

Impact of the Market Risk Factors on the Consumer Banking in Pakistan in the Financial Crisis 2008

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Abstract
Global financial crisis 2008 has severely impacted on banks and their risk profile. Huge losses were incurred due to systematic risk factors. However severity of these losses differs from one region to another region and from one country to another country. In Pakistan, consumer banking is the most affected banking business that has faced considerable losses during and after the financial crisis of 2008, because of the unexpected rise in the nonperforming loans. This study explores the factors of market risk, especially systematic part. It is noticed through studying the literature review that in 2008, when the financial crisis started influencing the banking system in Pakistan, the SBP had substantially increased the interest rate to control the hyperinflation in the country. Literature also indicates that financial crisis of 2008 has also impacted the GDP growth rate of Pakistan. Unemployment rate is another relevant variable in this context. This study assesses the significance of the market risk factors for the consumer banking in Pakistan, which was identified from the literature review viz. GDP Growth Rate, Inflation Rate and Interest Rate Volatility. In our study opinions of the banking professionals about the significance of the market risk factors were obtained through close-end questionnaire with 5 points likert scale for the study. Judgemental sampling was used in order to include experienced and seasoned consumer bankers. Professionals were selected from fourteen commercial banks of Pakistan. Secondary data of macroeconomic indicators were also used to augment and verify the findings of the study. T test is applied to check the significance of the risk factors.The results of our study indicate that all three market risk factors namely GDP Growth Rate, Inflation Rate and Interest Rate Volatility were found significant for the success or failure of consumer banking in Pakistan. Descriptive measure of mean was used for the ranking of market risk factor. Interest rate volatility is ranked the highest by the respondents, followed by inflation and GDP growth rate. This study concludes that financial crisis have impacted on the consumer banking in Pakistan and market risk factors played significant role in this episode of crises. This study creates value for the policy makers of banking institutions to develop risk management framework in the context of consumer banking.
Keywords: Risk Management, Market Risk, Financial Crisis 2008, Consumer Banking.

1. INTRODUCTION

In today's world revenue generation is more challenging because of increasing competition, opportunities as well as the involvement of fundamental and complex risks factors associated with the financial and non-financial institutions. If we say that financial institutions are in the business of risk then it is not wrong, because every financial institution faces risks which are specific to their institution and some risks are systematic in nature. Risks in financial services are larger in scope and scale than ever before, and generally categorized into external and internal factors. Bank for International Settlement describe three major types of risks i.e. Credit, Market and Operation Risk that creates losses and affects the liquidity of the financial institutions, others risk are Strategic Risk, Regulatory Risk, Reputational Risk, Tactical Risk etc. Along with revenue maximization and operational cost minimization, risk management has moved to center stage in defining superior performance. In the current global environment every banking segment has an important role towards financial and economic system. Banking segments can fundamentally be categorized into Corporate, Commercial, SME and the Retail Banking; moreover retail banking has also sub-categories according to the business segmentations like, Consumer Banking, Small Enterprise, and General Banking.

It has been noticed that decline in the macroeconomic factors and sudden disruption in business conditions affects borrower repayment behavior and their financial strength, which could also harmfully change financial results of the banks. It is difficult to exactly predict how worsening macroeconomic conditions affected the borrower's repayment behavior and financial condition of each banking segment.

The financial crisis of 2008, which started from Lehman Brothers and spread globally, it was happened just after a year of sub-prime mortgage mess. These issues had weakened the liquidity position of the banks and simultaneously the repayment capacity of the household customers. In Pakistan the financial crisis has also impacted the economic and financial system, and consumer banking is the most affected banking segment. After the financial crisis, mostly the banks had stopped lending and growth of the credit creation had been slashed, Non-performing Loans rises, Inflation reaches to 22% from 6%, Unemployment rises, Interest Rate reaches to 14% from 8.5%, GDP growth plummets to 0.36% from 5.6%. These macroeconomic factors are the part of the market risk which is also called the systematic risk and or external risk faced by the banks, furthermore these risk factors are difficult to control for an individual financial institution and the recovery of the economic and financial systems took several years.

After seven years of the crisis the weak economy in Pakistan is on the recovery mode, GDP is moving towards stability, capital and debt markets are growing, stock index is rising and credit creation increasing. The overall sentiments of the banking sector in Pakistan is now stabilizing as compare to few years back, and financial institutions are focusing to increase their revenues from different business avenues through inclusionary products and services. In the current economic and financial environment the most challenging banking segment is the consumer and retail banking because of the high returns on the short-term loans, nevertheless several risk factors are also associated with this segment, which needs to be identified and monitored and controlled.

In Pakistan consumer banking was introduced by the Citibank in early 1990's and as a pioneer of consumer banking it has captured the larger market share till late 1990's. The financial products that were offered in the consumer banking are, Car Financing, Housing Mortgage, Personal Loans and Credit Cards. After the year 2000, with the huge inflow of the foreign direct investment in the country almost every bank has started consumer banking and give personal loans, auto loans, credit cards and housing mortgage. During the initial phase consumer banking business has generated substantial profits, especially before the financial crisis 2008, but complexities to do business and retaining the customers was also there. After the financial crisis, NPL's in the consumer banking rises excessively and banks had stop creating new loans. It's no secret that profit maximization in the consumer banking is one of today's biggest challenges for the banking industry as the financial crisis brings many losses and changes the approach to do banking business. A better way to deal with such a situation is to take certain proactive measures to identify any kind of risk that can result in undesirable outcomes. In simple terms, it can be said that managing a risk in advance is far better than waiting for its occurrence. According to the Higher Education Funding Council for England (HEFCE), risk management is not just used for ensuring the reduction of the probability of bad happenings but it also covers the increase in likeliness of occurring good things.

1.1. RESEARCH OBJECTIVE

The objective of this study is to investigate the significant market risk factors to assess the performance of the consumer banking in Pakistan in the financial crisis 2008, and ranks these risk factors according to their significance.

1.2. STATEMENT OF THE PROBLEM:

In Pakistan, from early 90's to the year 2000, very few banks were doing consumer banking, but from the year 2001 when the huge inflows of FDI comes to Pakistan almost all the local and foreign commercial banks in Pakistan had started the consumer banking. From the year 2000 to 2008, financial institutions were very aggressive towards the consumer banking and tapped approximately 15% of the total household market. Consumer banking segment is a business line in which banks can make huge profits on high interest rate to lend short-term loans to the individual customers. Literature review and background study shows that sudden change in the macroeconomic factors can change the performance of the consumer banking in Pakistan. After the financial crisis of 2008, there is constant decline seen in the consumer assets and rise in the non-performing loans, which needs to investigate the significant macroeconomic factors that decreases the performance of consumer banking.

1.3. SIGNIFICANCE OF THE PROBLEM:

Different studies have acknowledged Financial Crisis 2008 and Risk Management Factors, and their significance for the performance of the consumer banking. This study is contributing twofold dimensional aspects; first it is addition to Consumer Risk Management literature and secondly to professionals by providing information about the significance of Market Risk Factors which are macroeconomic factors for the performance of the consumer banking in Pakistan. This research will be contributive for Risk Management Professionals, Financial Institutions and Regulators to develop effective risk management policies and procedures and prepare a comprehensive strategic plan for achieving future goals and rekindle consumer banking in Pakistan. Even though the NPL's of the consumer banking in the past is very high, but the larger part of the consumer market is still untapped. This untapped opportunity can be gained by identifying the core relevant risks and developing a comprehensive strategic risk management plan that gives long-term sustainable profitability to the banks in Pakistan.

2. LITERATURE REVIEW

Within the last few years numerous researchers have conducted study on the risk management in the area of banking in relation of financial crisis, generated by the virtue of market risk factors which ultimately transformed into declining the volume of consumer and retail loans and rise in the non-performing loans. An insight of the related study is as follows:

Brooman (2009) states that financial crisis of 2008 emerged in US from the sub-prime mortgages market and extend rapidly to the Europe and converted global crisis. This crisis affected both economic activity in almost all countries and financial systems across the global. Liquidity position is the key reason of the systemic risk that converted on 2008 financial crisis. Ali (2010) explore in his study that the financial crisis of 2008 in the west is characterized by squeezed liquidity in global credit markets and banking systems. The major cause was risky practices of credit creation and deposit mobilization due to the lower interest rates, and high debt burden level of individual and corporate foster manifold unfavorable effects on the global financial and economic system. Nevertheless all these years were exposed to persistence weaknesses in the world regulatory framework and financial system.

Sinkey (1991) earmark some factors i.e. increasing interest rate, excessive lending and GDP Growth Rate has a positive relationship with the NPLs. Metaxas (2010) assessed 9 largest Greek banks covering the period of 2003-9 and found that real GDP growth rate, Inflation, lending and unemployment rates influence the level of NPLs. Adela (2010) presented the idea by using Pearson correlation coefficient that how these banking elements average interest rate is connected with Non performing loans in Romanian banking system covering the period of 2006 till 2010, results of their study also suggest that there are other indirect channels which affect the non performing loans as well.

Developed and emerging markets were affected more deeply as compare to the Frontier markets, since the starting of the 2007 financial crisis, forecasts of the growth rates about the 2008 and onwards have been revised downward respectively. The most terrible affected regions include newly industrialized Asian countries, emerging Europe and the CIS countries each of which is estimated to see narrowing in the GDP in 2009 approximately above six percent. Other regions are anticipated to do far better, including countries in the emerging market like Middle East, Africa and the South Asia most of these countries are probable to keep away from recession. Brooman (2009) stated that forecasting has always considered the best supportive tool to predict the future sentiments for the economic and financial concerns, but we have seen in the financial crisis of 2008, that too much dependency on the financial and economic forecasting for decision making will leads to huge losses.

Pakistan has also suffered losses in the 2008 crisis from high current and fiscal account deficits, low reserves, rapid inflation, rise in unemployment, decrease in FDI, increase in loan provisions in the consumer banking, a weak currency, high rate of t-bills and a decreasing trend in economy that bring the country in a very complicated situation at the time of crisis. Financial Crisis has also affected the dynamics of the Capital Market, and the Portfolio Investment has sharply declined, but the increasing flow of remittances has been seen during the year 2009 – 2010 which were expected to increase more. A negative relationship has been found between capitalization in the stock market and the profitability of banks' (Huizinga, 2001; Bikker & Hu, 2002).

Haneef and Riaz (2012), in his research study, stated that along with operational cost minimization and revenue maximization, risk management becomes the important strategy in defining superior performance. Risks occur on both the areas off-balance-sheet and on-balance-sheet, but the majority of risk is at on-balance-sheet. Banks are always dealing with the risk and key challenge for the management is to understand the dimensions of risk and a variety of tools to mitigate risk. Several of these risks are of traditional kinds: Interest Rate Risk/ Market Risk, Credit Risk, Liquidity Risk, and Operational Risk. Nonetheless, several risks are more recent, such as regulatory risk, exchange rate risk, and risk occurs in economic recession, risk of inclusionary products and services and human resources risk. Koziol (2008) present a study in which they examine the risk of bank failures. They said that examining the risks of failing bank is the principal concern of bank regulations. Caprio (1996) compiled a study based on multiple episodes of banking crises among 69 countries segregated for each country for the respective time period, scope and estimated loss of crises mostly based on macro economic data, they describes that Poor management, supervision, regulations, corporate governance and unnecessary government intervention are the major causes of banking sector insolvencies during 80s to 90s.

Shafiq and Mohamed (2010) in their research study assessed 12 commercial banks practices by the independent variables, Understanding Relevant Risk of the bank, Risk Management Standards, Identification of Risks, Assessment and Analysis of Risks, Monitoring of Risks, and Credit Risk Assessment. Secondary data has been used to assess the financial soundness, Asset Quality, Capital Adequacy Ratio, Earnings and Liquidity along with their sub-indicators. The analytical and descriptive results, concludes that risk management professionals of the banks in Pakistan have general understanding of risk management. The most specific risks are Credit Risk, Operational Risk, Market Risk and Liquidity Risk. ANOVA is used for assessing the financial soundness, and shows the significance of the indicators to increase the efficiency of the risk management system in the banks.

Rekindling the consumer banking seems to be a massive challenge for the banks, (ERNST & YUNG [E&Y's], 2012). The increasing demand of the word of mouth means banks should refocused to change their customer relationship strategy. Banks should develop inclusionary products and services, and to keep their satisfied customers as their sales persons and advocate. It is fact that customer confidence in the banks remains definitely high in various emerging and frontier markets. In India, 72% of customers are feeling more confident from their primary bank. Retail and Consumer banking remains a mass market segment and the customer challenges depends geographically and different from one market to another market (Schlich, 2011).

3. BACKGROUND OF THE STUDY

To perform our research it is essential to add some facts pertaining to the macroeconomic factors of the Market Risk specific to the financial environment of Pakistan, and the performance factors of consumer banking. In this manner we have taken secondary data, which includes factors like Interest Rate, GDP Growth Rate, Inflation Rate, Non-performing Loans in Consumer Banking, Growth Rate of Consumer Banking. In this study we find the connectivity within these factors and analyze the impact on each other, which helps us to draw the final results of this research.

3.1. CURRENT ECONOMIC AND FINANCIAL SITUATION OF PAKISTAN

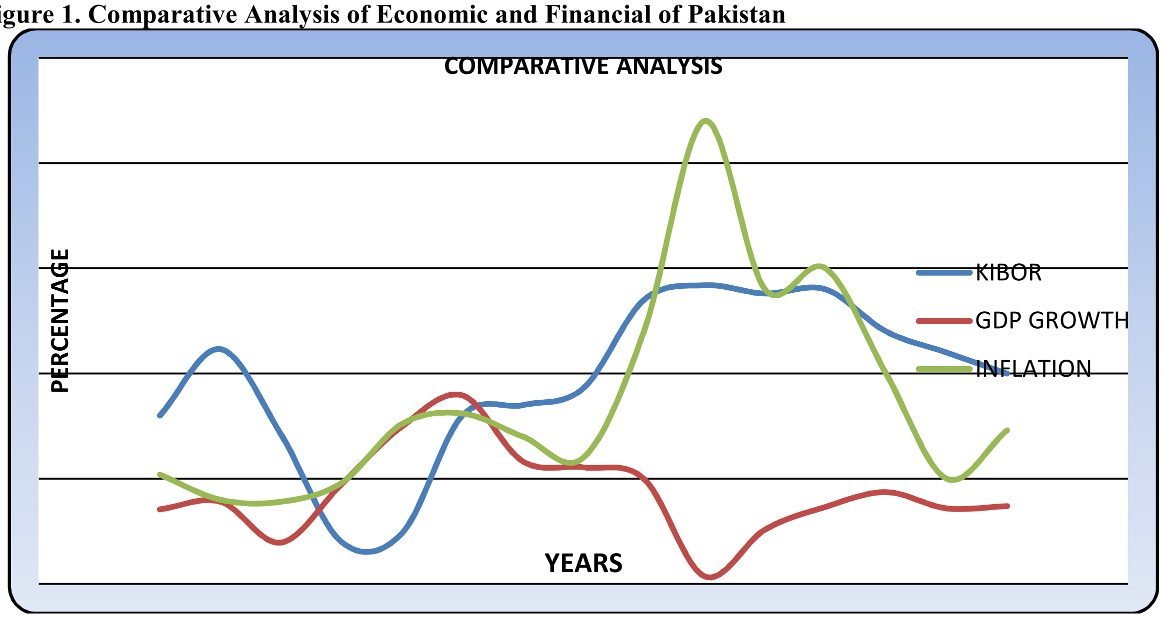
Pakistan is striving fast to enter into the emerging market countries by reaching the economic and financial goals. After a period of slow growth from the financial crisis, Pakistan's economy observed high trend economic growth in fiscal year 2013-14, through the major recovery process in industrial sector and fair growth in agriculture and service sectors. The success includes inflation restricted at single digit, rising up in economic growth, rupee strengthened, reduction in fiscal deficit, sustainable growth in exports and imports, growth in tax collection, rise in FDI and stock market created new history.

The GDP growth rate turned to 4.14 percent in 2013-14 as compare to the growth of 3.70 percent in last year. The industrial sector reached to 5.84 percent against the growth of 1.37 percent in the last fiscal year, while large scale manufacturing growth is 5.31 percent against the growth of 4.08 percent in last year. The services sector grew at 4.29 percent as compared to 4.85 percent in the last year. Overall the commodity producing sector is increased at 3.94 percent as compare to 2.14 percent last year, which represent a considerable turnaround from the weak growth rate of the previous years.

3.2. EFFECT OF THE FINANCIAL CRISIS 2008 ON PAKISTAN'S ECONOMIC AND FINANCIAL SECTOR

Economic and Financial Indicators are essential for the financial institutions and policy makers for decision making. These indicators help the management, economists and regulators for right decision making at the right point of time. Here in the (Figure 1) we can see the comparative analysis between KIBOR, GDP Growth and Inflation in Pakistan from the year 2000 to 2014. The analysis shows that when the financial crisis of 2008 occurs there was rise in Inflation, GDP growth rate falls down and Interest Rate increases, this rise in the interest rate is the counter step of the regulator to control or stabilize the inflation. We have also noticed that the financial crisis spur the Inflation that causes to rise in the Interest rate which plummet the GDP growth and the growth of consumer banking. If we develop relationship among these economic and financial factors we find that Inflation has direct relationship with the Interest Rate and Indirect Relationship with GDP growth. With respect to consumer banking we find that it has direct relationship with the GDP Growth and indirect relationship with Inflation and Interest Rate.

Figure 1. Comparative Analysis of Economic and Financial of Pakistan



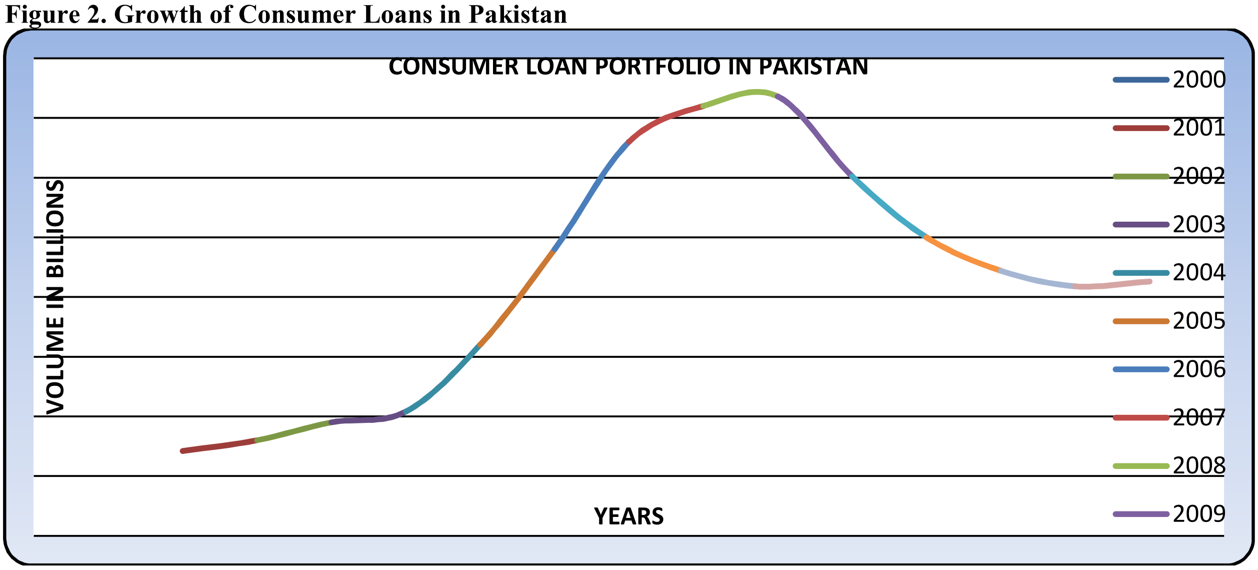
Source: GDP Growth, Inflation: www.gdpinflation.com/p/blog-page.html, KIBOR: www.SBP.ORG.PK

3.3. EFFECT OF FINANCIAL CRISIS 2008 ON CONSUMER BANKING IN PAKISTAN

Consumer banking took growth in the early 2000, in Pakistan and reached its peak at the mid of 2008, but the financial crisis of 2008 has totally change the performance of the consumer banking in Pakistan. Almost all the local and international banks had stopped the consumer lending, because of the highly increasing rate of the non-performing loans. After the financial crisis the repayment capacity of the borrowers has been seen extremely weaken and their irrational behavior was unexpected. This unexpected change effected the profitability of the banks very highly and the gravity of this matter constantly going into deep, which took several years to manage. There would be many reasons behind the decline of consumer banking, but one of the major reasons which significantly highlighted is the weak risk management standards, beside this in Pakistan 80 percent of the consumer market is still untapped,.

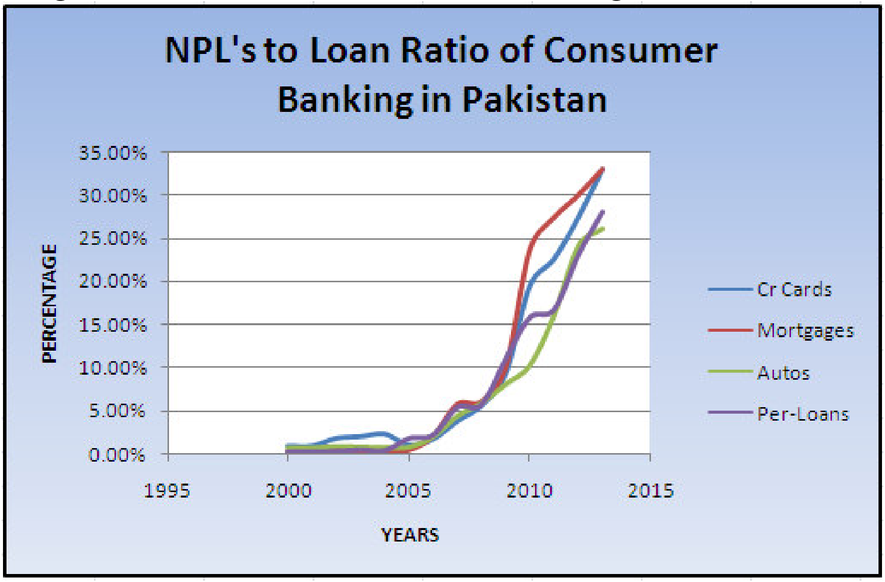
In Pakistan, Citibank has started the consumer banking in 1994, since then up to early 2000, it has taken study growth, but by the early of 2000 to 2008, the growth was seen very high it's a time when huge FDI is also inflows to Pakistan. Financial products offered to the customers in the consumer banking include Personal loans, Housing loans, Auto loans, and loans for Durable Goods. Consumer portfolio reaches from Rs. 71 Billion to 368 billion in 8 years of its peak, personal loans stood at the top among all products by Rs. 140 billion, Housing Loan was at Rs. 109 billion, Auto loan was at Rs. 48 billion, and Credit Cards was at Rs. 40 billion. Large number of NPL's was seen in Housing Loans and Credit Cards so far, which is around 33%, Personal Loans has 28% and Auto Loans has 26%. After the crisis the growth in the portfolio drastically deteriorated and reached to Rs. 213 billion in 2013, during these years banks were reluctant to reinvest into consumer banking because of high NPL's and lack of expertise to reengineer the risk management model. During 2000 to 2008 the position of the NPL's was very stable approximately 6%, but after the financial crisis it started increases and reaches very high up to 33% in 2013. In the beginning of 2014, few banks in Pakistan has taken steps to rekindle the consumer banking business and come up with new plans to tap the untapped market.

Figure 2. Growth of Consumer Loans in Pakistan



Source: State Bank of Pakistan, Trading Economics, The News, Daily Dawn, GDP Inflation: Economic Indicators of Countries.

Figure 3. NPLs to Loan Ratio of Consumer Banking in Pakistan

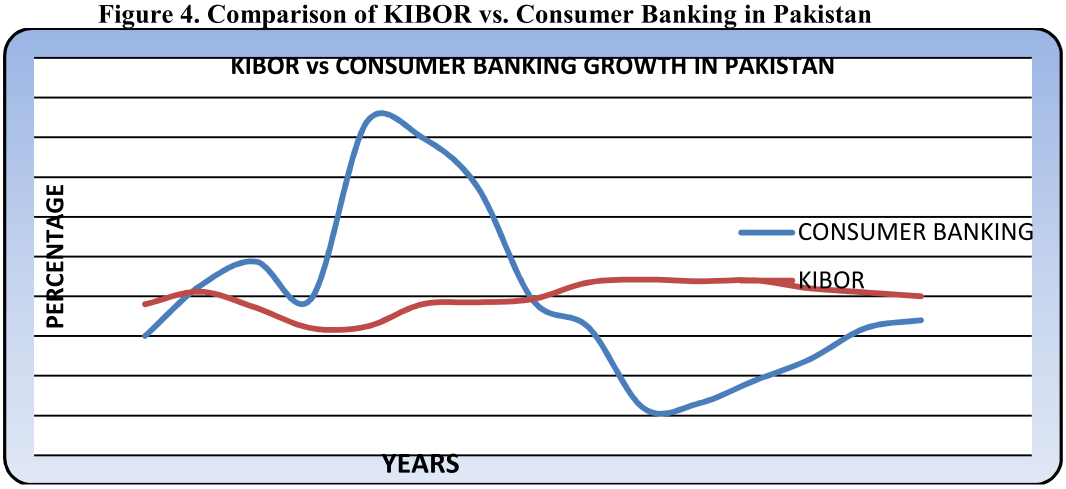


Source: State Bank of Pakistan, Trading Economics, The News, Daily Dawn.

3.4. EFFECT OF CHANGE IN INTEREST RATE ON CONSUMER BANKING IN PAKISTAN

Financial crisis of 2008 brings many substantial changes in almost every country of the world, regulators, policy makers and other market agents were forced to take rigid measures to control the economic and financial conditions. Pakistan has also been affected the financial crisis, especially few areas were severely affected like consumer banking and retail banking in which banks had lost the customers confidence. The most typical outcome of the crisis was considerable rise in the interest rate in the mid of 2008, by the State Bank of Pakistan, which shaken the consumer banking system in Pakistan, as the interest rate rises from 9% to 14% suddenly. If we look at the situation before the crisis we find moderate growth on yearly basis in the consumer loans, but the situation turned entirely different in 2008 after the rise in the interest rate, the NPL's were increased due to the non-repayment of the customers, and banks found incompetent to control the situation. These circumstances drastically hit the consumer credit creation and decline it roughly by Rs. 155 billion till 2013. It can be easily understand that quick rise in the interest rate and decline in the economic environment affects the customers' behavior to repay the loans that will cause a rise in the NPL's and reduce the profit of the bank. Easy monetary policy, low interest rates and excess liquidity facilitates to fuel the financial crisis, which lowers the economic position of the country. But low interest environment cannot remain for the longer period of time, as the economic situation moves the interest rate going to raise, which impacts on the profitability of the banks and their capital adequacy level. That's because the managing interest rate risk is at the heart of a bank's business model. At November 16, 2014 SBP has reduces the interest rate by 0.5 bps to 9.5 percent to increase the credit creation in the economy and cut low inflation.

Figure 4. Comparison of KIBOR vs. Consumer Banking in Pakistan



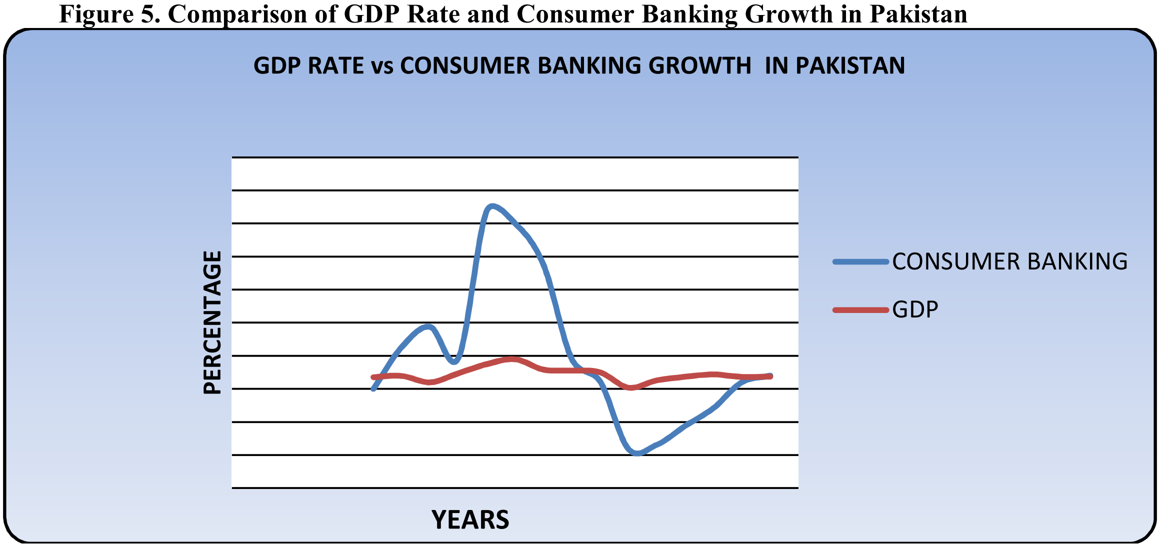
Source: State Bank of Pakistan, Trading Economics, The News, Daily Dawn, GDP Inflation: Economic Indicators of Countries.

3.5. EFFECT OF CHANGE IN GDP GROWTH RATE ON CONSUMER BANKING IN PAKISTAN

There are several indicators to assess the economy, but GDP is a key indicator through which the economic health and size is judge more accurately. GDP growth rate has a higher impact on almost every agent of the economy e.g. high GDP growth creates more opportunities of employment, investments and business. A major change in GDP, whether up or down, usually has a large effect on the financial system either capital market or debt market. If we look at the situation of Pakistan, before and after the financial crisis of 2008, we can see a direct link between the GDP growth rate and the performance of the banks. As in Pakistan the most effective area from the financial crisis is the consumer banking. We have compared the GDP growth rate with the performance of the consumer banking and we have assessed from the graph that GDP growth rate and Consumer banking was growing together from 2001 to 2008. After the crisis when the GDP growth rate start declining performance of the consumer banking also deteriorated, in the year 2007 the GDP growth rate was at 5.54 percent which declines to 4.99 percent in 2008, but in 2009 GDP move to negative growth and has impacted drastically on the consumer banking whit a negative growth of 18.2 percent.

The effect of the change in the GDP growth rate brings drastic impact on the overall performance of the consumer banking for several years, later on from 2013 the banking system of Pakistan comes out from the impact of the financial crisis 2008. In all these years we have seen that consumer loans did contributed in the profitability of the banks and shows constant increase in the NPL's.

Figure 5. Comparison of GDP Rate and Consumer Banking Growth in Pakistan

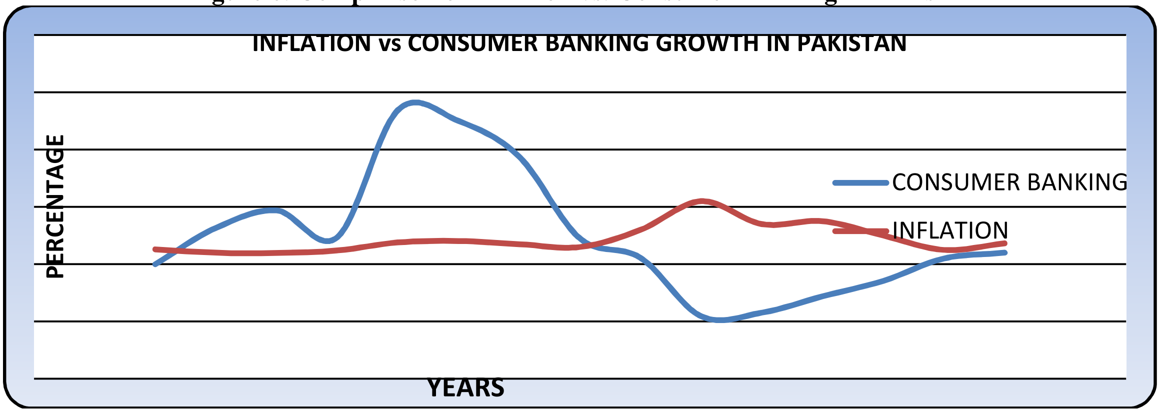


Source: State Bank of Pakistan, Trading Economics, The News, Daily Dawn, GDP Inflation: Economic Indicators of Countries.

3.6. EFFECT OF INFLATION ON CONSUMER BANKING IN PAKISTAN

The term "inflation" refers to rising prices of essential goods or, alternatively, the decline in value of money requires more money to buy the same goods and services. An increase in the projected inflation raises the nominal interest rate. This increases the number of rupees that creditors or debtors who are transacting in nominal financial instruments expect to receive or pay when loan matures. If these expectations are realized all the nominal values will be higher at maturity. In 1995, Robert J. Barro published findings they studied many economies and found that, across countries, inflation and economic growth were negatively related higher inflation was associated with lower economic growth. We have already analyzed that decline in the GDP growth rate have impacted the profitability of the banks, and financial institutions plays an important role in the economic development. These discoveries suggest a connection between Inflation, financial institution and economic growth. In 2006, John H. Boyd and Bruce Champ find in their study that one way inflation might affect economic growth through the banking sector is by reducing the overall amount of credit that is available to businesses. To further strengthen this connectivity we have take the data of the Inflation rate and portfolio growth rate of Consumer Banking Segment from the year 2000 to 2013. Through this data we have analyzed that when inflation rate suddenly becomes very high it affects the credit creation of the consumer banking segment. This can be seen in 2009 when inflation reaches to 22% from 12%, the growth of the consumer credit was slashed and start deteriorated for several years. If we analyze this in the context of financial crisis of 2008, we can understand that financial crisis has slowed down the economic growth rate and raises inflation which severely impacts on the performance of the consumer banking, the credit creations declines and increase in non-performing loans. If we look the duration from 2000 to 2007, we find that the inflation was consistently increasing with the slower rate and consumer banking was growing, but when the financial crisis occurs and inflation goes very high has ultimately affected the performance of consumer banking in Pakistan.

Figure 6. Comparison of Inflation vs. Consumer Banking in Pakistan



Source: State Bank of Pakistan, Trading Economics, The News, Daily Dawn, GDP Inflation: Economic Indicators of Countries.

4. RESEARCH METHODOLOGY

In this research, we investigate the significant risk factors of the market risk in the ranking order for the performance of consumer banking. In our research Model we have identified the risk factors of the market risk from the literature review and investigate the significance of these risk factors in the ranking order for the performance of consumer banking. In this quantitative cross-sectional research primary data is collected only at one time from the sample through the close-end questionnaire to draw the results for prospective purpose. Secondary data of macroeconomic indicators were also used to verify the findings of the study.

4.1. POPULATION AND SAMPLING

In Pakistan there are 35 commercial banks including both, Public and Private sector, all of these banks are involved in the consumer and retail banking. Cluster sampling is used to select the desired sample size from the population. We have divided these 35 commercial banks into the clusters by considering each bank as a cluster and select 14 banks including big 5 commercial banks in Pakistan on the bases of their portfolio in the consumer banking. From those 14 clusters we have randomly selected the 110 professionals because the population of our study are heterogeneous within each selected cluster, which consists of professionals, who are directly and indirectly involved in the consumer banking operations and having understanding of dynamics.

S.NO	SOURCES	POPULATION	SAMPELING TECHNIQUE	DESIRED SAMPLE SIZE	SAMPLE SIZE TAKEN (BANKS)	SAMPLE SIZE TAKEN (EMPLOYEES)
01	Commercial Banks	35	Random	14	14	110

Clusters: National Bank, Allied Bank, UBL, HBL, MCB Bank, SCB, NIB, Faysal Bank, JS Bank, Soneri Bank, KASB Bank, HabibMetro Bank, Summit Bank, Silk Bank
Respondents: Officer Grade-11, Officer Grade-1, Assistant Vice President, Vice President, Senior Vice President, Executive Vice President, Senior Executive Vice President.

4.2. DATA COLLECTION

The sample size of the respondents is 110 which are employees of the selected banks. First the meetings have been fixed with the respondent to get his time. Self-administrated data collection technique is used to ensure the quality and quantity of the response and email attachment technique is also used that produced better results with respect to manage time. The data is collected through the close-end questionnaire. The observation and opinion evaluated during the interview is used to draw the conclusion of the research report.

Secondary data is used to assess the macroeconomic factors and the performance factors of consumer banking in Pakistan which gives an idea about the GDP Growth Rate, Interest Rate Volatility, Inflation Rate, Volume of the Consumer Loans, NPL's Position, from 2000 to 2013. This data has been collected from the articles, reports, authentic presentations, research papers, internet and reviews of seminars.

4.3. INSTRUMENTS

Close-ended questionnaire with 5 point likert scale were used for this study to judge the opinions of the banking

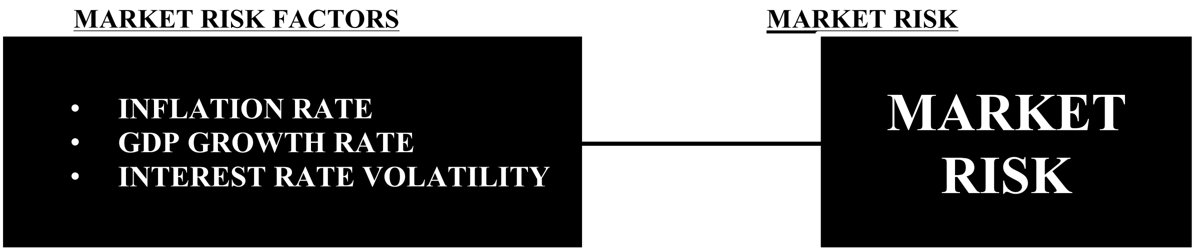
professionals regarding the significance of the market risk factors. Professionals were selected from fourteen commercial banks of Pakistan.
1 = Highly Unimportant, 2 = Unimportant, 3 = Indifferent, 4 = Important, 5 = Highly Important.

4.4. TECHNIQUES

Overall reliability of the questionnaire is checked through Cronbach's Alpha. To check the significance of the market risk factors for the consumer banking we have used T-test analysis. To rank the market risk factors according to their importance we have used descriptive statistics. The returned questionnaires were coded and data were entered into Excel and SPSS to perform analysis.

4.5. CONCEPTUAL MODEL

After analysing the literature review and emperical study, research variables were finalised to conduct the core research. All the variables are the outcome of the study, which significantly helps to draw the final results of the research. Risk factors of the Market Risk were selected to identify the their significance according to their ranks for the performance of the consumer banking.



4.6. VARIABLES

4.6.1. Market Risk

Market risk is the risk of losses in positions occurring from market prices movements such as Equity prices, Interest rates, FX rates and Commodity prices resulting in a loss to capital and earnings. Market risk is associated with Assets, Deposits, Investments and Trading and is also called "Systematic Risk", and cannot be eliminated through diversification.

Market Risk Factor

- **Interest Rate Volatility (MRIRV):** One of the major aspects of the economic and financial system is the variation in the long-term interest rates and the short-term interest rates. The major cause of the change in the interest rate is the change in the monetary policy, economic sentiments and after effects of the financial crisis.
- **Inflation Rate (MRIR):** Inflation refers to the constant rise in the general price level of goods and services in an economy over a period of time. Central bank of every country develops the monetary policy of their country to control inflation.
- **GDP Growth Rate (MRGGR):** The gross domestic product (GDP) is a key economic indicator to gage the health of the country. It includes the total market value of all final goods and services of a country produced in a year.

5. ANALYSIS

5.1. RELIABILITY TEST

The reliability of the questionnaire is tested through the Cronbach's alpha in the SPSS, which shows the internal consistency of the variables in the questionnaire.

Table 1. Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.725	.733	3

Results

We have taken three market risk factors of the questionnaire to test its reliability. The results indicate that the value of α **is 0.725,** which shows the internal consistency of the variables in the questionnaire.

5.2. MARKET RISK FACTORS ANALYSIS

In this part of our research we have taken three Market Risk Factors to check that all these risk factors are significant for the performance of consumer banking or not, furthermore we also rank each market risk factor on the bases of their mean value **µ**. To determine the significance of each risk factor we have developed two hypotheses **Ho** and **Ha**. To determine significant the set hypothesized/ test value is **3.5** as significant value because we are using 5-likert scale in our questionnaire to collect the respondent point of view regarding the proposition. T-test is used by taking the **t-value** to check the significance of each risk factor for the consumer banking. Descriptive statistics is used to analyze the mean values **µ** and standard deviations ***s*** for ranking order. Test value of the mean is ***h*** = 3.5, and the critical value of the t with 109 degrees of freedom, and α = 0.05 and one-tailed = 1.659.

Mean Values of Market Risk Factors:

µ1 = Mean value of Interest Rate Volatility
µ2 = Mean value of Inflation Rate
µ3 = Mean value of GDP Growth Rate

Proposition (H):

All the Risk Factors of the Market Risk are significant for the performance of the consumer banking.

Hypothesis:

Ho: µ1, µ2, µ3 ≤ 3.5 (All the three risk factors are not significant for the consumer banking)
Ha: µ1, µ2, µ3 > 3.5 (All the three risk factors are significant for the consumer banking)

Table 2. Descriptive-Test Analysis

Descriptive Statistics

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
MRIRV	110	4.5182	.06021	.63147
MRIR	110	4.3273	.07761	.81397
MRGGR	110	4.1909	.07248	.76020

Table 3. T-Test Analysis

One-Sample Test

	Test Value = 3.5					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
MRIRV	16.911	109	.000	1.01818	.8989	1.1375
MRIR	10.659	109	.000	.82727	.6735	.9811
MRGGR	9.532	109	.000	.69091	.5473	.8346

DESCRIPTION

The value of the t-test statistics shows the independent significance of each market risk factor towards the performance of consumer banking as MRIRV t = 16.911, MRIR t = 10.659, MRGGR t = 9.532. The t-critical value of Interest Rate Volatility, Inflation Rate and GDP Growth Rate is less than t-observed value, which shows that all the risk factors of the market risk are significant for the performance of consumer banking.

The above results represent the statistical behavior of the market risk factors. It has been observed that the mean µ of all the market risk factors are different µ1 = 4.51818, µ2 = 4.32727, µ3 = 4.19090. The standard deviations of the risk factors are $s1$ = 0.39874, $s2$ = 0.66255, $s3$ = 0.57789 refers that the observation in the data are more close to their mean values µ1, µ2, µ3 and shows that every risk factor is more or less significant for the Market Risk and for the performance of consumer banking.

As the value of t-critical is less than from all the t-observed values of the market risk factors, so we reject the NULL Hypothesis in favor of ALTERNATE Hypothesis.

The observed values of t are significant, which signifies that the respondents answer is towards mean values of Hµ, and refers that all the market risk factors are significant for the performance of consumer banking.

Ranking of the Market Risk Factors

If categorize all the market risk factors by making the mean value **µ1, µ2 and µ3** as a benchmark for ranking to check the importance of each risk factor, then results refers that.

Rank	Risk Factors	µ
Rank 1	Interest Rate Volitality	4.5182
Rank 2	Inflation Rate	4.3273
Rank 3	GDP Growth Rate	4.1909

The ranking order of the market risk factors shows that Interest Rate Volatility is highly important and stood at rank 1, Inflation Rate is at rank 2 and GDP Growth Rate stood at rank 3 for the performance of consumer banking.

6. CONCLUSION

This section is for analyzing the significance of the market risk factors on the performance of the consumer banking. For this purpose we have developed a model in which we have taken three market risk factors which we have identified from studying the literature review to find their significance for the performance of the consumer banking in Pakistan. Primary data were collected through questionnaire; furthermore in order to have insight of the consumer banking issues, financial crisis and macroeconomic factors secondary data is also evaluated. This investigation is qualitative in nature and secondary date in the form of articles, research papers and conference proceedings is used and comparative analysis is done before and after the financial crisis 2008. In our model we have used Descriptive statistics and T-test to identify the significance of the market risk factors, and to rank these risk factors according to their significance.

The compression of pre financial crisis of 2008 with the post financial crisis environment of Pakistan augments our investigation towards the risk factors that we have taken in our research model. The study shows that pre financial crisis period was very much growth oriented with respect to the economy and the financial sector cyclical rise in the GDP growth rate occurs from the year 2000 to 2008, which also gives rise in the volume of the consumer loans in Pakistan. During these years there was even rise in Inflation Rate which also kept control the Interest Rate, and SBP has enlightened the monetary policy of the country which also gives rise to the financial sector. Sustainable GDP Growth Rate, Lower Inflation Rate and Interest Rare spurs consumer portfolio and reaches from Rs. 71 Billion to 368 billion in 8 years with a very low rise in the non-performing consumer loan. The situation of the post crisis which is 2008 to 2014, found opposite from the pre crisis environment, GDP Growth Rate plummets and Inflation moves skyrocketed these factors has badly affected the economic situation in Pakistan, which results the tighter monetary policy through the higher Interest rate from the SBP. The compression shows that these substantial changes in the macroeconomic factors were caused in declining the Volume of Consumer Loans and exceptional rise in the Non-performing loans. The study further linkage that GDP Growth Rate has a direct relationship with the performance of consumer banking, and Inflation and Interest Rate has a indirect relationship with the performance of the consumer banking in Pakistan.

From the results of our study the results shows that Null hypothesis has been rejected in favor of Alternate hypothesis as the value of **t-critical** is less than the value of **t-observed** and the mean value **µ** is far greater than the test value. This represents that all the market risk factors we have taken in our study, which are Interest Rate Volatility, GDP Growth Rate and Inflation Rare are significant for the performance of the consumer banking. On page 5 of this report we can see that the ratio of NPL's to the Consumer banking was very low before the financial crisis occurs, but after the financial crisis it start rises and reached to 33%, and the volume of loans declines from Rs. 368 billion to Rs. 213 billion, which severely impacted the performance of the consumer banking in Pakistan.

The ranking order of the risk factors shows that Interest rate Volatility is highly important and stood at rank 1, Inflation Rate is at rank 2 and GDP Growth Rate stood at rank 3 for the performance of consumer banking.

We cannot say that the performance of the consumer banking is not only affected by these risk factors which we have identified in our research study, there are some factors from which different results can be observed, but our research study is limited to only these factors.

7. RECOMMENDATIONS

This study adds value to the earlier research efforts in understanding the relationship between GDP Growth Rate, Inflation Rate and Interest Rate Volatility with the performance of the consumer banking in Pakistan. The study provides new dimensions by opening a debate on the importance of Market Risk Management practices in the performance of consumer banking. The findings of this study suggested that statistically significant risk factors indicated their importance through their ranking orders for the performance of the consumer banking.

Several important points can be drawn from these results as we have seen that all the market risk factors that we have taken in our research study are more or less significant for the performance of the consumer banking according to their ranking. We suggest that all the risk factors included in our research can contribute important part in developing the risk management strategies to save the financial institutions form the systemic risk. The importance of these risks factors must be seen by the regulators and policy makers to take fiscal and monetary policy measures to control the monetary losses in the financial system.

However we also understand and suggest by the conclusion of this research report that sound risk management system like helps to prevent the financial institutions from losses and brings profitability. The limitations of this study by itself are leading to the new researcher for further research dynamics in this field of market risk management; furthermore the new researchers can also apply regression and correlation analysis on the risk factors to expand the area of this research study.

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