RESEARCH ARTICLE OPEN ACCESS

Do Loan Loss Provisions enhance Profitability through Tax Saving: Evidence for Pakistani Banking Sector

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Abstract:

In this study we evaluate that the impact of Loan Loss provisions (LLP) in profitability ratios and income smoothing in conventional banking sector of Pakistan. While there are so several prior researches have been observed that the impact of loan loss provisions in conventional banking sector of Pakistan. This study is the first to inspect that the impact of Loan Loss Provision on profitability ratios as well as for the income smoothing purpose. Loan Loss Provision is used as a manipulation tool over the time especially in high earning periods which diminished in profitability ratios. For this purpose, data of 20 conventional banks was taken for the period of 2006 to 2018. The Results suggested that the Loan Loss Provision had a significant negative impact on profitability ratios. Lower profitability would lead to tax savings, hence Banks used LLP as a tool to increase the cash flows due to tax savings. Other factors like non-performing loan have a significant and negative effect on profitability, whereas size have a positive effect. This study recommends that the conventional banks of Pakistan adjust their loan Loss Provision for income smoothing purpose which leads the negative impact, on profitability ratios return on assets (ROA) return on equity (ROE) and net profit margin (NPM). This study helps to comprehend all stake holders of banks concerning the manipulation of Loan Loss Provision and its impact on financial ratios expressly in high earning periods.

Keywords **—**Loan loss provision (LLP), Return on equity (ROE), Return on Assets (ROA), Variability, Income smoothing, net profit margin (NPM), Pakistan**.**

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1.INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The main objective of banks to collect deposits and advances loan to firms, government and individual to economic growth purpose. When banks are lending then the credit risk is rise when the borrower unable to pay the principle amount with interest due to unfavourable condition or business crises the set of a specific amount which going to be unrecovered in future considered as an expected loss on banks that's loss is known as loan loss provision and in this paper we explore that's the Loan Loss provisions (LLP) is used as a tool to manipulate income specially in high earning periods. Banks show high or low provisioning due to which the Net income increases or decreases and directly impacts on the profitability ratios, Taxes, Gross Domestic product (GDP) and economy of the country. Banks used Loan Loss Provisions (LLP) to the income smoothing purpose and to fulfil the minimum capital requirement. The main objective of Loan Loss Provisions (LLP) is to reduce the variability of net profit over time. Banks reduced the net profit through Loan Loss Provisions (LLP) by booking loss account specially in high earning periods and these funds are utilized in unfavourable situation or downsizing time According to the Accounting Framework only allows for provisioning for losses that have already been incurred as the date of financial statement. It does not address the concept of expected losses Loan Loss Provisions (LLP) plays an important role in bank stability and reliability by lending to individual, firms, governments and society. The banks supervisors and managers need to give attentions towards the rising loan loss provision in the balance sheet, the large amount of loan to have less chance of full recoveries with principle and interest therefore he suggests that the sufficient loans loss provisions considered as an expected loss (Luc & Giovanni, 2003)

Banks always attracts deposit and then reinvest those deposit to earn profit through loans and investments. Loans and securities are the tools of conventional banks to cater such future losses, Loan loss provisions are recognized by banks, has found that banks in Australia uses Loan Loss Provisions(LLP) for the purpose of capital management, signaling activities and also found that banks are also engaged in using Loan Loss Provisions(LLP) to accomplish earnings as well (ANANDARAJAN, McCARTHY, & HASAN, 2006). Loan loss provisions (LLP) for particular segment are reported in income statement time to time. Bank's stocks and future cash flows in Hong Kong, Malaysia and Singapore are positively related to loan loss provisions. They have further acknowledged that bank's management increases loan loss provision for the purpose of signalling favourable cash flows. The banks running across the world used the Loan Loss Provisions to the income smoothing purpose and not only for the credit risk but also sustain the variability of profit over the years (Eng & Nabar, 2007)

Loan Loss Provision(LLP) is used for the income smoothing purpose it is inclined by ownership concentration and regularity regime. Loan Loss Provisions (LLP) is used to cover the probable future losses and LLP does not any effect on credit fluctuation it's only used of management objective (Bouvatier, Lepetit, & Stobel, 2008). Loan Loss Provision (LLP) is used for income levelling and capital management with in the Spanish Banking Industry. According to their indications Loan Loss Provisions(LLP) supports income smoothing not for capital management by taking sample of 91 European Banks (Pérez, Salas, & Saurina, 2008)

It has been pragmatic by prior researches that Loan Loss Provisions (LLP) are utilized by banks for the purpose of income smoothing, further during relatively low income/profit specially crises time banks use loan loss provisions more extensively to smooth income upward using sample of 878 US banks holding companies for the period of 2001 to 2009.(ELSOOD, 2012)

The European banks use the Loan Loss Provision for income smoothening purpose when there are good years means that high earning periods they show more LLP so that can be used in heavy losses period same like when the people save water in rainy days and used that water at the water lack time by taking 179 banks as sample to find the LLP relationship with the earning management and this study concluded that the European banks used LLP when there is a good time which save the heavy loss period (Dorota, 2015).

(Majdi, Liang, & Quang, 2013) found that banks use discretionary loan loss provisions DLLP in case of capital management and earnings, additionally they were not able to discover and alteration in the practices implemented for the conservation of Discretionary provision of loan loss (DLLP) by Islamic Banks, Conventional Banks or Conventional banks with Islamic window. Banks play noteworthy role in the growth of an economy, solidity of economy and countries welfare. (Othman & Mersni, 2014) determined that banks having healthy financial situation are less likely be engaged in creating loan loss provisions whereas banks facing financial crisis are relatively more aggressive towards loan loss provisions

Earning management is reducing after the implementation of International Financial Reporting Standard (IFRS)and capital manage is not reduce in both pre and post IFRS regime by using a 491 sample from banks during the period of 1996 to 2006 by comparing of Euro Area (EA) Countries and all those countries where Euro is not used. According to them Loan Loss Provisions

(LLP) reflects the changes in banks quality, loan portfolio and earning management. Earning management is strongly supported for EA not in Non EA banks. EA banks used LLP to signal private information for outsiders whereas as EA banks do not (Leventis, Dimitropoulos, & Anandarajan, 2011). Loan Loss Provision (LLP)is the chief factor of the fluctuation of profit and it's also used to control the credit risk.it found that the relationship of Loan Loss Provisions(LLP) and future earning and return and no evidence found to support the relationship of Loan Loss Provisions(LLP)and future cash flow by using as the sample of by banks of Nigeria and Malaysia (Karimiyan, Nasserinia, Shafiee, & M., 2013)

Banks and financial institutions are the key organizations in financial intermediation and economic acceleration of a country. Conversion of deposit into fruitful investment is the major role of banks and financial organizations. So the major purpose of banks is to make best profits and to safeguard this, banks relay upon those who assure to pay the loan and interest timely, but these investments by conventional and Islamic banks as well, may or may not be collected completely, due to borrowers or investors failure to pay bank's obligations. For this purpose, banks mostly keep an allowance is kept in this regards for LLP (loan loss provision) to enchant or to diminish the loss that is to be occur in future. The provision is highlighted in income statement for each period as loan loss provision. Loan loss provisions that are generally measured as accruals are the major tools of used for treatment earnings in banking industry(Hajer, Khoutem, & Mouna, 2016).

This study explained that how LLP cooperates with macroeconomics, accounting, culture and institutional factors in an economy. The bankers and policy makers still not understand the relationship of LLP with income smoothing. The evidence found that the banks mangers used LLP to manipulate the income to receive bonus, to manage regularity capital requirement and future standpoint (Ozili, Bank Loan Loss Provisions Research A Review, 2017).

1.2 PROBLEM STATEMENT

The manipulation of Loan Loss Provision is the vital problem specially in high earning periods on which banks logged high provisioning due to which the net profit is waning which caused the negative impact on profitability ratios, return on assets, return on equity and net profit margin. When the banks recorded low provisioning and show high profit which attracts the investors for long term basis and also good sign for the shareholders and all stakeholders of bank. The main source of government revenue is the taxes when banks pay more taxes to government which is good sign for the country permanency and development. The manipulation of Loan Loss Provision (LLP) is the cause of the change in profitability ratios, High provisioning cause to diminished net profit resulted to pay low taxes to showing high provisioning it has negative impact on the economy of the government.

The major issue is that the banks book high provisions during the high earning periods to save from vast taxes due to which build a negative impact on all aspect on all profitability ratios ROA, ROE and NPM. Our study helps out in future for the shareholders of banks, stakeholders of banks, government as well as for all conventionalbanks running in Pakistan to understand the changes and impact arise due to change in Loan Loss provisions (LLP).

1.3 GAP ANALYSIS

This research assesses the impact of Loan Loss Provision in the profitability ratios, ROA, ROE and NPM and economic development of the country and it also supports to comprehend all shareholders, stake holders and government concerning the effect of Loan Loss Provision especially in high earning and crises periods. Tax is the main source of government revenue and higher tax higher revenue, when there is high provisioning to save high tax purpose which diminished the tax margin which is negative sign for the country and its also reduce the confidence of all stake holders of banks which is not good sign for all banks. No such research was conducted on Pakistani Banking Sector to assess the impact of loan loss provision. Specifically, we covered the negative impact of Loan Loss Provisions (LLP) on profitability ratios, ROA, ROE, and NPM. Hence, this is a novel attempt as no such research was carried out in Pakistani context.

1.4 RESEARCH OBJECTIVES

This study is the first to inspect that the impact of Loan Loss Provision on profitability ratios as ***well*** as for the income smoothing purpose. Loan Loss Provision is used as a manipulation tool over the time especially in high earning periods which diminished in profitability ratios. For this purpose, data of 20 conventional banks was taken for the period of 2006 to 2018.

1.5 SIGNIFICANCE OF THE STUDY

This research will significantly help out the investors, as they would able to recognize the impact of Loan Loss Provisions on ROA, ROE and NPM. They also they would able to find out how banks manipulate their earnings and show low and high return by using Loan Loss Provision as a manipulating tool particularly in great earning periods Our study would also be helpful for the government to easily find out how banks reduce the taxes by using loan loss is as a manipulation tool, the major source of government income is the taxes which is reduces by banks during the high earnings period and it’s also not good sign for all shareholders and economy of the country. If we reduce the high provisioning which has good and positive impact over all stake holders as well as for the economy of the country

1.6OUTLINE OF THE STUDY

The study is divided in several sections, the first section discusses the previous studies on the Loan

Loss Provision(LLP), the second section describe the data and methodology, the third section states the empirical result and the last section is conclusion

2. LITERATURE REVIEW

There is a lot of literature available for the use of loan loss provisions (LLP) by the banks, various researches have been conducted in the perspective of the use of Loan Loss Provisions (LLP) for the reason of probability, earning management, income smoothing and signalling activities. In this paper found several observations regarding the Loan Loss Provision and identify several issues of ethical and social, motivations and constraint to income smoothing and also mentioned the possible future direction in this paper. Many countries have provisioning system for the banks but the provisioning policies and experiment can be going to be wrong however many countries adopt this system of provisioning and more countries are going to adopt near future if the cost of provisioning system is greater than the its intended benefits then the Loan Loss Provision system may not have implemented in some countries.

(Ozili, Bank Loan Loss Provisions Research: A Review, 2017) Explained that how LLP interacts with macroeconomics, accounting, culture and institutional factors in an economy. The bankers and policy makers still not understand the relationship of LLP with income smoothing. The evidence found that the banks mangers used LLP to manipulate the income to receive bonus, to manage regularity capital requirement and future perspective

This paper concluded that the Loan Loss Provision LLP is used for income smoothing purpose in Albanian Banks. This study says that LLP has significantly positive relationship with income before interest, tax and provisional does not favourable for the capital management according to this study. LLP is used for income smoothing to take advantage in high profit period and this paper does not support for the capital management and signallingbehaviour(ELONA, 2016). (Łukasz & Natasha, 2015) Examined that the Loan Loss Provision is used during in crises time in Ukraine Banking industry.

(Tahir, 2015) Examine that the Loan Loss Provision has positive relationship with the profitability and performance of banks working in Pakistan. According to him as the Loan Loss Provision (LLP) decreased the profitability increased and as the LLP increased the profitability decreased. LLP is the important tool which is effected in the profitability of banks by having positive relationship with performance of banks

(Skała, 2015) investigates that the European banks use the Loan Loss Provision for income smoothening purpose when there are good years means that high earning periods they show more

LLP so that can be used in heavy losses period same like when the people save water in rainy days and used that water at the water lack time by taking 179 banks as sample to find the LLP relationship with the earning management and this study concluded that the European banks used LLP when there is a good time which save the heavy loss period

(Domenico & Iftekhar, 2015) investigates that the relationship of Loan Loss Provision with earning management, capital management and signal management of European banks and Non-European concerning future banks profit and investors' confidence. According to this study the change in LLP reflects on both group non-European Banks and European banks. LLP used to the income smoothing purpose LLP is used to managing the income in European banks and also find that the higher protection of creditors reduces to the incentive to smooth earning of European banks however the non-European focus on the stability of profit over the years so can attract the investors which conveys the good message to the out sider or the investors regarding the future performance and future market

Investigated the use of (DLLP) discretionary loan loss provisions during financial crisis in Chinese banking industry and tested the difference between listed banks and non-listed intermediaries in use of provisions for loan loss (LLP) for managing capital and income smoothing, it was found that banks in china are engaged in practices of income smoothing but relatively not engaged in practices of capital management, whereas it was also found that banks are not as much, to be involved in espousal of practices of income smoothing, that are listed comparatively to those that are not listed. (Domenico, Douglas, Angela, & Igor, 2014)

(Dennis & Taisier, 2014) tested in their research, for banks in Middle East and North African region the determinants of allowance for loan losses and (LLP) loan loss provisions and tested (LLP) provisions for loan loss and allowance for loan losses in framework of managing earning, managing capital and signaling, through the sample of 75 banks for the period of 2000-2008 found that banks were engaged in income smoothing practices and also found that banks also use (LLP) provisions for loan loss and allowance of loan loss ALL to provide signals about future earnings of banks

The study concluded that there is positive relationship between Loan Loss Provision (LLP) and future earning and return as the LLP increased in the result stock prices also increased which is the good sign for the investors and it's also noted in this study when there was financial crises in Malaysia which gravely effected all sectors but not effected Loan Loss Provision (LLP) and when LLP increase or decrease which is positive or negative sign for investors (Karimiyan, Nasserinia, & Shafiee, 2013)

(Gunther & Zoltannovotny, 2011) have tested the impact of change in procedure, measurements and implications of (LLP) loan loss provisions on practices of income smoothing by EU banks after mandatory adoption of IFRS and found that under IAS-39, recognition of incurred losses have concentrated the application of smoothing income through (LLP) provisions for loan loss and further identified that implication of incurred losses is less timely as compared to loan loss provisions as it is delayed recognition of future losses

(ZHANGXiaohui, JIZhihong, & CUIYong, 2009) found that People's Bank of china in recent years have continuously improved monetary policy to limit the excess cash holdings by banking sector and found optimal reserve rate to be 23% in China and concluded that if the reserve rate is to be raised above 23% then deposit, interest rates, interest margins are also subjected to be adjust accordingly by monetary authority

The Study on Spanish banks explained that the Loan Loss Provision LLP has positive relationship with earning and Loan Loss Provision use to manage earing of Spanish Banks and there is no evidence found in practically with the capital management (Salas-Fumá, Pérez, Vicente, & Jesús, 2008)

(Eng & Nabar, 2007) Explained that the Loan Loss Provision (LLP) has a positive relationship with the stock return and future cash flow of Singapore, Malaysia and Hong Kong Banks and the Bid Prices of stock up when the unexpected loans are positive. According to him the Loan Loss Provision (LLP) and the expected return and future cash flows are lower significantly in crisis year as compare to the non-crisis period

(GHOSH, 2007) Shown that the Loan Loss Provision LLP has positive relationship with the earning and capital management of Indian Banking sector. He found that in his study found that the LLP favours for both earnings and capital management. This paper also explained that the LLP play an important role in the minimum capital requirement. (Mustafa, Ansari, & Younis, 2012) Also contended that banking profitability can easily manipulate through Loan Loss Provision. Low provisioning caused high profitability which is good sign for banks

3. CONCEPTUAL FRAMEWORK:

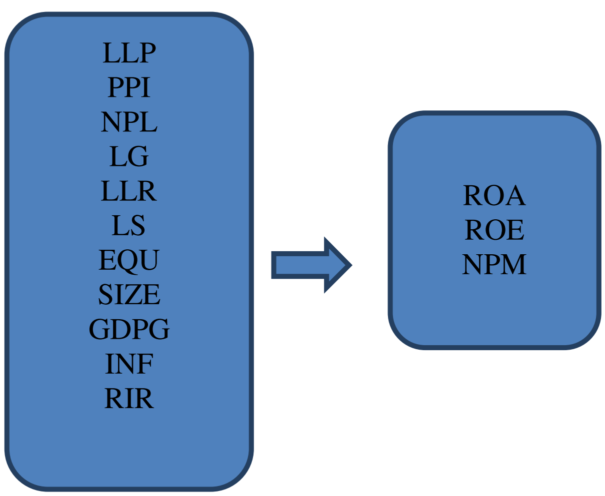
Agency theory is the explanation of relationship between principals and agents in business, therefore problems occurs between principals and agents that is shareholders and the executives of the company. Agency theory is related to identifying and solving such problems that exist between principal and agents. The system is organized in a way that the shareholders who are principally the owners, delegates the authority of running the business to company management formally agents. In banking industry, the problem arose when the bank's financials are misstated by the procedures of smoothing income through LLP provisions for loan loss by the administration and that is the only source of information available for the principals that is shareholders. Furthermore, banks also signal the same manipulated information to the investors as well. (Selçuk, Süheyla, & AEceUngan, 2012)

(Lambert, 1985)Draws on agency theory to explain why managers work to smooth income. Since shareholders set managerial compensation as a function of output, managers expend extra effort to boost production—thereby smoothing income—when it is low. In such a case, income smoothing is effectively a goal of both shareholders and managers. Similarly, because of income-smoothing firms' higher valuations, investors expect these practices; their absence may therefore be viewed negatively in the capital market (Thakor, 2003)this context is especially important given the role of managerial discretion in decisions on loan-loss reserves. Despite existing regulations on reserve levels, it is assumed that bank managers possess some discretion over annual LLP (1996, Metzemakers2005, 2008, & 2012).) Total annual provisions may therefore be viewed as the sum of non-discretionary and discretionary provisions. Non-discretionary reserves reflect the perceived risk of a bank's loan portfolio; such risk can be peroxide by loan-to-assets ratios and loan growth (González & 2014))or non-performing loans (Liu, 2006)Discretionary reserves follow managerial judgment and are not linked to changes in underlying bank risk. Hence they may be viewed as a form of opportunistic behaviour of managers that can obscure bank fundamentals (Williams, 2012)prime example is when managers decide to 'take a bath', deliberately reducing already-low earnings (Healy, 1985)When existing losses prevent managers from taking bonuses in the present, they may make extra reserves to improve future bonus prospects. 'Taking a bath' behaviour has been identified on the part of incoming CEOs who wish to decrease benchmark earnings used for future performance evaluations (Guan, 2005)It has also been shown to coexist with earnings smoothing in a theoretical model of financial reporting, in which managers elect to under-report already weak earnings (KirschenheiterMelumad, 2002)

However, discretionary decisions need not be detrimental to financial institutions. (Bornemannal, 2014)Are among the few to have analysed the financial effects of managerial discretion in reserve making. Using German bank data, they demonstrate that managerial discretion in building and using general risk reserves may increase bank stability. Regardless, (Pérezetal, 2011)show that the introduction of transparent income smoothing via Spanish regulations in 2000 has led to an abolition of discretionary non-transparent smoothing. The authors advocate implementing regulatory smoothing, which allows managers to smooth in a transparent manner. In such a case, smoothing for opportunistic reasons can be largely eliminated.

4. THE MODEL

Independent variables	**Dependent variables**



The Loan Loss Provision(LLP), Pre provision income (PPI), Non-performing loan (NPL),Loan share (LS), Equity (EQU), Log of total assets (SIZE), Gross domestic product growth, inflation (INF)and Real Interest (RIR) are the independent variables and Return on assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), are the dependent variables and these variables are depended on the Loan Loss Provision, and others variables when any manipulation is occurring in Loan Loss Provision and others then its impact on all dependent variables. In our research we find that the increase in Loan Loss Provision has significantly negative impact on all dependent variables.LLP is used for income smoothing and earning management purpose

4.1 Loan Loss Provision

Loan Loss provision has indirect relation with Profitability ratios like vice versa. When LLP increases the profitability ratios decrease as when LLP increases than the profitability ratios decrease because reason behind that due to increase in Loan Loss Provision the net income is decreased which lead the negative impact the profitability ratios. The formula of ROA is net profit divided by the total Assets of bank same as Net Profit divided by Total Equity and NPM formula is net profit divided by the total revenue or sales. So the LLP increased which decrease the profitability ratios and decreased LLP which increase the profitability ratios.

4.2 Pre-Provision Income

Pre- Provision income is the income before of the Loan Loss Provision.Pre-provison income has direct relation with the Profitability ratios as pre-provision income increase which also increased the profitability ratio as pre-provision income decrease lead the negative impact on profitability ratios

4.3 Non –Performing Loan

Non-performing loans are those loans which are not performed during the particular year. Normally non-performing Loan is the loan which the borrower is default and going to made any schedule payments for the required time period. Normally commercial loans are measured as none performing after 90 days which has indirect impact on profitability ratios as increase non-performing loan decrease the profitability ratios as decrease non-performing loan increase the profitability ratios.

4.4 Loan Growth

Loan growth is the total growth of annual loan. Normally loan growth has positive impact on the profitability whether long term or short term loans. When loan increases lead the positive impact and decrease the negative impact on profitability ratios

4.5 Loan Loss Reserve

Loan Loss Reserve reduces the Loan amount when some portion of the loan are not repaid actually this is recorded as expense so loan Loss reserve impact on the profitability ratio is negative when it increases then decrease the profitability ratios and when it decreases than the profitability ratios increase

4.6 Loan Share

Loan share is the total loan to total assets in year normally loan share has positive impact on the profitability. When loan share increases lead the positive impact and decrease the negative impact on profitability ratios

4.7 Equity

Equity is the share of bank capital of total assets in year t -1. The equity has positive relation with the profitability ratio as equity increases profitability also increase as equity decreases profitability also decrease vice versa

4.8 Size

Size is the log of total assts. The size has positive relation with the profitability ratio as size increases profitability also increase as size decreases profitability also decrease vice versa

4.9 GDPG

Gross domestic product is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health then there is positive impact on profitability ration when GDPG is not well then everything growth is usually low so its negative impact on profitability ratios there is direct relation with profitability ratio.

4.10 Inflation

Inflation is the year end price. When the economic growth is t=strong then the inflation rate is moderate and higher inflation higher economic growth which leads the positive impact on the profitability.

4.11 Real Interest Rate.

Real Interest Rate (RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate. The profitability and interest rate connected higher interest rate higher profitability

and lower interest rate lower profitability.

Table. 5.2

Variable Names	**Description**
LLP	Loan Loss Provision (LLP) also known as uncollectable loans when there are less chances to recover the amount its books as Loan loss provision. The set of a definite amount which going to be unrecovered in future considered as an expected loss on banks that's loss is known as loan loss provision.
PPI	Pre Provision Income(PPI)the income which is recorded before taking of provision or is the income before provision in year t scaled by total assets in year t
NPL	Non-performing Loans (NPL) are those loans which are not performed during the year or are those which are not perform to total loans in year t
LG	Loan Growth (LG) is the total growth of annual loan. Loan loss reserve is the relation of loan loss reserves on total assets side to total loan in year t -1.
LLR	Loan Loss Reserve(LLR) is the relation of loan loss

	reserves on total assets side to total loan in year t -1
LS	Loan Share (LS)is the total loan to total assets in year t
EQU	Equity is the share of bank capital of total assets in year t -1
SIZE	Size is the log of total assts.
GDPG	Gross domestic product(GDPG)is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health
INL	Inflation is the year end price
RIR	Real Interest Rate (RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate.
ROA	Return on Assets (ROA) indicates that how bank managers well managed assets to generate high earnings and how company profit relative to its total assets.
ROE	Return on equity (ROE) measures the return on bank equity send-off the liabilities.
NPM	Net profit margin(NPM) measures how much profit/income generated from the percentage of revenue

5.3 METHODOLOGY

In this study we used panel data of 20 well known commercial banks of Pakistan. Data of 20 commercial banks have collected from the Annual Reports from the web site of State Bank of Pakistan for the period of 2006-2018.There are 260 observations in our study. In our research we find some factors that influence on the profitability ratios. The Loan Loss Provision(LLP), Pre provision income (PPI), Non-performing loan (NPL), Loan share(LS), Equity(EQU), Log of total assets(SIZE), Gross domestic product growth, inflation(INF)and Real Interest(RIR) are the independent variables and Return on assets (ROA), Return on Equity (ROE) and Net Profit Margin(NPM) are Dependent variables.

Loan Loss Provision also known as uncollectable loans when there are less chances to recover the amount its books as Loan loss provision. The set of a definite amount which going to be unrecovered in future considered as an expected loss on banks that's loss is known as loan loss provision. Real Interest Rate (RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate. Gross domestic product is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health. Return on Assets (ROA) indicates that how bank managers well managed assets to generate high earnings and how company profit relative to its total assets. Return on equity (ROE) measures the return on bank equity send-off the liabilities.Net profit margin (NPM) measures how much profit/income generated from the percentage of revenue. Loan Loss provision(LLP)is the net provision during year t by total assets in year t-1 while pre provision income is the income before provision in year t scaled by total assets in year t-1.Non performing loans are those which are not perform to total loans in year t. loan growth is the total growth of annual loan .loan loss reserve is the relation of loan loss reserves on total assets side to total loan in year t -1.loan share is the total loan to total assets in year t .Equity is the share of bank capital of total assets in year t -1 .Size is the log of total assts. Inflation is the year end price. Gross domestic product is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health. Real Interest Rate (RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate.

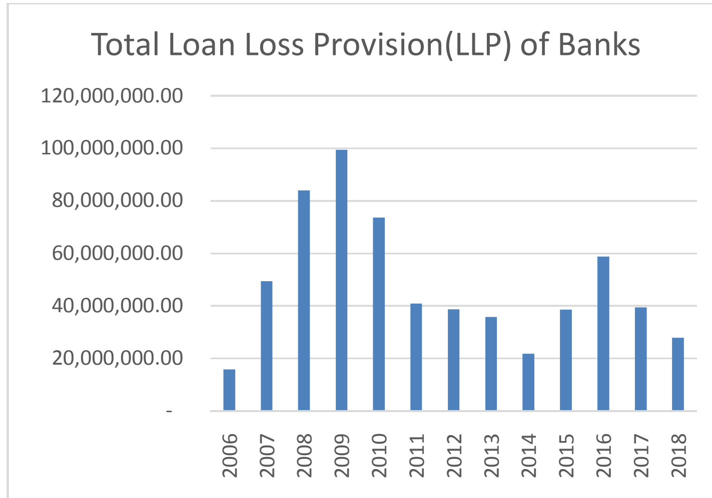
5.4 TREND ANALYSIS

Year	Total LLP of Banks
2006	15,813,358.00
2007	49,423,727.00
2008	83,956,733.00
2009	99,447,278.00

2010	73,519,283.00
2011	40,783,809.00
2012	38,698,187.00
2013	35,760,082.00
2014	21,746,989.00
2015	38,529,833.00
2016	58,745,554.00
2017	39,428,409.00
2018	27,804,055.00

Explanation: The above table shows that the values of Loan Loss Provision (LLP). During the periods of 13 years from 2006 to 2018.The Maximum LLP recorded during the period of 2009 amounting Rs.99, 447, 278.00 and the Minimum LLP recorded during the period of 2006 amounting Rs.15, 813,358.00 The 2nd highest Loan provision recorded by during the year of 2008 amounting Rs. 83,956,733.00. The 3rd highest LLP recorded during the period of 2010 total amounting Rs. 73,519,283.00 The 4rth highest LLP recorded during the period of 2016 total amounting Rs. 58,745,554.00. The 5rth highest recorded during the period of 2007 total amounting Rs. 49,423,727.00. During the period of 2017,2011,2012,2015 and 2018 are as 39,428,409.00, 40,783,809.00, 38,698,187.00, 38,529,833.00 and 27,804,055.00

5.5 GRAPH



Explanation: The above graph shows that on X-axis Years and on Y-axis shows the values of Loan Loss Provision (LLP). During the periods of 13 years from 2006 to 2018.The Maximum LLP recorded during the period of 2009 and the Minimum LLP recorded during the period of 2006.The 2nd highest Loan provision recorded by during the year of 2008 amounting Rs. 83,956,733.00. The 3rd highest LLP recorded during the period of 2010 total amounting Rs. 73,519,283.00 The 4rth highest LLP recorded during the period of 2016 total amounting Rs. 58,745,554.00. The 5rth highest recorded during the period of 2007 total amounting Rs. 49,423,727.00. During the period of 2017,2011,2012,2015 and 2018 are as

39,428,409.00, 40,783,809.00, 38,698,187.00, 38,529,833.00 and 27,804,055.00.

Table.1DESCRIPTIVE STATISTICS

	c	RESID	ROA	ROE	NPM	LLP	PPI	NPL	LG	LLR	LS	EQU	SIZE	GDPG	INF	RIR
Mean	1.000	6.84E-17	0.007	0.026	0.07 1642	2203808	15522251	20032214	1175471	16645834	0.466	340860 12	8.390	4.161	8.730	2.382
Median	1.000	0.001	0.009	0.144	0.133	802491	77349 13.	1077	9211784	8611776	0.47277	16419855	8.449	4.700	7.920	4.050
Maximum	1.000	0.036	0.041	2.343	0.658	23804767	79317711	1.33E•08	5.38E•08	1.33E•08	0.824	1.64E•08	9.459	6.200	19.600	8.320
Minimum	1.000	0.057	0.072	14.740	6.273	2835617	-39	0.000	-1.05E•09	0.000	0.0	6976480	6.389	1.600	2.900	6.770
Std. Dev.	0.000	0.0	0.0 16889	0.9976 17	0.454	3902228	17643911	24807026	1.33E•08	21379946	0.120	38030850	0.545	1.498	4.486	4.743
Skewness	NA	1.045	2.116	12.786	10.797	2.669	1.500	2.242	4.653	2.6660 16	0.107	1.607	0.549	0.418	0.829	0.770
Kurtosis	NA	6.529	9.147	188.072	148.897	11.417	4.693	8.706	34.325	11.667	3.391	4.756	3.299	1.868	3.293	2.209
Jarque-Bera	NA	181.502	603.356	375233.6	235647.9	1072.095	128.535	570.49 17	11568.5	1121.708	2.150	145.361	14.025	21.460	30.683	32.458
Prooability	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.34	0.000	0.00090 1	0.000	0.000	0.000
Sum	260	1.80E-14	1.731	6.798	18.627	5.71E•08	4.04E•09	5.21E•09	-3.06E•08	4.33E•09	121.054	8.86E•09	2181.407	1081.800	2269.800	619.200
Sum Sq. Dev.	0.000	0.044	0.074	255.776	53.306	3.93E•15	8.06E•16	1.59E•17	4.60E•18	1.18E•17	3.739	3.75E•17	76.831	581.162	5211.832	5827.103
Observations	260	260	260	260	260	259	260	260	260	260	260	260	260	260	260	260

The result of descriptive statistics shows that the mean of the ROA is 0.007 while the mean of ROE is 0. 026. The mean of NPM is 0.071642 and the mean of LLP is 2203808.The mean of PPL is 15522251 while the mean of NPL 20032214.Twenty Commercial banks of Pakistan LG mean is 1175471 and the mean of LLR is 16645834. The mean of LS is 0.466 while the mean of Equity is 34086012.The mean of Size of banks is 8.390 while the mean of GDP Growth is 4. 161. The mean of INF is 8.730 while the mean of RIR is 2.382

When we check the median of ROA, ROE, NPM, LLP, PPL, NPL, LG, Equity, Size, GDPG, INF and RIR are herewith according to the series.0.009,0.144,0.133,802491,77349.13,1077,92 11784,8611776,0.47277,16419855,8.449,4.700,7.9 20 and 4.050

The Maximum and Minimum of ROA of twenty commercial banks of Pakistan 0.041 and 0.072 while the Maximum and Minimum of ROE 2.343 and 14.740

The Maximum and Minimum of NPM 0.658 and 6.273 while the Maximum and Minimum of LLP 23804767 and 2835617. The Maximum and Minimum of PPL 79317711 and -39 while Maximum and Minimum of NPL 1.333 and 0.000

The Maximum and Minimum of LG 5.38 and -1.05 while the Maximum and Minimum of LLR 1.33 and 0.000. The Maximum and Minimum of LS 0.824 and 0.0. The Maximum and Minimum of Equity 1.64 and 6976480. The Maximum and Minimum of Size 9.459 and 6.389 while the Maximum and Minimum of GDPG 6.200 and 1.600. The Maximum and Minimum of INF19.60 and 2.900 while the Maximum and Minimum of RIR 8.320 and 6.770.

Return on Assets (ROA) indicates that how bank managers well managed assets to generate high earnings and how company profit relative to its total assets. Return on equity (ROE) measures the return on bank equity sendoff the liabilities.Net profit margin (NPM) measures how much profit/income generated from the percentage of revenue. Loan Loss provision(LLP)is the net provision during year t by total assets in year t-1 while pre provision income is the income before provision in year t scaled by total assets in year t-1.Non performing loans are those which are not perform to total loans in year t. loan growth is the total growth of annual loan .loan loss reserve is the relation of loan loss reserves on total assets side to total loan in year t -1.loan share is the total loan to total assets in year t .Equity is the share of bank capital of total assets in year t -1 .Size is the log of total assts. Inflation is the year end price. Gross domestic product is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health.

Real Interest Rate(RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate.

the return on bank equity send off the liabilities.Net profit

Table.2 CORRELATION

	c	RESID	ROA	ROE	NPM	LLP	PPI	NPL	LG	LLR	LS	EQU	SIZE	GDPG	INF	RIR
c	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RESID	NA	1														
ROA	NA	0.7724	1													
ROE	NA	0.3545	0.4356	1												
NPM	NA	0.4796	0.6287	0.2405	1											
LLP	NA	0.00 1181	0.1650	0.1220	0.0486	1										
PPI	NA	0.00 1738	0.3801	0.1360	0.2305	0.3691	1									
NPL	NA	0.00 1477	0.0759	0.0336	0.0895	0.4530	0.70 1191	1								
LG	NA	-4.21E- 05	0.0959	0.0172	0.207 128	0.1466	0.2851	0.2700	1							
LLR	NA	0.00 1389	0.1441	0.0503	0.1201	0.4680	0.7833	0.9439	0.2759	1						
LS	NA	0.0003	0.2459	0.1548	0.0591	0.3001	0.2209	-0.0160 12	-0.0 14076	0.0840	1					
EQU	NA	0.00 1455	0.3481	0.1235	0.2210	0.3253	0.9600	0.6983	0.2864	0.7937	0.2570	1				
SIZE	NA	0.0036	0.4652	0.1678	0.4118	0.3210	0.8063	0.6420 13	0.3633	0.6817	0.0674	0.7570	1			
GDPG	NA	0.0036	0.1904	0.1167	0.0542	0.2658	0.1320	0.0820	0.1522	0.1083	-0.2773 12	0.1703	0.1898	1		
INF	NA	0.0006	0.1930	0.1939	0.1111	0.2485	0.1719	0.1457	0.0255	0.1598	0.309 199	0.2161	-0.27 1811	-0.726 131	1	
RIR	NA	0.0002	0.1152	0.1267	0.1625	0.1329	0.1752	0.1981	0.3396	0.1979	0.3130	0.2228	0.3076	0.2849	0.6790	1

Return on Assets (ROA) indicates that how bank bank managers well managed assets to generate high earnings and how company profit relative to its total assets. Return on equity (ROE) measures margin (NPM) measures how much profit/income generated from the percentage of revenue. Loan Loss provision(LLP)is the net provision during year t by total assets in year t-1 while pre provision income is the income before provision in year t scaled by total assets in year t-1.Non performing loans are those which are not perform to total loans in year t. loan growth is the total growth of annual loan .loan loss reserve is the relation of loan loss reserves on total assets side to total loan in year t -1.loan share is the total loan to total assets in year t .Equity is the share of bank capital of total assets in year t -1 .Size is the log of total assts. Inflation is the year end price. Gross domestic product is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health.

Real Interest Rate (RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate the correlation between variables. It's observed that ROA correlation with ROE is moderate positive correlation while the ROA correlation with the NPM is strong positive correlation. The ROA correlation with the LLP is very weak positive while the ROA correlation with the PPL is weak positive. The correlation of ROA with NPL, LG and LLR are very weak positive. ROA has weak positive correlation with LS and Equity. ROA correlation with size of bank is moderate positive correlation. The correlation of ROA with GDPG, INF and RIR are very weak positive. It's observed that the ROE correlation with the NPM is weak positive correlation while reaming all variables have very weak positive correlation with ROE. The NPM correlation with the LLP is very weak positive while the NPM correlation with the PPL is weak positive. The correlation of NPM with NPL is very weak while, LG has weak positive correlation. While reaming all variables have very weak positive correlation with NPM

The LLP correlation with the PPL and NPL are weak positive while LLP has very weak correlation with LG. LLP correlation with LLR is moderate positive while the correlation of LLP with LS, EQU and Size are weak positive. LLP has weak positive correlation with GDPG and INF while very weak correlation with RIR. The PPL correlation with NPL is strong positive while PPL correlation with LG is weak positive. PPL correlation with LLR is strong positive while the correlation of PPL with LS is weak positive. PPL has very strong positive correlation with equity and size very weak correlation with GDPG, INF and RIR. The NPL correlation with LG is weak positive while NPL correlation with LLR is very strong positive. NPL correlation with LS is very negative while the correlation of NPL with equity and size are strong positive. NPL has very weak positive correlation with GDPG, INF and RIR are very weak The LG correlation with LLR is weak positive while LG correlation with LS is very weak negative. LG correlation with equity and size are weak positive while the correlation of GDPG and INF are very weak positive. LG has weak positive correlation with RIR. The LLR correlation with LS is very weak positive while LLR correlation with equity and size are strong positive. LLR correlation with GDPG, INF and RIR are very weak positive. The LS correlation with equity is weak positive while LS correlation with Size is very positive. LS correlation with GDPG is weak negative while weak positive correlation with INF and RIR. The equity correlation with size is strong positive while equity correlation with GDPG is very weak positive. Equity correlation with INF and RIR are weak positive. The size correlation with GDPG is very weak positive. Size correlation with INF is weak negative while correlation with RIR is weak positive. The GDPG correlation with INF is very weak negative while correlation with RIR is weak positive. The INF correlation with RIR is strong positive.

5.6REGRESSION METHODOLOGY

For the testing we used multiple regression, the data have taken from the 20 well known banks of Pakistan from the web site of the State Bank of Pakistan (SBP) from 2006 to 2018.The equation which is tested and can be mentioned as below

Equation 01. $ROA = \alpha + \beta_1 LLP + \beta_2 PPL + \beta_3 NPL + \beta_4 LG + \beta_5 LLR + \beta_6 LS + \beta_7 EQU + \beta_8 SIZE + \beta_9 GDPG + \beta_{10} INF + \beta_{11} RIR + \dot{\varepsilon}$

Equation 02. $ROE = \alpha + \beta_1 LLP + \beta_2 PPL + \beta_3 NPL + \beta_4 LG + \beta_5 LLR + \beta_6 LS + \beta_7 EQU + \beta_8 SIZE + \beta_9 GDPG + \beta_{10} INF + \beta_{11} RIR + \dot{\varepsilon}$

Equation 03. $NPM = \alpha + \beta_1 LLP + \beta_2 PPL + \beta_3 NPL + \beta_4 LG + \beta_5 LLR + \beta_6 LS + \beta_7 EQU + \beta_8 SIZE + \beta_9 GDPG + \beta_{10} INF + \beta_{11} RIR + \dot{\varepsilon}$

Where,

LLP is loan loss provisions by banks, PPL is pre provision income before provision NPL is Non performing loans are those which are not perform to total loans in year t. LG is loan growth is the total growth of annual loan .LLR is loan loss reserve is the relation of loan loss reserves on total assets side to total loan in year t -1.LS is loan share is the total loan to total assets in year t .Equity is the share of bank capital of total assets in year t -1 .Size is the log of total assts. Inflation is the year end price. Gross domestic product is the total monetary wroth of total finish goods or services or total production within the county is called GDP.GDPG measures the country economic health. Real Interest Rate (RIR) adjust to remove the effects of inflation to reflect the real cost of funds. When we subtract Nominal Interest rate from the inflation gets Real interest rate.

6. RESULT

6.1

Table.3 Polled Regression Result

Dependent Variable: ROA

Method: Least Squares Date: 12/21/ 19 Time: 20:58 Sample: 1260

Included observations: 260

Variable	Coefficient	Std.Error	t-Statistic	Prob.
LLP	-1.22E-09	2.78E-10	-4.381341	0
PPI	2.36E-10	1.99E-10	1.188144	0.2359
NPL	-2.65E-10	1.07E-10	-2.479	0.0138
LG	-3.15E-12	7.45E-12	-0.423 130	0.6726
LLR	8.52E-11	1.46E-10	0.584483	0.5594
LS	-0.0177	0.008614	-2.05441	0.041
EQU	-4.13E-11	8.62E-11	-0.478585	0.6327
SIZE	0.02009	0.002972	6.760319	0
GDPG	-0.00049	0.000915	-0.538058	0.591
INF	-0.00021	0.00039	-0.540598	0.5893
RIR	-0.00051	0.000299	-1.692744	0.0918
C	-0.14428	0.0238	-6.062353	0
R-squared		0.405881	Mean dependent var	0.006683
Adjusted R-squared		0.379422	S.D.dependent var	0.016917
S.E. of regression		0.013326	Akaike info aiterion	-5.75291
Sum squared resid		0.043866	Schwarz criterion	-5.58811
Log likelihood		757.0017	Hannan-Quinn criter.	-5.68665
F-statistic		15.340 12	Durbin-Watson stat	0.859022
Prob(F-statistic)		0		

R-squared is measured 0.405881 which means that it is approximately equal 1 and half quarter out of 4 quarter that the ROA of 20 Commercial banks of Pakistan is measure the 11 independent variables. F-statistic 15.34012 shows that the model is not very bad Durbin-Watson test shows that a result of approximately equal to 01 its means that there is positive autocorrelation it means that variables are dependent from each other's.so the result recommends that the Null hypothesis can be rejected

The significance of each independent individual variable.it can be detected that the p-value of all independent variables are more than 0.05 except the Size, LS, NPL and LLP so overall it concluded that we cannot rejected the null hypothesis The 01% increases in Loan Loss Provisions 0.0000000122 decreases ROA when 01% increase in pre provision income 0.00000000236 increases in ROA when the 01% increase in non-performing loan 0.00000000265 decreases in ROA when the 01% increase in loan growth 0.0000000000315 decreases in ROA.When the 01% increase in loan loss reserve 0.000000000852 increases in ROA When the 01% increase in loan share 0.0177 decrease in ROA When the 01% increase in equity 0.000000000413 decreases in ROA When the 01% increase in size 0.020009 increases in ROA When the 01% increase in GDPG 0.00049 decreases in ROA When the 01% increase in inflation 0.00021 decreases in ROA When the 01% increase in real interest rate 0.000051 decreases in ROA

6.2

Table: 04 Polled Regression Result

Dependent Variable: ROE

Method: Least Squares Date: 12/21/ 19 Time: 20:58 Sample: 1260

Included observations: 260

Variable	Coefficient	Std.Error	t-Statistic	Prob.
LLP	-3.45E-08	2.03E-08	-1.695579	0.0912
PPI	1.07E-08	1.45E-08	0.740697	0.4596
NPL	-2.52E-09	7.81E-09	-0.322907	0.747
LG	-2.22E-10	5.44E-10	-0.407856	0.6837
LLR	-3.12E-10	1.06E-08	-0.029347	0.9766
LS	-0.718115	0.629114	-1.14147	0.2548
EOU	-3.74E-09	6.29E-09	-0.594079	0.553
SIZE	0.372737	0.218127	1.708806	0.0887
GDPG	-0.087863	0.067341	-1.304745	0.1932
INF	-0.053237	0.028565	-1.863675	0.0636
RIR	-0.017585	0.02182	-0.805888	0.4211
C	-1.803566	1.753432	-1.028592	0.3047
R-squared	0.048741		Mean dependent var	0.026347
Adjusted R-squared	0.973001		S.D. dependent var	0.997617
S.E.of regression	232.8956		Akaike info criterion	2.828531
Sum squared resid	-352.8805		Schwarz criterion	2.993785
Log likelihood	2.197118		Hannan-Quinn criter.	2.89498
F-statistic	0.015162		Durbin-Watson stat	1.910335
Prob(F-statistic)				

R-squared is measured 0.048741 which means that it is 0.048741 quarter out of 4 quarter that the ROE of 20 Commercial banks of Pakistan is measure the 11 independent variables. F-statistic 0.015162 shows that the model is not very bad Durbin-Watson test shows that a result of 1.910335 its means that there is positive autocorrelation it means that variables are dependent from each other's.so the result recommends that the Null hypothesis can be rejected

The significance of each independent individual variable.it can be detected that the p-value of all independent variables are more than 0.05 so overall it concluded that we cannot rejected the null hypothesis The 01% increases in Loan Loss Provisions 0.000000345 decreases ROE when 01% increase in pre provision income 0.000000107 increases in ROE when the 01% increase in non-performing loan 0.0000000107 decreases in ROE when the 01% increase in loan growth 0.00000000222 decreases in ROE. When the 01% increase in loan loss reserve 0.00000000312 decreases in ROE When the 01% increase in loan share 0.718115 decrease in ROE When the 01% increase in equity 0.0000000374 decreases in ROE When the 01% increase in size 0.372737 increases in ROE When the 01% increase in GDPG 0.087863 decreases in ROE When the 01% increase in inflation 0.053237 decreases in ROE When the 01% increase in real interest rate 0.017585 decreases in ROE

6.3

Table05 Polled Regression Result

Dependent Variable: NPM

Method: Least Squares Date: 12/21/ 19 Time: 20:58 Sample: 1260

Included observations: 260

Variable	Coefficient	Std.Error	t-Statistic	Prob.
LLP	-2.46E-08	8.27E-09	-2.967054	0.0033
PPI	-6.73E-09	5.91E-09	-1.139172	0.2557
NPL	-5.34E-09	3.18E-09	-1.678329	0.0945
LG	1.69E-10	2.22E- O	0.76321	0.4461
LLR	1.79E-09	4.34E-09	0.413124	0.6799
LS	0.594124	0.256281	2.31825	0.0213
EQU	2.55E-09	2.56E-09	0.99535	0.3205
SIZE	0.55309	0.0884H	6.255502	0
GDPG	-0.015065	0.027222	-0.553409	0.5805
INF	0.004094	0.011603	0.352795	0.7245
RIR	0.004445	0.008891	0.499961	0.6175
C	-4.68259	0.708084	-6.613044	0
R-squared	0.270547		Mean dependent var	0.072703
Adjusted R-squared	0.238061		S.D.dependent var	0.454222
S.E. of regression	0.396486		Akaike info aiterion	1.032874
Sum squared resid	38.82876		Sdlwaiz criterion	1.197669
Log likelihood	-121.7572		Hannan-Ouinn|criter.	1.099132
F-statistic	8.328 163		Durbin-Watson stat	1.684522
Prob(F-statistic)	0			

R-squared is measured 0.270547 which means that it is approximately 01 quarter out of 4 quarter that the NPM of 20 Commercial banks of Pakistan is measure the 11 independent variables. F-statistic 8.328 shows that the model is not very bad. Durbin-Watson test shows that a result of 1.684522 is means that there is positive autocorrelation it means that variables are dependent from each other's.so the result recommends that the Null hypothesis can be rejected

The significance of each independent individual variables it can be detected that the p-value of all independent variables are more than 0.05 except size, loan share and loan loss provision so overall it concluded that we cannot rejected the null hypothesis The 01% increases in Loan Loss Provision 0.00000024 decreases NPM when 01% increase in pre provision income 0.0000000673 decreases in NPM when the 01% increase in non-performing loan 0.0000000534 decreases in NPM when the 01% increase in loan growth 0.00000000169 increases in NPM. When the 01% increase in loan loss reserve 0.0000000179 increases in NPM When the 01% increase in loan share 0.594124 increase in NPM When the 01% increase in equity 0.0000000255 increase in NPM When the 01% increase in size 0.55309 increases in NPM When the 01% increase in GDPG 0.015065 decreases in NPM When the 01% increase in inflation 0.004094 increases in NPM When the 01% increase in real interest rate 0.004445 increases in NPM.

7. DISCUSSIONS

We found that net income and loan loss provisions are indirectly related to each other that is any increase will lead to decrease in net income there after effecting Return on assets (ROA), return on equity (ROE) and net profit margin. Loan loss provision is an area which can be manipulated, these can be easily accomplished either increased or decreased responding to the income, that is higher or lower. There are well known twenty conventional banks currently operating in Pakistan. Based on the methodology presented above we have analysed the determinants of Loan Loss Provision in banking industry of Pakistan. According to the theoretically arguments of many authors LLP has positive impact especially in high earning periods so they show more provision which helpful for the lower profit period for the loss adjustment purpose. We have examined that there is not a positive impact of high provisioning because high provision leads negative impact on profitability ratios and it's also reduce the confidence of all shareholders and all stake holders of banks which is also not a good sign for all banks. Second reason is that when there is high provisioning which leads the negative impact on net profit so which may cause to reduce the tax to Govt. Tax is the main source of government revenue and higher tax higher revenue, when there is high provisioning to save high tax purpose which diminished the tax margin which is negative sign for the country. No such research was conducted on Pakistani Banking Sector to assess the impact of loan loss provision. Specifically, we covered the negative impact of Loan Loss Provisions (LLP) on profitability ratios, ROA, ROE, and NPM. Hence, this is a novel attempt as no such research was carried out in Pakistani context.

8. CONCLUSIONS:

Banking industry play a vital in the economy of any country. Baking industry is one of the main pillar to promote the economy and economic stability. Pakistan is one of the developing country and there is so many challenges concerning the economic stability and development. We have tested the impact of Loan Loss provisions on profitability ratios so we found that the Loan Loss Provisions have negative relation. More Loan Loss Provisions decrease the profitability ratios and less provisioning increase the profitability ratios. The minimum provisioning is more favourable to the banking industry in context of Pakistan. Minimum provisioning increases the net profit which has positive impact on all profitability ratios. The main source of government revenue comes from the taxes and when there is high profit cause to pay added tax to the government which is good sign for the economy of Pakistan. Low provisioning cause high profit which also increase the confidence of all shareholders and stakeholders of bank. We have also checked the impact of eleven more variables on the profitability ratios, these are Pre provision income (PPI), Non-performing loan (NPL), Loan share(LS), Equity(EQU), Log of total assets(SIZE), Gross domestic product growth, inflation(INF)and Real Interest(RIR) are the independent variables has positive and somewhere negative impact on all dependent variables

This research helps all shareholders and stakeholders of bank to comprehend concerning the manipulation of Loan Loss Provision and it impact. This research accommodating to banks, shareholders, stakeholders of bank and government regarding the manipulation and its impact so we recommend to all banks running in Pakistan to less loan loss provisions to have more protection and can be converted into higher profitability ratio which good for banks as well as for the economy of Pakistan.

Secondary data is collected from the web site of The State Bank of Pakistan, trading economy, Wikipedia

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10. Appendices A

STATE BANK REGULATION REGARDING LOAN LOSS PROVISION

According to The State Bank of Pakistan the Loan Loss Provision is divided into three

1. Prudential Regulations for Small and Medium Enterprises Financing Regulation R- Classification and provisioning
2. Prudential Regulations for Consumer Financing Regulation R-8 Classification and provisioning

3. Prudential Regulations for Corporate Financing Regulation R-8 Classification and provisioning

Referring the Regulation for small and medium Enterprises financing regulation SE R-8 the classification and provisioning shows the below mentioned table

10.1 SMALL & MEDIUM ENTERPRISES FINANCING

When there are up to 250 employees and 25 million paid up capital and the annual sales is 250 million covers the small and medium emprises

1. OAEM other than assets specially mentioned (I) Determinant the interest or principal is over due by 90 days or due date (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 10% of provision of the remaining outstanding balance the principal amount subtracts the pledged assets value or liquid assets, plant machinery commercial and industrial properties (land and building) to be extent in annexure ii

2. Substandard (I) Determinant where the interest or markup is principal is overdue by 180 days from the due date (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 25% of provision of the remaining outstanding balance the principal amount subtracts the pledged assets value or liquid assets, plant machinery commercial and industrial properties (land and building) to be extent in annexure ii

3. Doubtful (I) Determinant the interest or principal is over due by 1 year or more from the due date (ii)Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 50%of provision of the remaining outstanding balance the principal amount subtracts the pledged assets value or liquid assets, plant machinery commercial and industrial properties (land and building) to be extent in annexure ii

4. Loss (I) Determinant Where interest/markup or principal is overdue by eighteen months or more from the due date where trade bills (import or export or inland bills not paid) adjusted within 180 days of the due date (ii)Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 100%of provision of the

remaining outstanding balance the principal amount subtracts the pledged assets value or liquid assets, plant machinery commercial and industrial properties (land and building) to be extent in annexure ii

10.2 CONSUMER FINANCING REGULATION

According to the state bank regulation R-8 defines the Loan Loss Provision regarding the consumer finance the credit cards and advances classified as under

1. Loss (i) Determinant: Where interest or markup or principal is overdue by 180 days or more than the due date (ii) Treatment of Income: unrealized interest or markup is to be put in suspense account not in income account unless it will be realized cash (iii) Provision to be made: 100% provision is made after resulting from the outstanding balance (principal –liquid securities with bank or DFI)

2. Regulation R-14 Defines Regarding the Auto Loan Which Is Mentioned Under Below. Substandard (I) Determinant where the interest or markup is principal is overdue by 90 days from the due date (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 25%of provision of the remaining outstanding balance the principal amount subtracts from the liquid assets

3. Doubtful (I) Determinant the interest or principal is over due by 180 days or more from the due date (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 50%of provision of the remaining outstanding balance the principal amount subtracts from the liquid assets

4. Loss (i) Determinant where the interest or markup is principal is overdue by one year from the due date (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 100%of provision of the remaining outstanding balance the principal amount subtracts from the liquid assets

10.3 PRUDENTIAL REGULATIONS CORPORATE /COMMERCIAL BANKING

According to The State Bank of Pakistan R-8 defines regarding the Loan Loss Provision which is mentioned under

1. Substandard (I) Determinant where the interest or markup is principal is overdue by 90 days from the due date (ii) Treatment of Income Unrealized mark

up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 25%of provision of the remaining outstanding balance the principal amount subtracts from the liquid assets forced sale value (FSV)

2. Doubtful (I) Determinant the interest or principal is over due by 180 days or more from the due date (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account (iii) Provision to be made 50%of provision of the remaining outstanding balance the principal amount subtracts from the liquid assets forced sale value (FSV)

3. Loss (i) Determinant where the interest or markup is principal is overdue by 01year from the due date where trade bills (Export-import and inland bill) are not paid adjusted in 180 days (ii) Treatment of Income Unrealized mark up or interest must have kept in memorandum of Association except the realized cash and the already taken to income account that must reverse in the memorandum account

(iii) Provision to be made 100%of provision of the remaining outstanding balance the principal amount subtracts from the liquid assets

11. Appendix B: Abbreviations andAcronyms

ROA: Return on Assets

ROE: Return on Equity

PPI: Pre Provision Income

NPL: Non Performing Loan

LLR: Loan Loss Reserve

LS: Loan Share

EQU: Equity

Size: Log OF Total Assets

INF: Inflation

RIR: Real Interest Rate

TGDP: Tax to Gross Domestic Product (Means impact of tax on GDP)

GDP: Gross Domestic Product

LLP: Loan Loss Provision

NPM: Net Profit Margin

FS: Financial Statement

DLLP: Discretionary Loan Loss Provision

SBP: State Bank of Pakistan

FSV: Forced Sale Value LLP

