Impact of Liquidity Risk on Banks (A Case Study of Punjab, Pakistan)

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Abstract
The main reason or purpose of this research is to find out the impact of liquidity risk on banking sector. Bank and risk are two things that cannot be separated from each other. One of the critical risk is liquidity risk that caused by bank disabilities on meeting their maturity dates of depositors. Therefore it needs further observations to control their liquidity risk. In this study simple linear regression is used through SPSS to investigate the influence between dependent and independent variable such as Return on Equity, Return on Asset, Current Ratio, Capital Adequacy Ratio, belongs to liquidity risk on banking industry. The selection of samples uses purposive sampling method. The study is based on secondary data in a period of 20 years, i.e. 1991-2011. The statistical analysis of secondary data has been divided into three, which are descriptive, regression and hypothesis testing. The study finds negatively and significant influence of Capital Adequacy Ratio and Return on Equity to liquidity risk, while Return on Asset and Current Ratio have positively and significant effect. Return on Asset and Current Ratio influences to liquidity risk is positive and in same direction (upward) while Return on Equity and, Capital Adequacy Ratio influences to the liquidity risk is negatively and in opposite direction (downward).Return on Equity and Capital Adequacy Ratio Increases the Liquidity Risk will decreases, while Return on Asset and Current Ratio increases then Liquidity Risk will also increases.
Keyword: Liquidity Risk. Return on asset (ROA). Return on equity (ROE). Current Ratio (CR), Capital Adequacy Ratio (CAR)

1 Introduction

There are many types of risks which are involving in all business institutions due to their financial crises. In daily business transactions, banks are facing some risk which caused by their activities. There will be no bank if there is no braveness to take risk. There are several risks that must be considered by banks, for example: market risk, operational risk, legal risk, compliance risk, credit risk, and liquidity risk. One of that above risks one crucial risk is liquidity risk that comes from the mismatch timing between cash inflow and cash outflow. This lack outcome from cash that hopefully to be invested in credit loans or outcome from deficit cash that needed to meet their short-term obligations.

According to Ainley et al. (2007) In daily business transactions, there are many types of risks which are involving in all business institutions due to their financial crises. In daily business transactions, banks are facing some risk which caused by their activities. There will be no bank if there is no chance to take risk. There are several risks that must be considered by banks, for example: market risk, operational risk, legal risk, compliance risk, credit risk, and liquidity risk (Perotti et al 2011). One of that above risks one crucial risk is liquidity risk that comes from the mismatch timing between cash inflow and cash outflow. This lack outcome from cash that hopefully to be invested in credit loans or outcome from deficit cash that needed to meet their short-term obligations.in view of Murtunez and Repullo (2010) that Liquidity risk is the risk to earnings or capital from a banks inability to meet its obligations when they come due, without incurring unacceptable losses. Liquidity risk includes the inability to manage unplanned decreases or changes in funding sources. Liquidity risk

also arises due to the failure of recognizing or addressing changes in market conditions that affect the ability to liquidate assets quickly and with minimum value of loss. All institutions involved in derivatives face these two types of liquidity risk. For each of discussion, these risks are referred to as funding liquidity risk and market liquidity risk. Controlling, measuring, and limiting both types of liquidity risk are vital activities and that follow to provide additional information on how to do it so on. according to the Demirguc et al (2010) In developing guiding principle for controlling liquidity risk, banks should consider the possibility of losing access to one or more markets either because of their concentrate about their own creditworthiness, the creditworthiness of a major counterparty, or because of generally stressful market conditions. At this situation the bank may have less flexibility in managing its price, interest rate, credit, and liquidity risks. Banks that are market to makers in derivatives or that dynamically hedge their positions which are require constant access to financial markets, and that need may be increase in times of market stress. A bank's liquidity plan should also determine its ability to access alternative markets which means futures markets or cash markets. So finally liquidity risk includes both the risk (market liquidity risk and funding liquidity risk) of being unable to fund its portfolio of the assets at appropriate maturities and rates and also the risk of being unable to liquidate a position in a timely manner at reasonable prices.

1.2 Objective of Research:

Research objectives are ultimate reasons for carrying out the research. They help in developing the specific information that the researcher wants to know in order to fill the knowledge gap and solve the specific problem. We need to work on the impact of liquidity risk on banks, where students can collect data easily. The research project is designed to provide the relevant information and following are the objectives.

- To discover new facts and to identify the phenomenon of impact of variable on one another.
- To study the present status of Liquidity Risk in Punjab.
- To study the impact of Liquidity Risk on banks of Punjab.

1.3 Research Questions

- How liquidity risk impact on banking sector of Punjab?
- How much banks are affected by the liquidity risk?
- Is there any relationship between the liquidity risk and banks?

1.4 Significance:

There is a strong significant relationship and significant effect between dependent and independent variables. Large inflows of cash are required to be aware of the potential of liquidity risk.

2 Literature Review

However, we observe that liquidity risks have played a role in bringing financial distress to Islamic banks and some of them were forced to close. Market liquidity risk is that risk in which financial institutions could incur, if there is no more market for the asset where it should be sale. Funding liquidity risk is a risk which has linked to a wrong management on funding position. There are the following the sources of liquidity risk, Incorrect judgment and complacency, Unanticipated change in cost of capital, Abnormal behavior of financial markets, Range of assumptions used, Risk activation by secondary sources, Break down of payments system, Macroeconomic imbalances, Contractual forms and Financial Infrastructure deficiency

Causes of Liquidity Risk

Liquidity risk is occurred due to vary of economic conditions, but in general it is caused when one party (an investor or a bank) cannot sell a particular asset on the open market because of there is no other party available or willing to purchase and trade for it. It is easily to think that liquidity risk is a lack of mobility for a given investment product instead of a lack of that value. For example if the value of a stock falls to zero, the markets believe that stock to be worthless or low value and such as it will be harder to sell for the bank or investor holding the stock. The lack of value increased the liquidity risk because of it is more difficult to find someone which is willing to buy that stock. The goal of liquidity risk management is to identify potential future funding problems. In this case a bank must assess the expected value of its net cash flows and the value of its assets. Thus a bank must be able to measure and forecast the prospective cash flows for its assets, liabilities, off-balance-sheet, and derivative positions. The bank should have a detailed understanding of its contingent liquidity risk exposure. Since no single tool can comprehensively quantify in liquidity risk, there should be use several measurement tools to assess its current balance sheet and provide forward-looking analysis of its liquidity exposures. Market and funding liquidity risks mix with each other and it is so difficult to sell when other investors are facing funding problems and it is difficult to get funding when the situation of asset is hard to sell. Liquidity risk also tends to compound other risks. If any bank or a trading organization has a position to liquidate

their liquid asset with limited ability to liquidate that position at short notice will be compound their market risk. Suppose a firm or a bank has offsetting cash flows with two different counterparties on a given day. If the counterparty that owes the default payment then the firm or bank will have to raise its cash from other sources to make its payment.

According to the Perotti and Suarez (2011) investigated the financial crisis of banks and he examined that in the phase of 2007 the funds were easily provided and banks are in good position at that time the banks ignored the importance of liquidity. After that time when financial crisis arises. The banks feel how fast the liquidity can dry up. Due to this banks are in a stress with the required action of central bank they should manage the capital and money markets both. On behalf of this banks in Austria and Germany introduced the scheme called IPS (institutional protection scheme). Purpose of this scheme is to protect the institutions and tells the importance of liquidity and solvency of bankruptcy where necessary. For this purpose he uses the data of 800 Austrian banks. Who interested in the membership with IPS. These banks were good in liquidity risk management and supervision it. He took the liquidity as independent variable and banks as dependent variable. At the end he concludes for the development of banking network it's important for the banks to supervise their all operations strongly otherwise legislation enables to protect these institutions and arbitrage between models.
Mitoo and Varotto (2011) examined the liquidity risk with new bank capital regulation. The liquidity risk is independent variable and bank capital is the dependent variable. He investigated the new capital movement with incremental risk charge and extreme market movements with stress tests based on 2007 to 2009. For this purpose he took the data of 6 continues years from 2004-2009. He found that capital requirements are more than the suggested requirements he also found that low capitals reported by banks assumed the risk reduction with hedging strategies and their effectiveness remains the open question. King (2010) examined the relationship of the liquidity risk anFd bank lending. The independent variable is liquidity risk and dependent variable is bank lending. He examined as the capital increases bank lending spread by increasing one percentage of capital ratio. This can be assumed as with the ROE (return on equity) and cost of debt declines the bank lending spread also tends to decline. While with the NSFR (net stable funding ratio) the bank would need to increase its lending spread. He also examines as manage the risk weighted assets from holding more than the government bonds. For this purposes he uses 15 years data from 1993 to 2007. At the end he concluded that the banks when uses the data of balance sheet the capital and bank lending goes higher by managing the liquidity risk. Laurens (2012) examined the risk management with the financial crisis of bank. He investigated that banking industry is most important industry as financial crisis impacts significantly on supervision and regulation of banks. With some reforms the crisis may resolves and with proper actions the banks can improve their ability to perform and escape them with financial crisis stress and also systematic risk can be reduced this will improve the regulation and supervision of banks. He took the risk management as the independent variable whereas bank performance as dependent variable. He uses the data of twenty-five years. At the end he conclude that the reforms which made in past were not enough for the bank performance so these should be regulated in current phenomena. Cai and Thakor (2008) have collectively investigated the impact of liquidity risk with the interaction between the liquidity and credit risk in inter-bank competition. They first show the deposit insurance with the increasing impact of liquidity risk, it also negligible with inter-bank relationship with the higher the liquidity risk higher the credit risk. At third point they examined the impact of banking competition regarding with loan. It can improve the liquidity of the bank loan it also manage the credit and liquidation of the banks. But this can improve the liquidation at a certain point. They used the liquidity risk as independent variable and bank loan as the dependent variable. They examined the data of 15 years of banks from china. At the end they conclude at some conditions the bank liquidity risk increases with loan but overall risk reduces in the inter-bank competition the risk which reduces include credit and liquidity risk. Dass and Massa (2003) they examined the relationship of liquidity and implicit in the banking firms. They investigated that with the lending activity banks privilege about companies and manage the risk easily. They took the liquidity as independent variable and banks as the dependent variable. They uses data of 20 years from 1985-2004 as sample of U.S firms and examined that there is a significant relationship of liquidity and banks.

Their findings consist of that banking firm effect directly the risks and similar as corporate governance and this raises the issue of bank regulation. Krause and Giansante (2012) examined the impact of liquidity on the capital minimizing on the failure of banking system. They took the liquidity and solvency as independent variable and banking system as dependent variable. To examine the impact they used the data from 1999 to 2007. They investigated that failure of banking system for the inter-bank lending is due to the transmission mechanism. At the end they found that this impact of minimum capital and reserve and this is due to the shortage of holding work to smaller degree and it's only for the specific banks not on the effect on all banking system. Muharam and Penta Kurnia(2012) investigated the banking system both Islamic and commercial banking with the impact of risk. They considered the liquidity risk as the critical risk in both banking system. They investigate the CAR, profitability ratio NIM, liquidity gaps and RLA as the risk on banking industry. They took the liquidity risk as the independent variable and bank as the dependent variable. They examined the data of five years of 2001-

2011.all data is secondary data. At the end they conclude ROA and RLA have positive and insignificant effect. They also conclude that the dependent variable have positive and significant effect. Whereas liquidity gaps have positive and significant effect, another finding is that the CAR and NIM have negative and insignificant effect and only 5% is significant effect. Faia (2010) investigated the impact of liquidity on the banking system regarding the macro- economy and monetary policy remain unexplored. He took the liquidity as the independent variable and banking system as the dependent variable. For this impact he used the data of the period of financial crisis on banks 2007-2009. He introduced a model for this purpose known as DSGE model. With this he examine the properties of banks in secondary markets by transferring the credit risk, He found that credit risk allows banks to release the capital and effect productivity by inflation and markets are in equilibrium with secondary credit markets.

Pellegrina (2012) examined the relationship of risk management with Islamic and conventional banking .He took risk as independent variable and banks as the dependent variable. He used the data from 2000-2011. He examined that Islamic banking is less risky due to its policies and banking structure. He investigated that liquidity is more standardized in Islamic banking and less capitalized. At the end he concluded that Islamic banking is more regulatory to manage its operations and manage the risks well. Mencia(2009) examined the impact of interest rates determining in the inter-bank markets with effect of liquidity risk and solvency. He took interest rate as independent variable and inter-bank default probabilities liquidity problem occurs and effect of ratings downgrades sensitivity of inter-bank markets. Creutti and Claessens(2012) examined the impact of bank regulation and taxation on credit risk with the relationship of liquidity risk. He used the secondary data from 2004-2011. He took liquidity as the independent variable and bank regulation as the dependent variable. He found that relationship with the capital requirements, welfare and efficiency by reducing the liquidity which represents minimizing the risk. He also found that taxation generates higher government revenue but lower efficiency. At the end he concluded that both liquidity and taxation are associated with the cost significantly. Mardini(2013) investigated the systematic risk of banks with the statistical and significant relation of risk management. He used the secondary data of Amman stock exchange from2006-2012. At the end his findings consist of bank equity correlates with its size, liquidity and profitability. He also found that these elements are so risky the bank managers as well as investor should have access on bank's risk profile.

Alcock, J., Steiner, E., & Tan, K. J. K. (2014) examined the impact of competition on risk taking behavior. He compete the EUROPIAN banking system with CHINESE banking system. For competing he used credit risk, liquidity risk, capital risk and insolvency risk in the by the stability inefficiency whereas credit and liquidity risk are checked by the city commercial bank .He conclude that every risk is higher due to the ownership of banks dealing with these and with the higher competition of these banks ownership leads to the higher credit risk, higher liquidity risk, higher capital risk and lower the insolvency risk. Amidu Mahmed (2014) examined the liquidity risk on the bank exposure of 28 commercial banks of BOSNIA. He took liquidity risk as the independent variable and bank as the dependent variable. For this purpose he used eleven years secondary data in the period of 2002-2012. In his data analysis there is statistical significance and explanatory power of the selected variables. He investigated that for the analysis of the given years the bank's liquidity is determined by the models he applied. At the end he concluded most of the banks are influenced by the liquidity risk and at which level banks should minimize their liquidity risk.

3 Theoretical Framework:

The concept of liquidity lies at the heart of commercial banking and the management of its funds. It represents one of the big risks in banking industry. Liquidity risk is the possibility of loss, generating the cash needed to meet short term maturity dates included. The banking industry requires liquidity should be given important consideration in funds management. The ratio between cash and total assets describes how far the assets on banks can be converted to be cash to cover their liquidity risk. Some determinants factors that may influence liquidity risk are Capital Adequacy Ratio (CAR), Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), liquidity gaps, Risky Liquid Assets to Total Assets (RLA). CAR is the ratio which is used to measure capital adequacy to support the bank owned assets that contain or produce risk, such as loan. ROA measures the ability of bank management in acquiring and managing the profitability of the bank's overall business efficiency. ROE measures the ability of the company in making a profit available to shareholders. NIM is the ratio of interest income that is received from loans made to average earning assets. Liquidity gaps are the disparities between assets and liabilities that cause liquidity risk. RLA is the ratio that is used to measure how big the risky liquid assets of banks which can be converted to cash by selling them in low price.

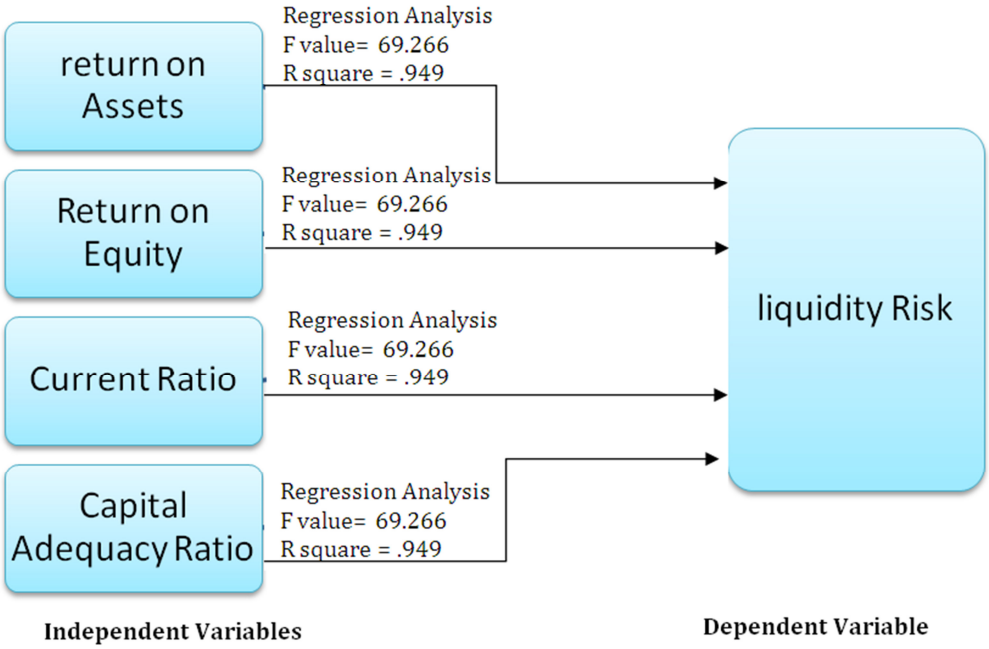

Figure No. 1

Regression estimation technique which was widely used by many researchers to investigate the impact of Liquidity Risk specific characteristics on banking sector (for example; Harjum Muharam and Hasna Penta Kurnia) will be use to analyze the impact of liquidity risk on return on equity (ROE), return on asset (ROE), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), liquidity gaps, Risky Liquid Assets to Total Assets (RLA) of banks listed at Karachi stock exchange.

Hypothesis:

Therefore, current study use following hypothesis for analysis:

Ho: ***Null Hypothesis: There is no significant relationship between Liquidity Risk and ROE, ROA, CR, CAR.***

H1: Alternative Hypothesis: There is any significant relationship between Liquidity ***Risk and ROE, ROA, CR, CAR.***

4 Research Methodology:

Dependent variable in this study is liquidity risk that is measured by ratio between cash and total assets. Independent variables in this research are ROA, ROE, CAR, NIM, liquidity gaps, and RLA. CAR is the ratio between bank capital and total average assets by risk. ROA is the ratio between earning after tax to total assets. ROE is the ratio between earning after tax to total equity. Liquidity gaps are the natural logarithm from assets minus liabilities. RLA is the ratio between risky liquidity assets to total assets.

4.1 Research Classification:

Quantitative and qualitative researches methods are classified as quantitative as opposed to qualitative methods are all methods will be used for research purposes. Quantitative description of this design can be. It is collected from the company's various financial statements are based on qualitative secondary data. The data are analyzed using qualitative techniques.

4.2 Collection of Data:

Collecting the data is the crucial part of research methodology and consists of gathering the data from various sources. Data is of two types: Primary and Secondary data. Secondary data is one that becomes the part of the research methodology through which we collect information for the project.

4.3 Sample Size:

The data of 20 banks including government and private commercial banks listed at Karachi stock Exchange (KSE) was used from 1991-2011 to conduct the study. Following criteria was used to collect the data: Banks were listed at KSE during year 1991-2011. Data regarding liquidity risk was available for years under study.

4.4 Limitation and Problems Regarding Data Collection:

The data which is collected for analysis is of secondary kind. Time need is very important because banking sector take more time for extracting data. There are so many technicalities I have faced during the data collection of my research Like related personals didn't responded, or if somehow responded then responded too late. Unavailable data, critical data sources and unintentional actions of related personals made me to focus just on secondary data rather than asking them questions personally.

4.5 Tools:

The software SPSS (Statistical Package for Social Sciences) version 17.0 is used for the data analysis from which the results are obtained. The statistical analysis of data is obtained spontaneously once the data is entered in the software and specifications are submitted regarding the requirements of the type of results needed. The further detailed analysis is discussed in the analysis and discussion section of the thesis.

5 Statistical Data Analysis and Interpretations:

Through scatter diagram we can identify that assumed dependent and independent variable in this model are not showing any linear relation. Because the scatter point of the variable does not show any relation (positive or negative) between each variables. The data has been analyzed in Statistical Package for Social Sciences (SPSS) in order to calculate simple the Linear Regression between two variables (dependent and independent variables). The variable is measured on the ratio scale (continuous variable). No outlier is found in the analysis that affects negatively to the relationship. Finally, I checked out that the Residual Error of the Regression Line is approximately normally distributed.

5.1 Descriptive Statistics

Table No. 1 Descriptive Statistics

	Mean	*Std. Deviation*	*N*
L.R	***6.8015***	***1.24608***	***20***
ROE	***.5625***	***.23987***	***20***
ROA	***.4405***	***.4665***	***20***
CR	***.3040***	***.29856***	***20***
CAR	***.6040***	***.25134***	***20***

This table gives us the information about the descriptive statistics in which we can see MEAN of Liquidity Risk is 6.8015 and MEANS of Return On Equity (ROE), Return On Asset (ROA).Current Ratio (C.R) and Capital Adequacy Ratio (CAR) are .5625, .4405, .3040, .6040. Similarly the variability between the two variables which is the standard deviation that tells us how much mean is deviated from it, although mean and standard deviation write together in the form of we can say:

Mean of Liquidity Risk is 6.8015 (±1.24608)
Means of Return on Equity is 0.5625 (±0.23987) Means of Return on Asset is 0.4405 (±0. 46665)
Means of Current Ratio is 0.3040 (±0.29856)
Means of Capital Adequacy Ratio is 0.6040 (±0.25134)
N indicates the number of samples which is 20 in our analysis.

5.2 Variables Entered/Removed

Table No. 2 Variable entered/ removed

Mode 1	Variables Entered	Variables Removed	Method
1	CAR, CR, ROA, ROE[b]	.	Enter
a. Predictors: (Constant)	CAR	RR	ROA
a. Dependent Variable: L.R b. All requested variables entered.			

The table simply figures out the predictors in the analysis which are Return on Asset Return on Equity Current Ratio and Capital Adequacy Ratio in my case which I have entered into the equation, and this is the linear regression.

5.3 Model Summary

Table No. 3 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.974[a]	.949	.935	.31782	1.484

a. Predictors: (Constant), CAR, RR, ROA, ROE
b. Dependent Variable: L.R

To check the fitness of model we check the adjusted R2 from the model summary table the adjusted R2= 0.935 which means that the model is a good fit model. It shows that almost 93% variation in liquidity risk is due to predictors. For check the autocorrelation we see the durbin Watson test result from summary table and the Durbin test result is 1.484 which is greater than -3 and less than 3 so there is no autocorrelation between variables. So far, this is the most important table in our analysis which tells us the measure how well the overall analysis or model fits. How well our predictor (ROA, ROE, C.R and CAR) are able to predict (Liquidity Risk). As it can be noted that the first model R which is the coefficient of correlation and measures of how well our predictor predicts the outcome. But, very importantly we need the R-square which is the coefficient of determination to get the more accurate results. This is the amount of variance in Liquidity Risk explained by the independent variables (predictors) which is the ROA, ROE, C.R and CAR.

In this case, 0.935 or 93.5% variability is explained by the ROA, ROE, C.R and CAR. (But this does not imply causality). In other words we can say that the 94.9% variability in annual Liquidity Risk can be accounted for by the use of ROA, ROE, C.R and CAR The difference between the Adjusted R-square and R-square becomes smaller as the sample size becomes very large. In our case, the sample is of 20 years which seems to be large and that's why the difference is slightly minor. The next column gives the standard error of the estimate. That is the measure of how much R is predicted to vary from one sample to the next. The amount of standard error is .31782 which is the error associated with the regression analysis in terms of the predicting the particular value and in this case it is positive and this standard error is associated strictly with its model and therefore would be more accurate only for X values .5625, .4405, .3040, .6040. As try to predict what would be the liquidity risk based on ROA, ROE, C.R and CAR) as you deviate from the actual mean in the model. It simply expresses how much the results deviate from the actual mean to the estimated mean.

5.4 ANOVA

Table No. 4 ANOVA

Model	**Sum of square**	**Df**	**Mean Square**	**F**	**Sig.**
Regression	**27.986**	**4**	**6.997**	**69.266**	**.000[b]**
Residual	**1.515**	**15**	**.101**		
Total	**29.501**	**19**			

a. Dependent Variable: L.R
b. Predictors: (Constant), CAR, RR, ROA, ROE

This table tells us that the correlation is statistically significant and we get F value which is 69.266 and it is the statistically significant. This F test outcome here is important which is highly significant whose value is less than 0.001 in the last column. Therefore, this model certainly fits the data. A straight line depicting the LINEAR RELATIONSHIP, describe the relationship between these variables.

5.5 Regression Analysis

Table No. 5 Regression analysis

Model	**Standardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**	**95.0% confidence interval for B**	
	B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
1							
(constant)	9.771	.217		45.049	.000	9.309	10.233
ROE	-3.122	2.598	-.601	-5.219	.000	-4.697	-1.847
ROA	.538	.193	.201	2.781	0.14	.126	.950
CR	.120	.277	.029	.431	0.11	-.471	.710
CAR	-2.461	.564	-4.96	-4.367	.001	-3.662	-1.260

This table is also very important from the analysis point of view. In the first column, the name of the predictors is mentioned that's the Return on Asset Return on Equity Current Ratio and Capital Adequacy Ratio. The column named "Unstandardized coefficients" give the value of constant "a" which is the intercept of the predicted values β1, β2, β3 ,β4 if Y = 0. Additionally, we can say that if the values of the Return on Equity

Return on Asset Current Ratio and Capital Adequacy Ratio will be zero, then Liquidity Risk will be 9.771. This also gives us B-coefficient (the Dependent Variable-Exports), the value of Y would change if beta changes by one unit. And, these values are 3.122, .538, .120, and 2.461 respectively. This also gives us the "Standardized Coefficients" contains the Beta-coefficient. This is 0.874. This is the identical value that is mentioned above in the Pearson's Correlation coefficient. Therefore, when we look at the relationship between the two variables, Beta in the regression output will always give us the same value as the correlation coefficient. It would not be happened in the case of having more than two variables which is the multiple regression analysis. There comes the statistical significance of the relationship between the independent and dependent variables. Moreover, we can say that the how well it is that we have a strong relationship in our example. It is observed that in our analysis in the above table the relationship is statistically significant at the 0.000 level.

6 Discussion of the Results:

The results of the study confirm that the variables that we have considered in the theoretical framework are important. We focus only on the four variables which are Return on Equity, Return on Asset, Current Ratio, Capital Adequacy Ratio and Liquidity Risk. The former is Independent variable and the latter is dependent variable and check the impact that how much Return on Equity, Return on Asset, Current Ratio, Capital Adequacy Ratio impacts the Liquidity Risk and finally reached the results of strongly aftermaths. It would be useful if the exports are utilized largely per year, however, gradually, it might be possible that it becomes perfect or even very close to the perfect. However, this is the statistical analysis that does not tells us the whole story, a kind of traditional approach in which we test the idea using statistical test. After determining the sample of the two variables which we put on the ratio scale and analyze in the SPSS for linear regression, we come to the answers to those questions that we stated in the methodology/proposal of the research. Each question was then tested. The first states that the how much Foreign Direct Investment impacts on exports. Essentially, in my methodology section, I suggest the linear equation which is Y=a+bX. This is the simple linear equation having two variables involved in it. Re-Arranged the equation with respect to my topic, I get: Where Liquidity Risk the is dependent variable Alpha (**α**) is the constant

ß **1** **is the coefficient of ROE**
ß **2** is the coefficient of ROA
ß **3** is the coefficient of C.R
ß **4** is the coefficient of CAR
ε 5 is the Error

Liquidity Risk (L.R) = α + β1 (ROE) + β 2 (ROA) + β 3 (C.R) + β 4 (CAR) + ε

Putting the above calculated values, we get

Liquidity Risk (L.R) = 9.771 - 3.122 (ROE) + .538 (ROA) +.120 (C.R) -2.461(CAR) + ε

In this equation explanatory variables Return on Asset (ROA) and Current Ratio (CR) have a positive coefficient of 0.538, 0.120 respectively and Return on Equity (ROE) and Capital Adequacy Ratio (CAR) have negative coefficient of -3.122, -2.461 respectively. Following explanatory variables coefficients of ROE, and CAR show that one unit of increase in ROE, and CAR then Liquidity Risk decreases by 3.122, 2.461 units, respectively, while other explanatory variables ROA and CR which have positive coefficient describe one unit increase in ROA and C.R then increases Liquidity Risk increases by 0.538, 0.120 units, respectively. In other words we can say this equation shows that one unit changes in ROA and CR then it will increase by 0.538, 0.120 units in Liquidity Risk. (The Liquidity Risk are predicted to be 0.538, 0.120) and one unit changes in ROE and CAR then it will decreases by 3.122, 2.461 units in Liquidity Risk. (The Liquidity Risk are predicted to be 0.538, 0.120) because ROE and CAR have negative coefficient of betas. The second question states that, is there any relationship between the Liquidity Risk and ROE ROA C.R CAR? We can surely say that the relationship between the two variables is strongly positive which are ROA and CR as one variable move, the other variable also moves in the same direction which is upward. But the two variables have negative which are ROE and CAR having downward direction. The third question states that how much Liquidity Risk is affected by the ROE ROA C.R CAR? When we see in the above table when ROE ROA C.R CAR is zero, then Liquidity Risk is 3.122 0.538, 0.120 2.461 respectively .This also gives us the results that if ROA C.R increases, the Liquidity Risk is also increased and when ROE CAR increases, then Liquidity Risk is also decreased. Finally, we can say that Liquidity Risk is largely affected by ROE ROA C.R CAR.

7 Conclusion

My Analysis of this research results is based on the calculation and analysis of the coefficients of simple linear Regression. Therefore, this research is undertaken to investigate the influence of selected determinants of bank liquidity risk in the banking sector in Punjab Pakistan. It can be seen from this research that the most important determinants of liquidity in the banking sector vary, that is selected as the dependent variable. In the research where the dependent variable Liquidity Risk and most strong variable to predict banks' exposure to liquidity risk

is as follow (ROE, ROA, CR, and CAR) .In this research variable ROA and CR is positively related to liquidity risk in regression, which is conducted in this research, while ROE and CAR variables has significant negative relation with Liquidity Risk, The value of the coefficients in this research (ROE; CAR) is –(3.122, 2.461), respectively. In other words, it suggests the lower impact on dependent variables Liquidity Risk. Inverse relation between ROE CAR and Liquidity Risk is justified by the fact that poor asset quality leads to lower profitability and less liquidity or higher exposure to liquidity risk. This negative relationship between CAR and Risk suggests that increase of CAR has inverse relations on liquidity of banks. ROE also have the negative and significant impact on the liquidity of the bank. In this research, it is determined that ROE has negative and statistically significant impact on liquidity risk measured in this research. This is consistent with the theoretical approach and expected impact of liquidity on predictors. Moreover, the results of the regression also revealed that only two variables have significant impact in this research. Statistically significant bank specific variables in this Model, such as ROA, CR .538, .120) have a positive relationship. It means that when each of these variables increases it result to increases in Liquidity Risk. This research conducted in this study showed that most of the analyzed variables included in this Model have a certain influence on determining the level of banks' exposure to liquidity risk,

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