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RESEARCH ARTICLE

Non-Performing Loans and its Impact on Profitability of Financial Institutions of Pakistan

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ABSTRACT

A loan is considered to be a NPL if interest and/or the principal be in amount outstanding over than 90 days; otherwise unpaid from more than 90 days was added to the principal, or the payments are overdue less than 90 days, but it is reasonable to suspect the possibility that the loan will be fully paid (Thanh, 2014).Similarly, (Alam, Haq, & Kader, 2015) highlighted, financial crises of Asia in 1997, that was the worst ever to hit the region. The Asian economic predicament flounced the region when it was once least anticipated and left reputedly irreparable result on the financial systems (van Mook, 2015).Current study was analyzed using E views, as it is time series study. In time series study, data sets were made among a period of 8 years among 2006 to 2014. In this study, secondary data was used and obtained from different sources. The data was collected by banks web sites; Google scholar, State banks of Pakistan sites where a financial statement/ data for the required time frame are accessible. Current study is not without limitations as most of things are out of budget and out of time constraints. The foremost limitation is that we could only include three macroeconomic variables in total like GDP, interest rate and inflation rate.We concluded that loan monitoring is an ignored part in previous researches as a consequence a very less attention is paid to the subject matter. Similarly, it is the main reason that amount of loans is miss-utilized and ultimately loan default is occurred. Moreover, non-performing loans not only created the liquidity problems for the banks but it also eliminated the interest income and bank profitability.

Key words: *NPLs, Inflation, Interest, GDP Growth, Financial Institutions.*

INTRODUCTION

1. Back Ground of Study:

A loan is considered to be a NPL if interest and/or the principal be in amount outstanding over than 90 days; otherwise unpaid from more than 90 days was added to the principal, or the payments are overdue less than 90 days, but it is reasonable to suspect the possibility that the loan will be fully paid (Thanh, 2014). Thus, NPL is determined by two factors: (i) expired more than 90 days and (ii) solvency in doubt (Barisitz, 2013). This is also the working definition of NPL in the International Accounting Standards (IAS).

NPLs preserve clear default loan, with banking sector not be capable toward earnings on it or after. Regularly loan fall suitable condition thumbs down concern have been rewarded within 90 days, except this can differ among unusual country as well as debtor (Gopalakrishnan, 2004). Defaulting credit authority banks toward obtaining positive actions inside organizations is to just before make improvement in addition to securitize them within the most excellent approach (R. G. Rajan & Zingales, 2003). The meaning of impair loan is a loan; that contain not expiry date, except it is doubtful whether the borrowers might pay back their amount; outstanding amount plus bank further recognition institute that not rank them because possible non-performing loans as well as other options to analyze through modest otherwise negative response failure condition that commence them (R. G. Rajan & Zingales, 2003).

Non-performing Loans (NPLs) have received world's concentration within the last three decades (Louzis, Vouldis, & Metaxas, 2012). These growing NPLs are causing banking drawback that is becoming banking screw ups (Barr, Seiford, & Siems, 1994). Nonperforming loans are one of the essential causes that intent insolvency of the monetary associations and ultimately hurt the entire

economic system (Lou, 2000). With the aid of the fact that, it's vital to manipulate non-performing loans for the financial development of the country, otherwise, the assets will also be jammed in unprofitable sectors which cannot tackle damages the fiscal balance but, in addition, the fiscal progress. With a purpose to manage the nonperforming loans, it's imperative to appreciate the foundation reasons of these non-performing loans in the special fiscal sector (Richard, 2011). Accordingly, it is essential to appreciate the phenomena and nature of non-performing loans and it has many implications. Fewer loan losses are a trademark of a relatively more organizational fiscal procedure. Alternatively, an excessive degree of non-performing loans is a hallmark of an insecure monetary plan and a disturbing signal for financial institution administration and regulatory authorities (Mah, 2011).

Non-performing loans are labeled by means of State bank of Pakistan into distinct categories according to their restoration. If the quantity bought is lower than 75% of receivable and past due by means of more than one hundred eighty days, it handled under the pinnacle of "other assets particularly mentioned" (Siddiqi, 2004). If the quantity recovered is lower than 60% and overdue with the aid of more than one year is handled as "substandard" (Okun, 1981). If the amount recovered is not up to 10% and past due through greater than two years is handled as "dubious" (Okun, 1981). In a similar fashion if the quantity recovered is lower than 2% and overdue by means of more than three years, is considered to be a "loss" (Okun, 1981).

Nonperforming loans refer how much lending portfolio convert into bad debts (Caprio & Klingebiel, 1996). A smaller amount of nonperforming loans is essential for the survival of financial institutions, because when financial institutions introduce money in open market (Allen, Qian, & Qian, 2005). They face several risks in process of fund allocation and a massive risk which is faced by financial institutions in default risk, consequently increased the nonperforming loans. The immediate consequence of large amount of NPLs in the banking system is bank failure. Many researchers on the cause of bank failure found that asset quality is a statistically significant predicator of insolvency (Barr & Siems, 1994; Demirgüç-Kunt & Detragiache, 1998), and that failing banking institutions always have high level of nonperforming loans prior to failure.

The major function of a financial system is to support the advancement with the flow of money from savers to borrowers (Arnold, 2008). If a financial method is efficient, then it shows profitability upgrades, growing the wide variety of funds flowing from savers to debtors, and higher high-quality services for purchasers. The banking sector also performs a most important financial function in offering monetary intermediation and monetary acceleration through changing deposits into productive investments (Luo, 2014). Given the relation between the wellbeing of the banking sector and the progress of the economy (Levine & Zervos, 1998; R. G. Rajan & Zingales, 1998), the health of the banking sector could be primary to the well-being of the total fiscal approach at the giant. This entails the trained of banking sector efficiency in constructing economies of higher value.

2. The Arbitrage Pricing Theory (APT):

This theory was developed by (Ross, 1976) and it is other way of linking financial institution performance and macroeconomic variables. In addition, it is extention of Capital Asset Pricing Model (CAPM) that is basing on mean variance by assuming process generating security. CAPM is established on risk premium of market which is one independent variable. Both APT and CAPM are having the same assumptions such as perfectly competitive markets, homogenous expectations, and frictionless capital markets. On contrary, Ross (1976) suggested multi-factor model in order to explain the price of assets via Arbitrage pricing model (APT). According to Ross, primary influences on returns of stock are a few economic factors like unexpected shifts in risk premiums, changes in expected industrial production, unexpected inflation and unexpected movements of interest rate term structure (Flannery & Protopapadakis, 2002).

Above mentioned all factors are explained in factor specific coefficient that can gauge and measure assets sensitivity with respect to each factor. APT is having a different approach in determining the asset pricing and hence it deduces its foundation from one price law (Cochrane, 2009). While on other hand, in efficient market hypothesis, two same items can't sell with respect to different prices rather in arbitrage model, opportunity will exists (Ravenscraft & Scherer, 2011). In addition, APT

desires that returns on stock must be directly related to indices of set. Chen and Ross, (1986) stated that individual stock should depends on unanticipated and anticipated factors. The authors have a firm belief that investors realized the stock return in consequence of unexpected events that depend on economic conditions (Barberis, Shleifer, & Vishny, 1998; Collin-Dufresne, Goldstein, & Helwege, 2010).

3. Nonperforming Loans:

Nonperforming are considered as the burden on economy and it is always a load on credit rating of any country. Plethora of researchers is available on the causes and effect of non-performing loans and the factors which highlighted the negative outcome on gross domestic production (GDP) of any country. Likewise, (Lee, 1997) tried to cover the barrier of NPLs in the course of the challenge in the economic process in Japanese banking system. The analysts who, prescribed de-regulation and adoption of market self-discipline as the only method to the alleged inefficiency of the Japanese monetary sector in the wake of the latest unsafe mortgage problem (Yavlinsky, 2011). It appears to lost sight of these works and alternatively targeted too much concentration on what they perceive to be the weaknesses of the Japanese financial method. In their view, the Japanese approach desires to change to turn out to be extra like that of the U.S. Japan's economic mandarins, however, appear to have one more view (Dore, 1987). They supposed that the Japanese process has been very successful so far under their steerage and that they will have to now not give up their position (Dore, 1987).

Similarly, (Alam, Haq, & Kader, 2015) highlighted, financial crises of Asia in 1997, that was the worst ever to hit the region. The Asian economic predicament flounced the region when it was once least anticipated and left reputedly irreparable result on the financial systems (van Mook, 2015). As financial mediators of the economy, the financial institutions used to be considered by overwhelmed by the trouble (Kwok & Tadesse, 2006). NPLs started out to increase as weakening finance of upset borrowers and elevated curiosity rates messed up debtors' capacity to provide mortgage. In addition, the crumple of financial and property asset values radically lowered the value of the collateral for a lot of bank loans. The monetary institutions "capital base suffers from elevated losses from mortgage defaults, requiring them to seek recapitalization. Increase of bank efficiency is vital for all clients together with depositors, financial institution, managers, and regulators (Onyiriuba, 2015).

Likewise, (Vong, 2005) observed whether financial system slipped into recession with negative output progress of 4.6% and 3.0% in 1998 and 1999 respectively. For a protracted interval of time, Macao banks had relied heavily on the traditional lending industry to generate the majority of their profit. Up to now, the loan demand has shrunk and the curiosity rate spread between lending and borrowing has narrowed, regional banks have encountered a primary mission to their profitability. It's witnessed that the interest margin has saved falling when you consider of year 2000 (Miller-Adams, 2002).

Notwithstanding, the fall in interest margin which was once the one foremost explanatory variable for the profitability of the banking sector, Macao banks have made a development in their earnings, as proven in the upward thrust in working earnings after 2001. Hence, this has been made viable in the wake of adverse credit demand due to the fact that the banks have quite simply altered their strategic focal point and different their trade into new areas (DiVanna & Austin, 2004). They have widened and extended the scope of their services to buyers, participated extra active in securities investment, and had been more concerned about their working charges (Gereffi & Frederick, 2010). It represents an initial try and analyzes the sluggish credit score phenomenon in Macao, and it’s terrible outcome on the banking profitability and the reaction of banks to this situation. It's largely believed that the banking profitability will push upward further as the economy continues to choose up following the liberalization of the gaming enterprise and further implementation of the “Individual Traveller Scheme” (Haggard, 2000).

Another researcher like (Das & Ghosh, 2006) examined the organization between financial institutions’ non-performing loans and company leverage. Most significantly, the fiscal situation of the finance related sector can furnish priceless leads on banks’ asset first rate. Second evidence means that rapid expansion of lending by using institutions typically deteriorates their asset

excellent, which, in flip, negatively influences their capital function (Liu & Mello, 2008). In most countries prudential regulations, nevertheless, do not position limits on score growth of credit. In these circumstances, (Honohan, 1992) has endorsed 'speed limits' to preclude the price of development of banks' mortgage assortment. Such 'speed limits' might notably be limited to those varieties of borrowing which can be considered as self-importance the big hazard to banks' mortgage portfolio and engender high company leverage illustratively, in the Pakistani context (Hildyard, 2008). Better company information could be fed into 'early notice programs'. This could necessitate a development in statistical programs to toughen each the best and coverage of understanding. Despite the fact that improving statistical techniques would entail gigantic expenses, however, prone to be a ways curb than the costs of resurrecting the economy will have to the main issue arise (Demsetz, 1997).

Other researchers such as (Naaborg & Lensink, 2008) studied the connection between overseas possession and bank efficiency. Overhead charges are negatively involving international economic recession. Nevertheless, as many of the banks are either practically totally house owned or close to wholly overseas owned, the steady international possession variable has the characteristic of a dummy variable (Naaborg & Lensink, 2008). Therefore, overseas possession negatively influences curiosity revenues and earnings even though overseas possession and overhead costs are additionally negatively associated. The level of international locations, GDP per capita, or consciousness of the banking sector is irrelevant for having an influence on of overseas possession (Vogel, 2014).

Nonetheless, global monetary discipline penetration does have an effect on considering the fact in an environment with higher international fiscal institution banks with bigger stages of overseas possession are additional beneficial than banks with curb phases of foreign possession (Hutchcroft, 1998). The outcome is mighty and same for the subset of industrial banks and for the whole sample, which entails economic savings banks and cooperative banks. This is understood whether fundamental to set up empirically proof for the existence of a home subject potential for house banks in changed economies in Pakistan (Khan, 2010). Further reports will have to establish empirically the purpose of the bad relationship between abroad possession and fiscal institution profitability. Ideally, the question ought to be whether or not time performs a function. It may be necessary to seize whether or now not as transition economies advance, overseas banks lose a number of their hypothesized comparative advantages (Buckley et al., 2007). One more reason for the reduce down the efficiency of foreign banks perhaps the existence of understanding asymmetry between the proprietor inside the residing country (the essential) and the managers of the abroad subsidiary inside the host nation (the agent) (REPRESENTATIVES, 2006).

4. Problem Statement:

This study attempt to determine that which variables are most influential to increase NPLs and affect the profitability of financial institutions of Pakistan. However, before current study, many researchers conducted study on non-performing loans impact on the financial profitability of banking sectors and other leasing companies. Our preliminary investigation showed dearth of research on under review variables like interest rate, inflation rate, and other macroeconomic variables. Therefore, we tried to uncover that whether interest rate variation, increasing inflation rate, privatization rate, and GDP growth rate have significant impact on increasing NPLs and its impact on the profitability of financial institutions and what is the direction of their relation either positive or negative. The focus of current study is to perk up the risk management by financial institutions and other leasing companies that is achieved by higher loan quality requirement of investors or depositors.

RESEARCH OBJECTIVES

The objective of the proposed research is given below

1. To find out what are the determinants that significantly influence NPLs of the banking sector of Pakistan.
2. To find out which variables are most influential in determining the level of NPLs.
3. To uncover the direction of relationship between the NPLs and its determinants.

4. To uncover the negative effects of higher interest rate on borrowings on the non-performing loans.
5. To explore the policy makers impact on the financial profitability of banking sectors and other leasing companies.

In this study, the one **dependent variable** is

1. Non-Performing Loans

The three **independent macroeconomic variables** are

1. Interest Rate (IR)
2. Inflation rate (IF)
3. GDP growth rate

MODEL SPECIFICATION

Study will be based on the following model:

Profitability of banking sectors = $\alpha+\beta_1$ If + β_2Ir+ β_3 GDPs +ε

HYPOTHESES OF THE RESEARCH

We developed the following hypotheses are proposed for the research after critical evaluating literature of four macroeconomic variables, such as interest rate, inflation rate, and GDP growth rate and likewise non-performing loans starting from year 2006 to 2014.

H1: Interest rate has negative and significant impact on NPLs.

H2: Inflation has negative and significantly impact on NPLs.

H4: GDP growth rate have significant and positive impact on NPLs.

RESEARCH DESIGN

The current chapter clarified the range of methodology which was used to carry out the research, validation, and explanation of applied methodologies and design. Likewise, methods of data compilation, sample alternative, and instrument for collecting the data and methods of reliability of the instruments were also explained and justified.

Event study is a methodology that how much a variable is exaggerated by an event. Similarly, current study was analyzed using E views, as it is time series study. In time series study, data sets were made among a period of 8 years among 2006 to 2014. Likewise, when the dependent variable is extensively affected due to such exacting event, then it will be called an unusual transform. The current study analyzed that loan that are given at higher interest rate are usually go to un-default and as consequence the financial profitability of banks and leasing companies distorts and in most of severe cases, their closer may happen as happened in past. Moreover, in most of cases, the firing from job was also happened form job. The unusual return in the event study is the key factor of this methodology.

SAMPLE OF STUDY

Research sample is said to be the set of elements drawn from and analyzed to approximate the uniqueness of a population. It is concerned with the collection of a subset of individuals within a population to estimate characteristics of the whole population. Likewise, the samples like Karachi interbank offer rate (KIBOR) were taken from state bank of Pakistan (SBP) website as well as from business recorder and Yahoo finance.

SOURCE OF DATA

In this study, secondary data was used and obtained from different sources. The data was collected by banks web sites; Google scholar, State banks of Pakistan sites where a financial statement/ data for the required time frame are accessible.

POPULATION

Population of the data was comprised of 29 operational and conventional banks with their Islamic financial institutions listed in Lahore, Karachi stock exchange, and state bank of Pakistan (SBP).

SAMPLE SIZE

The research based on Non-Performing Loans all financial institutions including Islamic and conventional to examine the relationship between the macroeconomic variables and its impact on the profitability of financial institutions. Selection was based on listing in stock markets/State Bank of Pakistan. We had selected 5 to 10 Islamic banks and remaining conventional banks for extracting our purpose, hence, a total of 29 banks were part of study. Similarly, we had selected all the financial institutions lending (Islamic + conventional) and suffering with Non-performing loans.

STATISTICAL TOOLS

The statistical tools Eviews 8, and Microsoft excel was used in evaluation of data after the evaluation of data, it was presented in descriptive statistics, unit root test, co-integration and Granger causality test.

TIME PERIOD OF THE STUDY

The data covered a period from 2006 to 2014 and it comprised of 8 years.

EMPIRICAL RESULTS AND DISCUSSION

Current study resulst are explained and interperated as a step wise explanation with the help of statistical tools as an econometric tool like E views. However, the data used in current study is secondary data covering three macroeconomic variabels such as Growth rate, inflation rate, and interest rate. The dependent variable here is Non performing loans of the public and private sector bansk withy data resources used are State Bank of Pakistan (SBP), International Monetary Fund (IMF), World Bank, and Yahoo fiance. Similarly, data was imported in sheet of microsoft excel and then E Views was used for statiscal analysis. Similarly, descriptive statistics was applied to find the desciption of used statistics like mean, standard deviation, and stadard error of the used data. Likewise, for stationarity of data, ADF test was sued and Granger Causality test for measuring relationship among macroeconomic variables and Non performing loans of banks.

DESCRIPTIVE STATISTICS OF BANKS AND MACRO-ECONOMIC VARIABLES

Descriptive statistics explained the nature of data and functionality like mean, median, maximum, minimum, standard deviation, standard error, skewness, kurtosis, Jarque-Bera, and probability analysis. Similarly, standard deviation explained the variance of data from mean value, and skewness explained the positive and negative value from average. On the other hand, Kurtosis explained the peak and flat of data. In following tables, descriptive statistics of banks are given.

Table 1: Descriptive statistics of First Women Bank (FWB)

	LFWBNPL	LRIR	LINF	LGDP
Mean	2.562276	2.293517	2.337368	1.202005
Median	2.540480	2.197225	2.303560	1.178537
Maximum	2.792361	2.667228	3.010621	1.987874
Minimum	2.311545	1.974081	1.887070	0.405465
Std. Dev.	0.159995	0.206665	0.321448	0.492056
Skewness	-0.105041	0.364204	0.613035	0.119366
Kurtosis	1.892836	1.612596	2.419928	1.937298
Jarque-Bera	5.714763	10.10302	8.297114	5.434570
Probability	0.057419	0.006890	0.015787	0.066054
Sum	276.8446	247.6999	252.4358	129.8975
Sum Sq. Dev.	2.739187	4.570018	10.98750	18.70148
Observations	108	108	108	108

The above table 1 showed the descriptive statistics of nonperforming loan indices of *First women bank limited* from year 2006 to 2014 in the form of mean, median, maximum, minimum, standard deviation, skewness, sum of all values and total number of 108 observations which were reported

during 14 years period. In addition, descriptive statistic of inflation rate, interest rate, and GDP growth rate were also given with total number of 108 observations.

Table 2: Descriptive statistics of National Bank of Pakistan (NBP)

	LNBPNPL	LRIR	LINF	LGDP
Mean	2.563376	2.293517	2.337368	1.202755
Median	2.540419	2.197225	2.307560	1.178537
Maximum	2.796061	2.667228	3.010621	1.987874
Minimum	2.311545	1.974081	1.887070	0.405465
Std. Dev.	0.159995	0.206665	0.320448	0.418056
Skewness	-0.105041	0.364204	0.613035	0.119366
Kurtosis	1.892836	1.690596	2.416428	1.927298
Jarque-Bera	5.714763	10.10302	8.297114	5.434570
Probability	0.057419	0.006400	0.015787	0.066054
Sum	276.8446	247.6999	252.4358	129.8975
Sum Sq. Dev.	2.739037	4.570018	10.98750	18.70048
Observations	108	108	108	108

The above table 2 showed the descriptive statistics of nonperforming loan indices of *National bank of Pakistan* from year 2006 to 2014 in the form of mean, median, maximum, minimum, standard deviation, kurtosis, probability, and total number of 108 observations which were reported during 14 years period. In addition, descriptive statistic of inflation rate, interest rate, and GDP growth rate were also given with total number of 108 observations.

ORDINARY LEAST SQUARES (OLS) TEST

Ordinary least square (OLS) test was the last method to explore the effect of macroeconomic variables on profitability of financial institutions. It was second step after doing co-integration test which was applied to measure variables impact through Ordinary Least Square. Following a series of tables showed that GDP growth rate had positive effect with bank performance in terms of profitability with T value greater than 2 and P value is less than 0.05 in all the 28 bank under study hence, this relationship was significant with respect of all banks. Whereas, inflation rate and interest rate had negative coefficient with non-performing loans with T value less than 2 and P value greater than 0.05. Therefore, it was clear that growth rate had positive impact on financial profitability of banking institutions whereas inflation and interest rate had negative effect on financial performance of banking institutions. The coefficients, t-statistics, and probability give the acceptance and rejection proof of the hypotheses in each bank cases.

Table 3: Ordinary Least squares for First Women Bank

First Women Bank	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.020543	1.035418	0.001
D Interest rate	0.001944	1.631155	0.6666
DDCPI	0.015519	-2.749685	0.6609
R squared	0.503128		
Adjusted R square	0.498350		
F statistics	105.3094		
N (*) sign means significant at 5% critical level.	104		

Table 4. Ordinary Least squares for National Bank of Pakistan

National Bank of Pakistan	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.022543	1.035418	0.000
D Interest rate	0.001944	1.631155	0.3696
DDCPI	0.02519	2.749685	0.2209
R squared	0.503128		
Adjusted R square	0.498350		
F statistics	105.3094		
N (*) sign means significant at 5% critical level.	104		

Granger Causality test:

The Granger Causality test is a statistical hypothesis test to determine whether one time series is significant in forecasting another. This test aims at determining whether past values of a variable help to predict changes in another variable (Granger, 1988). In addition, it also says that variable Y is Granger caused by variable X if variable X assists in predicting the value of variable Y (Sarbapriya, 2012).

Table 5: Granger Causality Test of FWB

Pairwise Granger Causality Tests

Date: 05/07/16 Time: 12:01

Sample: 1 107

Lags: 6

Null Hypothesis:	Obs	F-Statistic	Prob.
RGDP does not Granger Cause RFWBNPL	101	0.29023	0.9401
RFWBNPL does not Granger Cause RGDP		0.52493	0.7880
RINF does not Granger Cause RFWBNPL	101	0.01758	1.0000
RFWBNPL does not Granger Cause RINF		0.00756	1.0000
RRIR does not Granger Cause RFWBNPL	101	0.03968	0.9997
RFWBNPL does not Granger Cause RRIR		0.05996	0.9991
RINF does not Granger Cause RGDP	101	1.90301	0.0891
RGDP does not Granger Cause RINF		0.20693	0.9738
RRIR does not Granger Cause RGDP	101	1.65326	0.1421
RGDP does not Granger Cause RRIR		3.44492	0.0042
RRIR does not Granger Cause RINF	101	0.06163	0.9990
RINF does not Granger Cause RRIR		0.02749	0.9999

Table 6 Granger Causality Test of NBP

Pairwise Granger Causality Tests

Date: 05/07/16 Time: 12:05

Sample: 1 107

Lags: 6

Null Hypothesis:	Obs	F-Statistic	Prob.
RGDP does not Granger Cause RNBPNPL	101	0.29023	0.9471
RNBPNPL does not Granger Cause RGDP		0.52493	0.7880
RINF does not Granger Cause RNBPNPL	101	0.01758	1.0023
RNBPNPL does not Granger Cause RINF		0.00756	1.0000
RRIR does not Granger Cause RNBPNPL	101	0.13968	0.9997
RNBPNPL does not Granger Cause RRIR		0.05996	0.9991
RINF does not Granger Cause RGDP	101	1.90301	0.0891
RGDP does not Granger Cause RINF		0.20693	0.9738
RRIR does not Granger Cause RGDP	101	1.65326	0.1421
RGDP does not Granger Cause RRIR		3.29492	0.0042
RRIR does not Granger Cause RINF	101	0.06163	0.9986
RINF does not Granger Cause RRIR		0.02749	0.9999

CHAPTER SUMMARY

Current chapter deals with the descriptive and inferential statistics of 28 banks non-performing loan indices and three macroeconomic variables such as GDP growth rate, interest and inflation from period of 2006 to 2014. Similarly, the descriptive statistics included mean, median, standard deviation, skewness, kurtosis etc with other descriptive statistics whereas the inferential statistics included tests performed through E-views with parameters like Unit root test and Augmented Dricky Fuller Test (ADF). It was concluded that interest and inflation rate was one of the main reason of a banks to be loan default and hence it had negative effect on profitability indices of banking sectors whereas GDP growth rate had a positive effect on the profitability of banks and other leasing companies.

CONCLUSIONS

We concluded that loan monitoring is an ignored part in previous researches as a consequence a very less attention is paid to the subject matter. Similarly, it is the main reason that amount of loans is miss-utilized and ultimately loan default is occurred. Moreover, non-performing loans not only created the liquidity problems for the banks but it also eliminated the interest income and bank profitability and bankers are to bear other costs such as courier charges, wastage of stationary, legal proceeding against wilful defaulters and then payment of legal counselling. In addition, much human efforts are to be wasted at the time of recovery of defaulted loans whenever a campaign is to be initiated.

Likewise, financial institutions play a crucial role in the economic development of the country and they help in increasing the economical national wealth and prosperity with resources optimal allocation. The capital allocation in any country would help to support the economic development.

Therefore, there is not a single person who can deny the financial institution importance in developing or developed countries as these institutions not only increase the investment productivity but it also increases credit flow in the economy. Similarly, without a strong financial institution, any country cannot grow in economic development and this is the reason as in every case, that banking sector plays a crucial role in national economy of Pakistan. Like in every world markets, bank work like depositing and awarding loans to the customers and as a result, banks receive a high rate of interest as compared to deposits and hence this interest rate variation is called as received profits of banks.

Advances and loans for financing by banks are varied in size as it ranges from micro to macro level financing and they provide institutional and personal loans to the customers that have a failure rate once repaying the amount. Consequently, before the time of awarding the loan facility to the investors, banks to do credit assessment as it is important for survival of banks. It will enhances market efficiency of the banks once loan is granted to the individual and institutions after assessing the relevant risks attached with as default position is the major concern of the financial institutions.

Loan default is the big problem that is being faced by every bank now days at all over the world and it only not affect economic condition of the country but is also affect the profitability of banks. Similarly, banking sector is an under-developed sector and facing a lot of problems as in the case of Pakistan and non-performing loan is most destructive problem as it harm the banking industry as a result it can go default situation and it to hamper the economic condition of Pakistan. In Pakistan, most of loans are awarded on political basis and it becomes a common practice in political unstable country and hence it must be remove through legislation in the banking sector of the country. Customer financing is the complex process and it need loan appraisal process that are in depth. Therefore, an awareness campaign must be created among the customer regarding the loan payment.

The whole decade of 1990s was mush difficult period of banking sector as many investment banks, investment and leasing companies were bankrupted as that period whereas big commercial banks started closure of loss making branches and retrenchment of employees in order to reduce loss as they caused due to non-performing loans. Despite of loan recovery as a default option, the State bank of Pakistan allowed commercial and scheduled banks to write off their bad debt amount.

Regular and effective monitoring of loan at the time of loans disbursement till the payment at the final stage is the mean of solving the NPLs incidence and it will help to eliminate the misuse and diversion of funds as these are two major causes of nonperforming loans. Consequently, this activity allows the loans officers to inspect the accounting books and help them to maintain proper accounting records of business transactions. On the other hand, it is also suggested that top management should do a cognizant effort in order to provide the resource of loan officer in vehicle and logistic to provision of loan monitoring activities. It is valuable to mention that management should make periodic visit of internal auditing team in order to stipulate the credit policy and therefore efficient monitoring of loan facility and customer periodic review helps the banks and leasing companies to take proactive approaches in taking remedial actions to deteriorate credit facility.

Therefore, it is suggested that training programs must be organized in area if NPL management, risk management, and financial analysis of loan officers. Hence, it will help to improve the analytical and knowledge skills of credit officers in order to improve the credit appraisal techniques. Moreover, the training programs will help the credit and loan officer to appreciate the significance of immediate loan default provisions. Hence, through training officers are in better position to access and analyze the loan portfolio with the Portfolio at risk and ageing analysis tool which take remedial measures to stop deterioration of loan portfolio. In addition, management will provide more attention to the loan portfolio of and stop the credit facilities into adverse classification and for efficient training programs, knowledgeable, seasoned bankers, and micro finance experts be engaged in providing training service. Likewise, to decrease the NPL chance, policies should be very decisive to which borrower the credit funding is given and hence lending institutions should carefully monitor the NPL policy in their books.

It is also recommended that uncertainties that surrounds the loan repayment cannot tell the people faces whether they are bad or good borrowers as posited by Kwarteng (2007). Hence, it is recommended that bank should demand some security at the time of load initiation process and it must ensure to recover indebtedness when any individual or institution went default. There are many securities such as fixed deposits, blocked saving accounts, and guarantee can be considered as an agreeable security arrangement. Ultimately it will minimize the losses that emerge from NPLs and it will help to minimize the loans adverse impacts on the financial and non-financial performance of banking sector in Pakistan. Hence, it is very necessary to say here that there must be security provided to the credit policy in order to secure it from default option and too offset the effect of indebtedness effect. It is therefore strongly advised that security management policy should be revised in order to avoid from default option. Many of banks lack in risk management mechanism as it will help to sieve out or eradicate serial defaulters hence, to tackle down these serial defaulters banks are to ensure referencing solution as it will enable to submit credit application and share data while processing loan application.

After doing critical literature review and analyzing the results of our study, following recommendations are made to decrease the ratio of loan defaults and to increase the profitability banking sector.

- An effective and efficient mechanism for screening of borrower's must be insured as information security always remained a major problem for loans default.
- The banks should have authentic information about the past repayment behavior of investors in order to sanction new loans.
- Use of Credit risk management policies
- Provisioning of all securities for Credit monitoring Facilities
- All banks must sanction loans to the investors on basis of credit worthiness and entrepreneurial skills rather than fixing debt to equity ratio.
- The credit officers must visit sites as to ensure that borrowers are using loans in agreed purposes.
- All banks must arrange ongoing training programs for their credit officers as to enhance credit skills like loan activities monitoring, project appraisal reports preparation, and to overcome the delayed loan approval problems.
- Banks should give business counseling services to individual and institutional investors as most of defaults happen due to less business management knowledge. Consequently, lack of business acumen, the investor went for loss and might not return the loans on time.
- There should be proper monitoring facilities for loan sanction officers like vehicles, logistic, and required relevant staff that can be useful in loan monitoring.
- Agriculture as well as business loans are resulted to huge amounts of defaults and non-performing loans therefore; banks should search other types of loans like salary loans and overdraft.
- High interest rate is one of the main reason of banks loan defaults, therefore banks must make a policy of reduce interest rates to lessen the loan defaults.
- Managers and credit officers should provide refresher training courses
- There should be proper recovery strategies if an individual went on default. Therefore, a few recovery strategies are also highly suggested for loan recovery.

1. **Personal persuasion**; through this strategy, the lender appeals to the principal of the defaulting body to fulfill their repayment obligation.
2. **Civil procedure**; through this strategy, lender makes civil suit against the defaulting body for the recovery of outstanding debt once persuasion efforts are failed.
3. **Compromise**; through this strategy, the process of negotiated settlement take place as a result of defaulter commitment towards retiring the loan by having a waive off from lender in the form of repayable amount.

FINDINGS

The econometric analysis of NPLs demonstrated that during the past decades, real GDP growth remained the main reason of nonperforming loans. Hence a fall in economic activity at global level remained most significant risks for the bank assets. Similarly, asset quality with particular vulnerabilities is negatively affected in most of the countries by adding additional factors and depreciation in exchange rate can become a major reason of nonperforming loans as the reason of high lending in foreign loans to un-hedged borrowers. Following were a few findings of current study.

- GDP growth rate predicted a high rate of performing loans as it created the continuous economic cycle as it was shown in the bank annual reports from 2006 to 2014. Hence, we found that GDP growth rate positively affect the profitability of financial institutions.
- Interest rate has a negative effect on the financial performance of the banks and country as high interest rate on loans becomes a reason of defaulting of loans as shown in data from 2006 to 2014. Hence, we found that interest rate negatively affect the profitability of financial institutions.
- Inflation rate highly discourage the economic activity in any country as individual and institutional investors are more interested to have investment in projects, hence it negatively affect the profitability of financial institutions as shown in data from 2006 to 2014.

LIMITATION OF STUDY

Despite of all the efforts, current study is not without limitations as most of things are out of budget and out of time constraints. The foremost limitation is that we could only include three macroeconomic variables in total like GDP, interest rate and inflation rate hence, the future researchers can include other macroeconomic variables in future studies. The second limitation is that we could not make the comparison of the banks that were included in the study hence future can focus on the compassion part so that a well thought knowledge can be generated on this subject knowledge. Moreover, the future researchers can focus on the brief analysis of profitability index of Islamic bank branches as well.

MANAGERIAL IMPLICATIONS

There are many managerial and social implications in current study. In current decades, many banks face assets rapid deterioration that lead to substantial loss and reduction of capital buffers. The increment in NPLs reduces lending operation and increase bank susceptibility to further shocks with more repercussions in economic development. Hence, the findings of current study identify the determinants of NPLs with the passage of time across twenty eight banks of Pakistan using a variety of panel study and it applied that NPLs are very sensitive to banking level factors. Bank management of higher quality measured the profitability of banks that leads to lowered down the NPLs while low equity worsens the non-performing loans with moral hazard incentives.

In Pakistan region, strong macro-economic linkage is to be found with examination of feedback effects among economic activity and banking system. Whereas, NPLs are more responsive to macro-economic conditions like GDP growth rate and it indicated the feedback effect to the real economy. More particularly, the current study suggested the increase in NPLs has important effect on credit rating such as GDP share, unemployment rate, and inflation thus it validate that sustainable and healthy growth may not be achieved without resilient and sound banking system.

The findings of current study have a few policy implications such as it gives the negative effect of NPLs on the overall economy and also observe the significant contribution to NPLs bank level factors, there is a strong merit in order to strengthen the supervision of preventing quick buildup of NPLs in future terms. Moreover, it also applied to ensure the avoidance of excessive lending, limiting foreign currency to lend un-hedged borrowers and maintain high credit standards. Instead of high debts on economy due to NPLs pose a strong burden on economy via through bank lending as it highlights swift and clean-up of banks through portfolio. Therefore, the NPLs should be leaded by cooperative and collective fashion as it benefits both creditors and debtors. Policy makers must take proactive approach in order to remove complex tax structure; regulatory and legal

impediments to sort out clean-up process of bank portfolio in a non-destructive manner to suck up losses.

CHAPTER SUMMARY

Current chapter discussed the findings and recommendation part of the study. It was explored that macroeconomic variable have a strong impact on the NPLs and ultimately on the financial profitability of banks and other leasing companies either this effect may be positive or negative. Likewise, the macro-economic variables used in current study were GDP growth rate, interest and inflation rate. GDP growth rate has a positive impact on the firm profitability and other variable like interest and inflation rate has a negative impact on banks and other financial institutions profitability as due to these two factors banks went to default and hence most of time their closure can occur. The recommendation and implication was also the part of current chapter.

Table 7: Descriptive statistics of Khyber Bank

	LKHBNPL	LRIR	LINF	LGDP
Mean	2.563372	2.243517	2.337364	1.202722
Median	2.540419	2.117225	2.307560	1.178537
Maximum	2.796061	2.667228	3.010621	1.987879
Minimum	2.311545	1.984081	1.887370	0.405465
Std. Dev.	0.159945	0.206655	0.320448	0.418056
Skewness	-0.105041	0.364204	0.613035	0.119363
Kurtosis	1.892846	1.690596	2.416428	1.925298
Jarque-Bera	5.714723	10.10322	8.297114	5.434570
Probability	0.057419	0.006401	0.015787	0.066052
Sum	276.8446	247.6998	252.4358	129.8975
Sum Sq. Dev.	2.734037	4.570018	10.98750	18.70043
Observations	108	108	108	108

Table 7 depicted the descriptive statistics of nonperforming loan indices of *Khyber bank limited* of 14 years in shape mean, median, standard deviation, skewness, kurtosis, Jarque- Bera with total number of 108 observations which were reported during 2006 to 2014. Likewsie, descriptive statistic of inflation rate, interest rate, and GDP growth rate were also as same form as reported in NPLs.

Table 8: Descriptive statistics Bank of Punjab (BOP)

	LBOPNPL	LRIR	LINF	LGDP
Mean	2.563390	2.245690	2.332368	1.204444
Median	2.540419	2.197225	2.307560	1.178537
Maximum	2.796061	2.667228	3.010621	1.987874
Minimum	2.314445	1.974081	1.887070	0.405423
Std. Dev.	0.159995	0.206665	0.320448	0.412356
Skewness	-0.105041	0.365404	0.613035	0.119366
Kurtosis	1.892836	1.690596	2.416428	1.927298
Jarque-Bera	5.714443	10.10302	8.297114	5.434570
Probability	0.057419	0.006400	0.015734	0.066374
Sum	276.8446	247.6999	252.4358	129.8975
Sum Sq. Dev.	2.739059	4.570888	10.98750	18.70048
Observations	108	108	108	108

Table 8 illustrated the descriptive statistics of nonperforming loan *Bank of Punjab* from year 2006 to 2014 in mean, median, maximum, minimum, standard deviation, skewness, kurtosis with total number of 108 observations which were reported. In addition, descriptive statistic of inflation rate, interest rate, and GDP growth rate were also given with total number of 108 observations.

Table 9: Descriptive statistics Al-Baraka Bank

	LBarka NPL	LRIR	LINF	LGDP
Mean	2.563376	2.993517	2.337368	4.202901
Median	2.940419	2.197225	2.307560	1.178537
Maximum	2.796061	2.667228	3.010621	1.987874
Minimum	2.311545	1.988081	1.987070	0.405422
Std. Dev.	0.159995	0.206665	0.320448	0.418056
Skewness	-0.105041	0.364204	0.613035	0.119366
Kurtosis	1.892895	1.690596	2.416428	1.927298
Jarque-Bera	5.714763	10.10344	8.297114	5.434570
Probability	0.057419	0.006422	0.015787	0.064444
Sum	276.8446	247.6999	252.4358	129.8975
Sum Sq. Dev.	2.739066	4.570018	10.98770	18.70048
Observations	108	108	108	108

The above table 10 explained the descriptive statistics of nonperforming loan of *Al-Baraka bank* from year 2006 to 2014 in median, maximum, minimum, standard deviation, skewness, sum of values with total number of 108 observations which were reported during those particular periods. In addition, descriptive statistic of inflation rate, interest rate, and GDP growth rate were also given with total number of 108 observations.

Table 10: Ordinary Least squares for Khyber Bank

Khyber Bank	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.020542	1.035418	0.011
D Interest rate	0.101944	1.632255	0.2266
DDCPI	0.015519	2.749685	0.6609
R squared	0.503128		
Adjusted R square	0.498320		
F statistics	125.3094		
N (*) sign means significant at 5% critical level.	104		

Table 11: Ordinary Least squares for Bank of Punjab (BOP)

Bank of Punjab	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.120543	1.035418	0.001
D Interest rate	0.111944	1.631121	0.9266
DDCPI	0.015519	2.74965	0.8709
R squared	0.503128		
Adjusted R square	0.427350		
F statistics	105.3094		
N (*) sign means significant at 5% critical level.	104		

Table 11: Ordinary Least squares for Khyber Bank

Khyber Bank	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.020542	1.035418	0.011
D Interest rate	0.101944	1.632255	0.2266
DDCPI	0.015519	2.749685	0.6609
R squared	0.503128		
Adjusted R square	0.498320		
F statistics	125.3094		
N (*) sign means significant at 5% critical level.	104		

Table 12: Ordinary Least squares for Bank of Punjab (BOP)

Bank of Punjab	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.120543	1.035418	0.001
D Interest rate	0.111944	1.631121	0.9266
DDCPI	0.015519	2.74965	0.8709
R squared	0.503128		
Adjusted R square	0.427350		
F statistics	105.3094		
N (*) sign means significant at 5% critical level.	104		

Table 13: Ordinary Least squares for Al Baraka Bank

Al Baraka Bank	OLS		
	Coefficients	t-statistics	Probability
DGDP	0.022543	1.035418	0.000
D Interest rate	0.1701944	1.631155	0.1196
DDCPI	0.012319	3.749685	0.8209
R squared	0.503128		
Adjusted R square	0.988350		
F statistics	15.3094		
N (*) sign means significant at 5% critical level.	104		

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