses a higher threat to the banking system. On the other side, the significant and positive effect of capital adequacy ratio (CAR) on net interest margin was reported. The performance of Kenyan banks examined by (Kithinji, 2010) during 2004-2008 reported that the performance of the banking organizations is not only reliant on the level of non-performing loan, but it was also depended on various other factors. Loan loss provision, the economic downturn, and Nonperforming loans are the main cause of credit risk (Ahmad & Ariff, 2007). The authors further revealed that management quality and regulatory capital are essential for loan dominants banks as well as for banking organization that offers multiple products in emerging economies. The performance of banking organizations in Gulf Cooperation Council assessed by Al-Khouri (2011) during 1998-2008 emphasized that liquidity risk, capital risk, and credit risk are the primary elements which adversely affect the profitability of banking organizations. Sami Ben Naceur and Omran (2011) found a favorable and significant association of credit risk and bank capitalization with the profitability of the bank. Bourke (1989) revealed an unfavorable association between bank performance and credit risk. Noman, Pervin, Chowdhury, and Banna (2015) used the loan loss reserve ratio, CAR, and NPLR as proxy variables for credit risk and NIM, ROAA and ROAE as an indicator of bank performance and found the significant but unfavorable association between bank’s profitability and credit risk. According to Miller and Noulas (1997) and A. S. Ahmed,
Takeda, and Thomas (1999) increased the amount of loan loss provision lead to credit risk vulnerability. It also affects the performance of the banking organizations.

**Liquidity risk**

Liquidity risk occurs when the organization becomes unable to fulfill its promise to repay a debt or to satisfy short-term financial demands. This usually occurs due to the incapability to convert assets to cash without a loss. Liquidity risk adversely affects organization's profitability; therefore, it becomes important for Banks Top Management to manage funds in order to meet potential demands of the borrowers and depositors at reasonable costs.

Various research studies discussed the effect of liquidity risk on banks profitability. Some empirical studies showed the negative effect such as (Bourke, 1989; Demirgüç-Kunt & Huizinga, 1999; Kosmidou, Tanna, & Pasiouras, 2005; Zopounidis & Kosmidou, 2008). The positive effect showed by (Barth, Nolle, Phumiwasana, & Yago, 2003; Molyneux & Thornton, 1992). According to Iannotta, Nocera, and Sironi (2007), large size banks minimize their cost of funding which allows them to invest in riskier assets. Ayadi and Boujelbene (2012) found the significant and favorable effect of size on the profitability of Tunisian Deposit Banks. According to Sinkey Jr and Greenawalt (1991), large-size banks are more flourishing compared to small size banking organizations. Haslem (1968) commend in their research paper that quality of management, location, time and bank size are the main factors which affect the bank profitability. Therefore, it is concluded that the impact of the asset base (Bank size) on the profitability of financial institutions cannot be tentatively estimated.

Loan to deposit ratio (LDR) is commonly used for the detection of banks liquidity. The lower level of LDR means that a banking organization relies on its own deposits to offer loans to its clients. On the other hand, higher LDR shows high risk. Loan and deposit are considered two sides of the same coin. Obviously, a banking organization offers more loans to the customers to get interest revenue. At the same time, the chances of liquidity risk may also increase. It also adversely affects the profitability of the banks. Deposits are the key source of funds, and associated with bank profitability. Deposits are bank liability; banking organizations are liable to pay interest on deposits. Khrawish (2011) found a significant and positive association between total liabilities to total assets and return on assets.
Operational Risk

Operational risk gets remarkable attention as compared to liquidity risk and credit risk. It is not a new concept, for the first time in 1998, it was treated as a regulatory issue in the Operational Risk Management documents issued by the Basel Committee on Banking Supervision. It is an accepted and essential part of sound risk management practices. Effective operational risk management programs shield shareholder value.

Various researchers used the capital adequacy ratio for measuring operational risk. This is an important indicator of the financial position showing the ability of the organization to manage abnormal losses (Lee & Chih, 2013). In order to mitigate risks and to protect financial institutions from liquidity problems, credit losses and abnormal loss situation, sufficient capital assistance is necessary. According to Olalekan and Adeyinka (2013), sufficient capital can be used to reduce risk and protect organizations from loan losses and liquidity problems. Berger (1995) reported that CAR had a positive effect on the profitability of US banks. However, such relationships are unfavourable under different circumstances. Kosmidou et al. (2005) found the same results between 2000 to 2005 of banks working in the UK. Hosna, Manzura, and Juanjuan (2009) showed a positive relationship, and Kithinji (2010) observed an equitable effect of credit risk on bank’s profitability.

Hypothesis

\[ H_1 \] There is a significant relationship between credit risk and banking institution's profitability.

\[ H_2 \] There is a significant relationship between Liquidity risk and banking institution's profitability.

\[ H_3 \] There is a significant relationship between operational risk and banking institution's profitability.

Methodology

The descriptive design research approach is applied in the present study, which involves getting knowledge related to the existing state of phenomena to exhibit “what exist” pertaining to several aspects in a situation (Gardner, Mills, & Cooperman, 2000).

Population / Sampling

The populations selected in this study are Commercial Banks, Islamic Banks and Foreign Bank wording in Pakistan. Based on the availability of data total 33 Banking was selected. This research study is quantitative in nature; so, the empirical data were collected from the website of the
“State Bank of Pakistan (SBP)” and yearly financial reports of the selected financial institutions from the period 2006-2015. Furthermore, the Stata V.13 software was used to identify the affect.

**Econometrics Model**

Different statistical techniques (e.g. Descriptive statistics, Pearson's correlation “r” and Regression Model) have run to systematically examine the data set. The ratio, Return on Assets some time abbreviated as (ROA) used in this study as a proxy variable for the profitability of financial institutions. A large number of research scholars used the ROA as a proxy variable of profitability such as (Abiola & Olausi, 2014; Afriyie & Akotey, 2013; Al-Khoury, 2011; Berrios, 2013; Dhmadirek, 2003; Douma, 2003; Kolapo et al., 2012; Tabari, Ahmadi, & Emami, 2013; Zou & Li, 2014). As a credit risk indicator, the Non-Performing Loan Ratio was selected. NPLR were used by (Afriyie & Akotey, 2013; Banker, Chang, & Lee, 2010; Berger & DeYoung, 1997; Das & Ghosh, 2006; Hsiao, Chang, Cianci, & Huang, 2010; Jha, Hui, & Sun, 2013; Karim, Chan, & Hassan, 2010). LDR as a proxy of liquidity risk has been used by (M. F. Akhtar et al., 2011; Jha et al., 2013; Rengasamy, 2014). Cash & cash equivalent to total assets (CCE to TA) and bank size (BS) were used as proxy variables for Liquidity risk by (Shen, Chen, Kao, & Yeh, 2009) and (Bunda & Desquilbet, 2008).

\[ Y_{it} = \alpha + \beta_1 X_{i1},t + \beta_2 X_{i2},t + \beta_3 X_{i3},t + \beta_4 X_{i4},t + \beta_5 X_{i5},t + \epsilon_{i,t} \]  

--- Model 1

Where:

- \( Y_{it} \) = Dependent Variable
- \( \alpha \) = Constant
- \( \beta_i \) = Beta Coefficient of variable i which measure the sensitivity of X to unit change in i
- \( X_{it} \) = Independent Variables
- \( \mu \) = Error term

\[ \text{ROA}_{it} = \alpha + \beta_1 \text{NPLR}_{i},t + \beta_2 \text{LDR}_{i},t + \beta_3 \text{CCE to TA}_{i},t + \beta_4 \text{BS}_{i},t + \beta_5 \text{CAR}_{i},t + \epsilon_{i,t} \]  

--- Model 2

Where:

- ROA = Return on Asset
- NPLR = Non-Performing Loan Ratio
- LDR = Loan to Deposit Ratio
- CCE to TA = Cash & Cash equivalent to Total Assets
- BS = Bank Size (Natural logarithm of Total Assets)
- CAR = Capital Adequacy Ratio
Conceptual Framework:
Independent Variables

- Credit Risk
- Liquidity Risk
- Operational Risk

Dependent variable

- NPLR
- LDR
- CCE to TA
- BS
- CAR
- ROA

Source: ConceptualFramework (2017)

Analysis and Finding

Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>330</td>
<td>0.590801</td>
<td>.9900964</td>
</tr>
<tr>
<td>NPLR</td>
<td>330</td>
<td>0.685248</td>
<td>.7701858</td>
</tr>
<tr>
<td>LDR</td>
<td>330</td>
<td>0.25289</td>
<td>1.042731</td>
</tr>
<tr>
<td>CCE to TA</td>
<td>330</td>
<td>0.589130</td>
<td>.9959343</td>
</tr>
<tr>
<td>BS</td>
<td>330</td>
<td>18.39161</td>
<td>1.478624</td>
</tr>
<tr>
<td>CAR</td>
<td>330</td>
<td>0.691735</td>
<td>.9161375</td>
</tr>
</tbody>
</table>

Source: Stata V.13 Summary of Descriptive Statistics, data from sampled Banks and DFI’s over a period 2006-2015 and authors calculation.

Table 1 exhibits the summary of descriptive statistics of variables used in this research study. As shown in the table, 1 financial institution working in Pakistan complies the rules and guidelines provide by the “State Bank of Pakistan” regarding various statutory challenges. However, the standard deviation of the independent variables signifies that risk management deviates among financial institutions. The standard deviation of the variables exhibits higher volatility between the capability of the financial institutions regarding risk management. The mean score of the ROA implies that financial institutions tend to be more competitive for enhancing profit. However, the standard deviation
indicates that the earning ability of the institutions is different from each other.

**Correlation Analysis**

Pearson correlation also called a correlation coefficient is a statistical procedure for computing the degree of linear association between two or more than two variables with value for the interval (+1 to -1). The value of 0 represented no linear relationship; +1 demonstrates positive linear relationship; -1 shows a negative linear relationship where X and Y varies in the reverse direction (Joaquim & Marques, 2007). The correlation coefficients of the selected variables are shown in Table 2. The table shows the negative association between NPLR and LDR with ROA. The association between credit risk (NPLR & LDR) and profitability (ROA) shown in the table are consistent with the result of various studies (Aduda & Gitonga, 2011; Berrios, 2013; Kaaya & Pastory, 2013). The table also highlighted the explicit relationship between capital adequacy ratio and financial institution profitability, which are similar to the finding of (Bateni, Vakilifard, & Asghari, 2014; Gizaw, Kebede, & Selvaraj, 2015; Gul, Irshad, & Zaman, 2011; Olalekan & Adeyinka, 2013). The association of liquidity risk (CCE to TA) and Bank Size (BS) with profitability exhibited favorable. The results of the favorable association between the profitability of banks and liquidity risk are similar to the results of (Amah, Ekwe, & Uzoma, 2016; Regehr & Sengupta, 2016).

Table 2. Pearson Correlation (r)

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>LDR</th>
<th>NPLR</th>
<th>CAR</th>
<th>CCE to TA</th>
<th>BS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDR</td>
<td>-0.2000</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPLR</td>
<td>-0.1344</td>
<td>0.1698</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAR</td>
<td>0.1065</td>
<td>0.1706</td>
<td>0.2469</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCE to TA</td>
<td>0.0116</td>
<td>-0.2067</td>
<td>0.0053</td>
<td>-0.0847</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>0.1540</td>
<td>-0.2565</td>
<td>-0.3118</td>
<td>-0.2146</td>
<td>0.0908</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

*Source: Stata V.13 correlation analysis output from data of sampled Banks and DFI’s over a period 2006-2015 and authors calculation.*

**Regression Analysis**

Table 3 shows that regression model is the best fit with the overall probe > F = 0.0000. The associations between the profitability of financial institutions (ROA) and credit risk (NPLR) presented in table 3 are significant, but negative (Coefficient = -. 1463886 P= 0.047) which mean to accept the hypothesis H1. The result shows that higher NPLR affects the profitability of financial institutions. As a result, it became clear that...
one-unit escalation in NPLR minimizes ROA by 14.63 units. The relationship between liquidity risk (LDR) and ROA shown in Table 03 shows a negative and significant (coefficient = -1788251 $P = 0.001$) relationship signifying accepting alternative hypothesis $H_2$. It indicates that one-unit increase in LDR minimizes ROA by 17.88 units. The ratio of CCE to TA (Coefficient = -0.0208704 $P = 0.700$) shows a negative and insignificant relationship with ROA. The coefficient and p-value of Bank size (Coefficient = 0.0754625 $P = 0.051$) show positive and significant associations with bank profitability (ROA). The association between operational risk measure as CAR show a positive and significant association with banks profitability (ROA). The coefficient (0.2043859) and P value (0.001) mean to accept the alternative hypothesis ($H_3$). The results reveal that increase in the capital base of financial institutions has a direct effect on the performance of selected banks and development financial institutions working in Pakistan. Capital adequacy improves the capability of the financial institutions to assimilate loan losses and protect the financial institutions from risk events. The result shows that capital adequacy has a positive impact on ROA (Kosmidou et al., 2005). The result also confirms that financial institutions working in Pakistan may intensely rely on equity financing as a source of funding but do not use it effectively due to insufficient fund management. The results also revealed that decreasing/increasing the asset base (BS) of financial institutions shows a direct effect on the performance of selected financial institutions working in Pakistan. Financial institutions have a good reason to believe that profitability and size are related. Large bank size can enhance bank profitability through the realization of economies of scales. Therefore, it is concluded that bank size is a vital determinant of profitability.

Table 3. Regression Analysis (Fixed Effect)

<table>
<thead>
<tr>
<th>R-squared</th>
<th>0.792</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prob &gt; F</td>
<td>0.0000</td>
</tr>
<tr>
<td>F (3, 326)</td>
<td>6.43</td>
</tr>
<tr>
<td>ROA Coef.</td>
<td>Std. Err</td>
</tr>
<tr>
<td>NPLR</td>
<td>-0.1463886</td>
</tr>
<tr>
<td>LDR</td>
<td>-0.1788251</td>
</tr>
<tr>
<td>CCE to TA</td>
<td>-0.0208704</td>
</tr>
<tr>
<td>BS</td>
<td>0.0754625</td>
</tr>
<tr>
<td>CAR</td>
<td>0.2043859</td>
</tr>
<tr>
<td>cons</td>
<td>-1.418638</td>
</tr>
</tbody>
</table>

Hausman FE

| chi2(5) | 13.99 |
| Prob>chi2 | 0.0157 |

Source: Stata V.13 Regression Analysis output from data of sampled Banks and DFI’s over a period 2006-2015 and authors calculation.
Finding and Conclusion
This study aimed to investigate risk management and its impact on the performance of the financial institution. In this regard, the secondary data set was collected from the website of the “State Bank of Pakistan” covering the financial years 2006 – 2015. The study result shows that inadequate risk management practices have a negative impact on the financial institution's performance, leading to failure and bankruptcy. The organization that cannot manage the risk effectively does not make constant progress. Thus, it is concluded that there is a strong correlation between well-managed business and efficient risk management system. Non-performing loans (NPL) are the major cause of credit risk in financial institutions. Poor quality risk management practices increase the bad quality loans. Sound management of credit risk reduces the amount of NPL. A Higher value of NPLR indicates more risk involved in investment and operations activities of the financial institutions. The result of the study endorses the claim that bad quality loans and poor loan management in banking organization reduce the efficiency of the banking organization. The impact of liquidity risk on the financial institutions performance measure as taking the ratio of Loan to Deposit ratio. It has been found that LDR is an influencing factor that determines the performance of financial institutions. The overall result of the analysis proves that the performance of selected financial institutions in Pakistan has been influenced by risk management. Both NPLR, LDR and CAR have shown significant predictors. Therefore, the study results conclude that risk is a major threat to financial institutions. Based on analysis and observation, it would be advisable for financial institutions to focus on and apply cautious risk management practices to maximize bank revenue and protect institutions against potential losses. This can be achieved through the development of effective internal control systems, sound assessment procedures, diversification with hard work to improve assets, retaining profitability is a challenge, innovative cost-cutting techniques and minimizing the events of risk.

Suggestions for Further Studies
Future research work can expand the scope of the study, including other parameters, such as "market risk, currency risk, interest rate risk" and other factors used by researchers to analyze profitability and risk management.
References


