

The Causative Impact of Liquidity Management on Profitability of Banks in Pakistan: An Empirical Investigation

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Abstract

In the corporate finance, liquidity management and profitability are widely debated areas. Liquidity management plays a dynamic role in determining the effectiveness of the banking sector with potential influence in smooth functioning. The objective of the study is to scrutinize the impact of liquidity management on the profitability of Pakistani banks, covering period of 2006-2016. The secondary financial data obtained from audited annual financial reports were analyzed using descriptive and inferential statistics. Return on assets (ROA) and Return on equity (ROE) have been used as measures of bank's profitability while as, Current Ratio (CR) advances to deposit ratio (ADR), Cash deposit ratio (CDR) and Deposit Assets Ratio (DAR) represented liquidity management. The result demonstrates that ADR, CDR and DAR

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have positive and significant impact on ROA, whereas negative and significant impact on ROA. CR, ADR, CDR and DAR have positive and significant impact on ROE. Based upon key findings, all financial markets should have a comprehensively approved liquidity management procedures, practices, policies and mechanisms, exclusively tailored for their financial institutions, and management should be responsible for aptly implementing these policies and strategies on priority basis.

Key Words: Liquidity Management Practices, Profitability, Banks, Pakistan, Regression

1.0 Introduction

1.1 Pakistan Banking Sector

In the last decades, the banking sector has grown and developed to a gigantic pace in the world. Banking industry of Pakistan is progressing astound pace surpassing all forecasts, and customarily the majority of financing is done through banks in Pakistan. Banks serves as an intermediary to all industries, contribute in national income, growth, and development of country. However, in the epoch of hyper competition, banking sector on the other way around confronting new challenges that in account of striking the performance of banks from these challenges one of them is liquidity management. Therefore, for the curiosity of stakeholders Pakistani-banking sectors has become sizzling concern to investigate the impact of liquidity management on banks performance.

1.2 Background of study

According to Bagh, et al. (2017) “the Banking sector serves as a backbone for an economy, and occupies a paramount important place in the development and growth of country’s economy. Banks serves as an intermediary to all industries ranging from textile, cotton, agriculture, small and medium enterprises, manufacturing, construction, starts up finance and many more one way that in turn contributes straight a way to the national income and growth and development of country largely depends on sound foot holding of the banking system of a country. It acts as a role of nucleus for smooth working of economic undertakings with in a country and from corner to corner of the world, and eventual rebuilding and innovation in the industry has upstretched the standard of living”. According to Eljelly, (2004) the conception of liquidity management is getting a thoughtful consideration across the world, principally due to current financial circumstances. Moreover, Panday, (2005) Liquidity management is surrounded by the four cardinal decision domains of corporate finance management that entails meticulous administration, planning, and management to be a successful enterprise.

According to Kashyap et al. (2002) for banking sector the long tenure of advancing, construct liquidity impediments. Rehman at el. (2015) stated liquidity and profitability both are most bulbous issues in the realm of corporate fiancé and the theme of liquidity is not straight to define. Based upon these phenomena the cushion is available for research on liquidity management practices. The terms liquidity is defined by Nwaezeaku (2008) as the degree of convertibility to cash or in other words the ease with which any assets can be en-cashed or converted to cash is called liquidity in financial literature. He also added that assets must be

sold at a fair market price. Nahum et al. (2013) advocated that the dilemma in connections with liquidity management is to attain the desired trade –off between profitability and liquidity. In accordance to Niresh (2012) liquidity management is regarded as a prerequisite in order to make sure that the firms are capable to meet their short term business obligations effectively. He also added that liquidity always plays a vital role as far as the successful operation of the business is concerned. Ibe, (2013). Liquidity can be categorized as the straightforwardness with which an advantage can be changed over into money. Bank liquidity implies having adequate money to meet the commitments. It is banks capacity to rapidly meet money, checks and other withdrawal commitments.

Akter and Mahmud, (2014) indicated availability of money to meet everyday maneuvers of business is called liquidity. Liquid resources are easily converted over into money. According to Arif and Anees, (2012) Liquidity difficulties may deleteriously affect a certain bank's earnings and capital. Under risky situations, it may become reason of failure otherwise solvent bank. Another hurdle may be meeting the depositor's demands. The highest priority of a bank's management is to pay the necessary consideration to the liquidity difficulties. These difficulties should be taken into consideration in timely manners and immediate affirmative and corrective actions should be taken in order to avoid the significances of illiquidity. The study is around the impact of liquidity on the profitability of commercial banking sector of Pakistan. When the banks have sufficient money to meet day to operation is called liquidity. Bank liquidity implies having enough money to meet the commitments.

1.3 Problem Statement

In the corporate finance literature, stated earlier most of the studies have typically emphasized on long term financial management decision like capital structure, investment as well as valuation overlooking decision pertained to liquidity management practices Faden (2014).

Rehman et al. (2015) stated liquidity and profitability both are most bulbous issues in the realm of corporate fiancé and the theme of liquidity is not straight to define. By basing on this per se the cushion is available for research on liquidity management practices.

The liquidity management has been regarded as an area of momentous concern to the business managers as well as owners around the globe as there are lot of strategies have been introduced to manage liquidity of firms. In developed countries, previous studies have been conducted regarding the liquidity management and its impact on profitability but less work is done in respect of developing countries like Pakistan. Excitingly, the problem statement investigated in this research study is that ***“Impact of liquidity management practices on profitability of banks in Pakistan”***_over the time of 2006-2016. In banking sector, liquidity plays a vital role. Lacking liquidity can brings about investor's loss of certainty. To guarantee investor's certainty regulatory bodies have settle some minimum limits of liquidity of banks. The inverse relationship amongst liquidity and profitability however exists theoretically. According to Bagh et al. (2016) the leading objective of firms is to generate maximum profit but in conjunction with, other paramount important objectives is to uphold the liquidity of a firm in order to survive in the cruel and titanic competition in the business world.

1.4 Research Objectives

This research encompasses of the following two research questions;

1. To scrutinize the impact of liquidity management on the profitability of banks in Pakistan.
2. To pinpoint the status of impact of liquidity management practices on profitability of banks in Pakistan.

1.5 Research Questions

Following are the research questions related to current study:

1. Is there any impact of liquidity management on profitability of banks in Pakistan?
2. Whether the impact is positive or negative.

1.6 Significance of the Study

This study will be helpful to academia the findings will be of great beneficial to future students of finance in the field of impact of liquidity management practices on profitability by providing relevant literature in order to build the better insight of that area. The findings of our study will provide assistance in order to make decisions, formulating strategies chiefly about liquidity.

The key findings of this study will be provide advantages for policy makers and top level managers of those banks and companies which are close to shut down because of the liquidity mismanagement. For banking sector, proposed study would be helpful that gives more importance to their services and ignores the importance of liquidity management. This research will provide knowledge about the importance of liquidity management in financial performance of banks. The additional research avenues will be opened after this study.

2.0 Literature Review

This chapter consorts with presentation of literature rearview, both theoretical and empirical, research hypotheses and research models

2.1 Liquidity management practices and banks profitability-An overview

The terms liquidity is defined by Nwaezeaku (2008) as the degree of convertibility to cash or in other words, the ease with which any assets can be en-cashed or converted to cash is called liquidity in financial literature. He also added that assets must be sold at a fair market price. In line with Sanghani, (2014) by employing financial ratio analysis the firm's liquidity can be judged. These ratios including current ratio, liquid ratio extracted from balance analysis and operating cash flow ratio extracted from cash flow analysis. In line with Bolek and Wolski (2012), the capacity of organization to meet its current liabilities and measured by different financial ratios. The firm can get together its debt and give its client long time payments. The firm will more focused in the commercial place and face the cash issue so the cost of capital contributed will be high. By expanding development of liabilities and short-term deposits bank can cover its liquidity requirements. Moreover , Priya and Nimalathsam, (2013) documented the ability of banks to meet money , check and other commitment immediately when required

and furthermore justify new credit request taking after the current reserve requirements. Liquidity demonstrates that how instantly assets can be changes over into money while relating towards organization. Amengor ,(2010) reported that liquidity of banks refers the banks' ability to satisfy its short terms financial obligations and requirements as and when they come due and these commitments or dues include withdrawal of lending, deposits, and investment, which come about in the normal progress of the Bank actions. According to Das, et al. (2015) profitability refers to the company net income left after payments of expense. The income of banks is generating from the operational activities of banks and the term expenses are the rate or cost of resources is used up in generating that profit or income. The leading objectives of almost all banks are to gain profit.

According to Bagh, et al. (2016) profitability or monetary performance embodies quantifying the outcome of a business's entire polices and operations in terms of money. In order to gauge firms profitability diverse alternatives key financial ratios can be employed e.g. earnings per share, net profit ratio, gross profit ratio, return on equity, assets, and capital employed etc. Arif & Anees, (2012) Liquidity difficulties may deleteriously affect a certain bank's earnings and capital. Under risky situations, it may become reason of failure otherwise solvent bank. Another hurdle may be meeting the depositor's demands. The highest priority of a bank's management is to pay the necessary consideration to the liquidity difficulties. These difficulties should be taken into consideration in timely manners and immediate affirmative and corrective actions should be taken in order to avoid the significances of illiquidity. The study is around the impact of liquidity on the profitability of commercial banking sector of Pakistan. When the banks have sufficient money to meet day to operation is called liquidity. Bank liquidity implies having enough money to meet the commitments.

2.2 Theory of Liquidity

2.2.1 Anticipated Income Theory

According to Alasthi (2014) firms can deal with liquidity problem by giving advances through appropriate techniques and then collecting these advances in time when they become due as well as decrease the reimbursement postponement at the due time. Mercy, (2013) reported if the creditor's prospect revenue of a company increase than creditor can pay back the credit installment in specified period of time and with the help of this refund the necessary liquidity state of the bank is upheld. According to Sobyibo, (2004) the anticipated theory of liquidity particularly focuses on long-term advances. The long terms advances that are prudent for the banks as well as creditor ability and power to pay back advances in a specified period.

2.2.2 Shiftability theory

In accordance to Alashti, (2014) the shiftability theory is a process by which bank interchange or exchange its assets for the extreme liquid bank when there is paucity of liquidity. In addition to this, liquidity of a bank could be greater if it clings to assets in order to sell and offer the national bank as well as the markdown in marketplace equipped to purchase the assets. Moreover, for governing and controlling liquidity transferability or shiftability of banks assets it is central. The abundant source of the liquidity the extreme smart securities

clutch's by bank (Ibe, 2013). According to Kouser et al. (2012) the income of company is kwon to profitability and with a view to gauge profitability they used two impotent proxies i.e. ROE and ROA. Return on Equity is the investment made by shareholders of the in order to earn. In connection with Saleem and Rehman, (2011) reported that for ascertain corporate profitability financial ratio are very important because employees, management, owner, stakeholders are interested and they always have a quest to know about liquidity situation of any organization.

2.2 Empirical Literature Review

This section endowed with empirical literature on the causative impact of liquidity management on profitability. By doing research in by employing different methodologies in different countries UK, India, USA Pakistan, Canada etc. researchers produced different results. However, some of the key major studies are presented in forthcoming discussion. Hakimi and Zaghdoudi (2017) scrutinized the impact of liquidity on Nigerian bank performance over the period 2004 to 2012, by employing generalized method of moment and the results demonstrates that there is a positive liaison between liquidity and Nigerian bank performance. They suggest that the bank should upsurge their liquidity to get improved performance. Moreover, the liquidity, historical performance smooth, debt structure and board size is main drivers of banks' revenue.

The study determines that banks must focus on retain the high level of liquidity to mend their performance as well. Correspondingly, they a reasonable level of debt must be loaned out to keep their performance smooth. Khan and Ali, (2016) probed the association between profitability and liquidity in context of commercial banks in Pakistan covering the period of 2008-2014, and Secondary data utilized for examination which was take out from the last five years annual accounts. After steering infernal statistics analysis it was set up that there as significant positive connection between liquidity by profitability of banks Therefore, it is suggested that banks must have substantial amount from their liquid assets to improve profit.

Moreover, Maqsood, et al, (2016) tested the impact of liquidity management on profitability in banking sector of Pakistan by taking data from 2004-2015. They took eight banks monetary reports and pooled analysis is used for regression and correlation. The results of the study demonstrate that there is a significant link between liquidity and profitability. In addition to this, Ismail, (2016) studied the impact of liquidity management on profitability of 64 Pakistani non-financial firms from 2006 to 2011 by using correlation and regression tools for analysis. The conclusions of study demonstrate the liquidity variable's current ratio and cash conversion cycle have significant positive impacts on profitability (ROA). Bassey and Moses, (2015), explore the connection amongst profitability and liquidity of Nigerian banks covering 2010 to 2012. In this study, ordinary least square method was worked out and observed here is significant connection amongst liquidity measures.

Alashatti, (2015) centered on the effect of liquidity on Jordanian commercial banks profitability from 2015 to 2012. By taking a sample thirteen banks selected and found the positive effect of quick and investment ratio on the profitability while negative effect of capital and liquid ratio on profitability of Jordanian banks. Therefore, the investigator recommends that here is a want to capitalize liquidity at the banks. In many aspects of investments, direction

to rise the banks' profitability and to get profits from the time value of the existing money and the banks must to take on of systematic approaches in recognition of the strong point and weak points in liquidity, exclusively in light of the quick situations that may be display by banks.

According to Mushtaq, et al. (2015) the study concentrated on the trade-off amongst liquidity and profitability of five sectors of Pakistan. As a part of study, quantitative study was used. In the study correlation and panel regression analysis was used. Based on panel regression results are evaluated. The Results recommends that there is positive relationship of liquidity and profitability of firms. Ehiedv, (2014) explored the bond between the liquidity and profitability. In this study Quantitative method was used. Simple correlation tests the hypothesis, Non probability sampling were utilized .The results show that there is significant positive relation between current ratio and profitability, and there is no major relationship between's acid test ratio and profitability.

Likewise, Bareikaite and Martinkutė-Kaulienė, (2014), examined the situation of Lithuanian banks to liquidity threat, and favorable situation towards liquidity and explores the liquidity impact to profitability in Lithuanian banking segment. The investigation determined that Banks should confirm that the supply and demand of liquidity would be managed properly so as to ensure increase in profitability and output.

Nyaga, (2014) studied the effect of liquidity on the profitability of the Ukrainian companies by taking data from 2001-2010. By employing regression analysis and the conclusions indicts that rapid and current ratios have positive significant result on profitability. Rasul, (2013) investigated the effect of liquidity on the Islamic banks profitability from the time period 2001 to 2011. For the sample size five Islamic banks of Bangladesh have been utilized. He found that money and due from banks to aggregate assets has insignificant on ROA. Ajanthan, (2013) analyzed the connection PF liquidity and profitability of Sri Lanka trading companies. The study concentrated on 8 listed trading companies from the period 2008 to 2012. Regression and correlation analysis were utilized and outcomes propose significant relationship amongst liquidity and profitability of listed trading companies of Sri Lanka. Based on the investigation results, the investigator determined that, there is an influence of the liquidity managing on profitability in the Jordanian commercial banks as measured by ROE or ROA.

Furthermore, Ibe, (2013) explored the effect of liquidity and profitability of Nigerian banks. Regression has been used in study and three banks were randomly selected as a sample size. The outcomes express that liquidity is big issue for Nigerian banking industry. Niresh, (2012) examined the relationship amongst liquidity and profitability of 31 listed manufactured firms in Sri Lanka. Investigate over the time of 2007 to 2011 they utilized descriptive statistics and correlation. The outcomes demonstrate that there is no significant relationship amongst the liquidity and profitability of Sri Lankan listed firms. Siame, (2012) the study focused on the effect of liquidity on profitability of listed firm of South Africa over the time period from 2000-2009. The results recommend that there is negative relation between liquidity and effective liquidity management and profitability can increase income to shareholders.

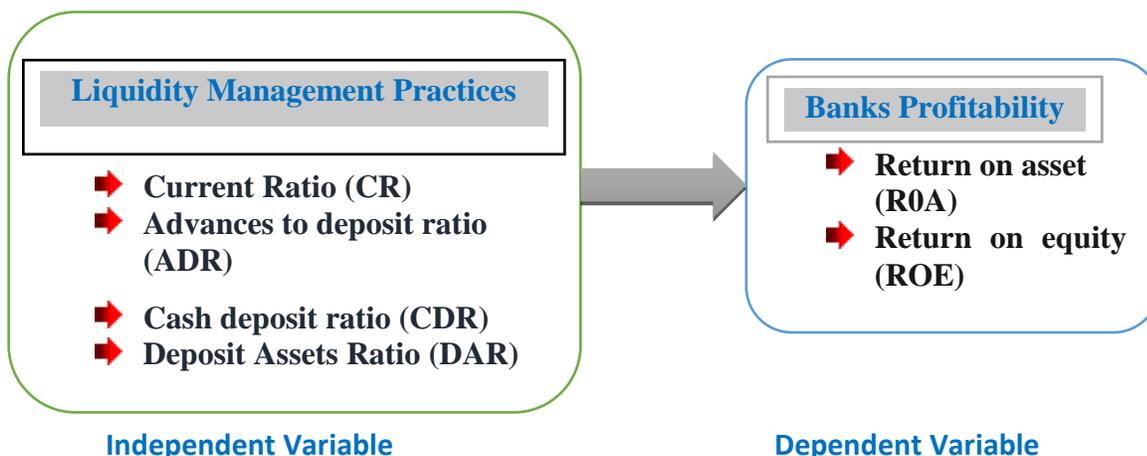
Vodova, (2011) identify determinants of liquidity among Hungarian commercial banks over the time period 2001 to 2010. The outcomes of panel data regression examination show demonstrate that bank liquidity is positively related to capital adequacy of banks, bank profits,

interest rate on loans and negatively related to the size of the bank, interest margin, monetary policy interest rate and the interest rate on interbank exchange. Arif and Anees, (2012) examine the liquidity risk and performance of banking system of 22 Pakistani banks over time 2004-2009. The outcomes of multiple regression show that the liquidity risk affects bank productivity significantly.

Akhtar, et al. (2011) conducted a research on liquidity risk management among conventional and Islamic banking of Pakistan over the period of 2006 to 2009. By using secondary data, the study found that positive but insignificant relationship. Moreover, According to Chen, et al. (2009) examined the relationship among banks performance liquidity and risk of 12 commercial banks in advanced financial countries, for the period of the 1994-2006. The study distinguished that liquidity is an endogenous determining element of bank performance measure by net interest margin, return on assets and return on equity. In addition , Haron and Azmi, (2004) conducted a research the factors of Islamic banks output across many countries showed that there is a significant effect of liquidity risk elements on the banks output. The study outcomes is that profitability is negatively affected by the provision of liquidity gap and non-performing credits. Various researchers have attempted to explore the impact of liquidity on profitability of commercial banks of different countries. The results of existing study been mixed. A trade-off between liquidity and profitability in banking businesses has also been acknowledged.

2.3 Conceptual Framework

Conceptual framework is graphical representation of variables, which are being studied in research. It is important research tool planned to help the researcher to extend understanding of situation.



In the diagram figure 2.1 dependent and independent variables are presented where the dependent variable of the study is banks profitability to measures two proxies i.e. (ROA) Return on Asset and ROE (Return on equity) to be used in this study. Where Liquidity Management Practices is used as an independent variables and to measures Liquidity Management Practices four ratios i.e. Current Ratio, Advances to deposit ratio ,Cash deposit ratio and Deposit Assets Ratio to be used.

2.4 Hypothesis of the study

On the bases of literature the study following two hypotheses are operationalized.

Hypothesis	
H ₁	<i>Liquidity Management has a significant impact on banks performance in Pakistan.</i>
H ₂	<i>Liquidity Management has not significant impact on banks performance in Pakistan.</i>

2.5 Research Gap

In the corporate finance literature, stated earlier most of the studies have typically emphasized on long term financial management decision like capital structure, investment as well as valuation overlooking decision pertained to liquidity management practices Faden (2014). Based upon this perception the cushion is available for research on liquidity management practices. The footing behind the study is to add in mitigating the knowledge gap recognized in the literature relating to liquidity management practices and banks profitability. Yet these research studies are not adequate. Literature review clearly divulges there is deficiency of evidence on liquidity management practices and banks profitability in Pakistan.

3.0 Research Methodology

The study based on deductive approach and the Deductive is one which investigator builds their studies on hitherto existing theories on the foundation of which they develop hypothesis that will be tested later by empirical outcomes (Saunders, 2011). Research designs explain a clear picture of how investigation is conducted. According to (Saunders, 2011) there are three categories of studies named as, exploratory, explanatory and descriptive. This study is explanatory in nature. This study is based on quantitative research method. The unit of analysis the Pakistan banking sector-covering period of 2006-2016 and data collected from annual reports and financial statements from State bank of Pakistan publication and banks. The target population of this research is total commercial banking sector of Pakistan and total banks are 30 in Pakistan that is used for draw the sample. Purposive sampling technique used to access the data based on proximity and availability. Banks are selected whose data will be easily available for research.

In sampling frame, banking sector of Pakistan will be included. The sample size 30 Pakistani banks have been analyzed. The name of banks under study are presented in the table 3.1 in appendix section. The secondary data over the period of 2006-2016 collected largely from annual audited reports. To categorize the impact of liquidity management practices on profitability of banks in Pakistan descriptive statistics and regression analysis have been worked out. To gauge the impact of independent variable on dependent variable regression analysis is employed.

3.1 Variables of the Study

Following are the variables of the study.

3.1.1 Dependent Variable

Banks profitability is taken as a dependent variable of the study and to measures Banks profitability two proxies i.e. Return on Assets (ROA) and return on equity have been used. Our choices are in line with literature review.

3.1.2 Independent Variable

Liquidity Management Practices is used as an independent variables and to measures Liquidity Management Practices four ratios i.e. Current Ratio, Advances to deposit ratio ,Cash deposit ratio and Deposit Assets Ratio to be used.

3.1.3 Variables (Measurements)

Figure 3.2 presents the expiration of the variable to be used in this study.

Table 3.2 Variables (Measurements)

<u>Dependent Variable</u>	<u>Abbreviations</u>	<u>How to Measure</u>
Return on Assets	ROA	ROA=Net Income after taxes/Total Assets
Return on Equity	ROE	ROE=Net income after taxes /Equity
Current Ratio	CR	CR=Current assets /Current liabilities
Advances to deposit ratio	ADR	ADR=Advances and Loans /Total Deposits
Cash deposit ratio	CDR	CDR= Cash and Cash equivalent /Total Assets
Deposit Assets Ratio	DAR	DAR=Total Deposit to Total Assets

3.2 Econometric model specification

In order to identify the impact of liquidity management practices on banks performance in Pakistan following two regression equations have been used.

$$ROA=B_0+B_1CR+B_2ADR+ B_3CDR+ B_4DAS+U_i-----\text{Model [1]}$$

$$ROE=B_0+B_1CR+B_2ADR+ B_3CDR+ B_4DAS+U_i-----\text{Model [2]}$$

Where

ROA =Return on Asset

ROE =Return on equity

CR =Current ratio

ADR =Advances to deposit ratio

CDR=Cash deposit ratio

DAR=Deposit Assets Ratio

B₀ = Constant

β₁, β₂, = Regression Coefficient

U_i=Random error term

4.0 Results and Discussion

This section focuses on the results of the study. The table 4.1 is comprise of descriptive statistics , table 4.2 presents regression analysis of first model , table 4.3 contain the results of second regression equation and finally table 4.4 explains summary of hypotheses testing.

4.1 Descriptive Statistics

Table 4.1 reports the detail of descriptive statistics of main variables of the study. The descriptive statistics tables include range, minimum, maximum, mean, standard deviation and variances of all dependent variable i.e. ROA and ROE as well as independent variable, CR, ADR, CDR and DAS.

Table: 4.1 Descriptive Statistics

<u>Variables</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Range</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Variance</u>
ROA	0.820	2.53	1.15	1.57	0.46	0.23
ROE	13.46	24.33	8.77	18.92	2.84	13.69
CR	0.68	0.79	0.17	0.98	0.04	0.190
ADR	0.791	0.68	0.17	0.28	0.53	0.090
CDR	0.11	0.14	0.07	0.12	0.04	0.090
DAS	0.09	0.14	0.08	0.13	0.23	0.080

4.2 Regression Analysis

It is used to estimate the impact of independent variable on dependent variables. It also helps us to explain how change in dependent variable brings change in independent variable. It also helps to understand which variable is proving that independent variable is related to dependent variable and also identify their relationship. A multiple regression was conducted to determine the impact of liquidity on the profitability of banking sector in Pakistan.

4.2.1 Regression Analysis

To ascertain the impact of liquidity management on the profitability of banks in Pakistan the following regression model is to be used:

$$ROA = B_0 + B_1CR + B_2ADR + B_3CDR + B_4DAS + U_i \text{-----Model [1]}$$

Table: 4.2 Regression Analyses

<u>Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>t-Statistic</u>	<u>Prob.</u>
C	-0.003231	0.008098	-0.245236	0.8074
ADR	0.000169	7.04E-07	23.95230	0.0000
CR	0.018381	0.082143	0.830096	0.0108
CDR	0.023388	7.044406	33.95231	0.0001
DAS	0.020163	0.029148	0.860096	0.0308
R-squared	0.917832	Mean dependent var		0.049227
Adjusted R-squared	0.904743	S.D. dependent var		0.109280
S.E. of regression	0.023704	Akaike info criterion		-4.145819

Sum squared resid	0.040586	Schwarz criterion	-4.015993
Log likelihood	104.3176	Hannan-Quinn criter.	-4.071879
F-statistic	285.9128	Durbin-Watson stat	0.755764
Prob(F-statistic)	0.000000		

R-squared value of ROE is 0.917832 which shows that 91.7832%% variation in dependent variable is explained by the independent variables (ADR, CR, CDR and DAS) in the model. The current ratio has negative relationship with ROA. Adjusted R square (AR) value of coefficient is 0.904743, which shows that 90.4743% of the deviation in the dependent variable is expounded by the independent variables of the model. The beta value shows both the proxies have positive impact on Profitability of Pakistani Banks. The F-value represents the overall model predictive power. The first model has the predicting power to capture the effect of liquidity management on banks profitability understudy. The study results are in confirmation with Ali et al. (2011).

4.2.2 Regression Analysis

To ascertain the impact of liquidity management on the profitability of banks in Pakistan the following regression model is to be used:

$$ROE=B_0+B_1CR+B_2ADR+ B_3CDR+ B_4DAS+U_i\text{-----Model [2]}$$

Table: 4.3 Regression Analyses

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.124028	0.126491	-1.352491	0.00827
ADR	-1.21E-05	7.23E-07	-0.147482	0.03834
CR	0.414569	0.253541	1.739089	0.04320
CDR	0.233-05	8.317-09	0.126481	0.01834
DAS	0.254569	0.136441	1.514289	0.04320
R-squared	0.562610	Mean dependent var		0.007170
Adjusted R-squared	0.532611	S.D. dependent var		0.350347
S.E. of regression	0.348186	Akaike info criterion		0.785977
Sum squared resid	5.697986	Schwarz criterion		0.800688
Log likelihood	-16.64917	Hannan-Quinn criter.		0.929651
F-statistic	1.314979	Durbin-Watson stat		2.390028
Prob(F-statistic)	0.00 2825			

In the table 4.3 the value of R-squared is 0.562610 which express that 56.26 % discrepancy in elucidated by the independent variables (ADR, CR, CDR, and DAS) in the model. Adjusted R-squared value also justifying this effects the Adjusted R-squared (AR) value of coefficient is 0.532611which shows 53.2611 %of variation in independent variable is explained by the independent variable of the model. The beta value shows current ratio positive impact on ROA while ADR has negative impact on ROE of Pakistani Banks. F value represents the model 'fitness. Second model like first model has the vigorous potency. The study results are in line with Ali and Akhtar, (2011).

4.4 Testing of Hypothesis

Hypothesis		Decision
H ₁	<i>Liquidity Management has a significant impact on banks performance in Pakistan.</i>	Accepted
H ₂	<i>Liquidity Management has not significant impact on banks performance in Pakistan.</i>	Rejected

4.4 Discussion

The study results demonstrated that liquidity management has significant impact on the profitability of banks under study and these results are in consistent with Ail and Akhter (2011). From this study it is conclude that the profitability of selected Pakistani banks is affected by liquidity management. Firms should have a moderate level of liquidity by doing so their going concern standing does not shaken and however allows firms to create adequate returns on their funds as well. This is so because, based upon results of present study we found positive impact of liquidity on profitability guarantees in picking up profitability of firms. Hence it is suggested that the financial institutions should strive to find best possible strike between profitability and liquidity. This recommendation is as per Wang, (2002). Based upon key finding, all financial markets should have a comprehensively approved liquidity management procedures, practices and policies mechanism and exclusively tailored for their financial institutions and management must responsible for aptly implementing these polices and strategies on priority basis.

5.0 Summary, Conclusion and Recommendations

In the corporate finance milieu Liquidity management and profitability are considered to be the one of touchiest subjects. Liquidity management plays dynamic role in determining the effectiveness of the business. Liquidity and profitability both are crucial for banks because it can influence the smooth operations of the banks; therefore it rightfully attracts a lot of attention from researcher. The central objective of the study is to scrutinize the impact of liquidity on the profitability of banks Pakistan covering period of 2006-2016. From audited annual financial reports secondary data was collected. The quantitative research designed and Descrptive statistics were worked out to examine impact of liquidity on profitability. Banks profitability used as dependent variable and to gauge banks profitability two proxies i.e. Return on assets (ROA) and Return on equity (ROE) have been applied. Liquidity Management has been treated as independent variable and to measure liquidity four key indicators of liquidity management i.e. Current Ratio and advances to deposit ratio (ADR), Cash deposit ratio CDR and Deposit Assets Ratio DAR were put in use.

The results demonstrates that ADR, CDR and DAR has positive and significant impact on ROA whereas negative and significant impact on ROA. CR, ADR, CDR and DAR have positive and significant impact on ROE. It is concluded the profitability of banks understudy is influenced by liquidity management proxies. Therefore, firms must consider liquidity management practices

and must designed and implement strategies that in turn help banks to keep the trade of between liquidity and profitability in order to boosting business profit.

5.1 Policy Recommendations

Based upon results this study offers following Policy recommendations.

- 1) Firms should have a moderate level of liquidity by doing so their going concern standing does not shaken and however allows firms to create adequate returns on their funds as well. This is so because, based upon results of present study we found positive impact of liquidity on profitability guarantees in picking up profitability of firms. Hence it is suggested that the financial institutions should strive to find best possible strike between profitability and liquidity. This recommendation is as per Wang, (2002).
- 2) Based upon key finding, all financial markets should have a comprehensively approved liquidity management procedures, practices and policies mechanism and exclusively tailored for their financial institutions and management must responsible for aptly implementing these polices and strategies on priority basis.

5.3 Limitations of the Study

Limitation of the study is detailed as below;

1. Our study is conducted on the banking sector of Pakistan from 2006-2016. The study is mainly concentration on banking sector for particular time so the outcomes of the study couldn't be generalized on different segments of economy. Only 11 years data have been used in this study, further year data might have been used.
2. The study has been conducted by relying on the secondary source of data. All profitability ratios and liquidity ratios are not measured because of sufficient information. Further banks data might have been used.

5.4 Foundation for Future Research

The present study investigated the topic of liquidity management practices on profitability of banks in Pakistan and opens new opportunities for future researchers in the following ways;

1. Future research could extend by covering more banks by doing cross country research in order to strengthen results.
2. Secondly, a comparative study may be carried out by categorized banks according to market capitalization, size, and market share.
3. Strata techniques of sampling may be used in place of so called statistical sampling techniques like simple random, purposive and convenient sampling.
4. Moreover, addition of primary data can further offer an improvement in conjunction with reliability and quality of results.

Reference

- Akter, A., & Mahmud, K. (2014). Liquidity-profitability relationship in Bangladesh banking industry *International Journal of Empirical Finance*, 2(4), 143-151
- Akter, A., & Mahmud, K. (2012). Liquidity-profitability relationship in Bangladesh banking industry *International Journal of Empirical Finance*, 2(4), 112-134
- Arif, A., & Nauman Anees, A. (2012). Liquidity risk and performance of banking system *Journal of Financial Regulation and Compliance*, 20(2), 182-195
- Arif, A., & Nauman Anees, A. (2011). Liquidity risk and performance of banking system, *Journal of Financial Regulation and Compliance*, 20(2), 182-195
- Amengor, E. C. (2010). Importance of liquidity and capital adequacy to commercial banks. A Paper Presented at Induction Ceremony of ACCE, UCC Campus
- Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank-specific and macroeconomic indicators of profitability-empirical evidence from the commercial banks of Pakistan. *International Journal of Business and Social Science*, 2(6), 235-242
- Alshatti, A. S. (2015). The Effect of the Liquidity Management on Profitability in the Jordanian Commercial Banks. *International Journal of Business and Management*, 10(1), 62.
- Alshatti, A. S. (2015). The Effect of the Liquidity Management on Profitability in the Jordanian Commercial Banks. *International Journal of Business and Management*, 10(1), 62
- Alagathurai, A. (2013). A nexus between liquidity & profitability: a study of trading companies in Sri Lanka. ,” *European Journal of Business and Management*, Vol. 5, No. 7, 2013, pp. 221-237.
- Akter, A., & Mahmud, K. (2014). Liquidity-profitability relationship in Bangladesh banking industry, *International Journal of Empirical Finance*, 2(4), 112-134
- Bagh, T., Khan, M. A., Azad, T., Saddique, S., & Khan, M. A. (2017). The Corporate Social Responsibility and Firms’ Financial Performance: Evidence from Financial Sector of Pakistan. *International Journal of Economics and Financial Issues*, 7(2), 301-308
- Bareikaite, E., & Martinkute-Kauliene, R. (2014). Liquidity Risk and its Management in Lithuanian Banking System, *Mokslas: Lietuvos Ateitis*, 6(1), 64
- Bassey, G. E., & Moses, C. E. (2015). Bank profitability and liquidity management: a case study of selected Nigerian deposit money banks. *International Journal of Economics, Commerce and Management*, III (4)
- Bagh, T., Nazir, M. I., Khan, M. A., Khan, M. A., & Razzaq, S. (2016). The Impact of Working Capital Management on Firms Financial Performance: Evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(3).
- Chen, C. W., Wang, M. H., & Lin, J. W. (2009). Managing target the cash balance in construction firms using a fuzzy regression approach. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 17(05), 667-684.
- Das, S. (1995). Size, age and firm growth in an infant industry: The computer hardware industry in India. *International Journal of Industrial Organization*, 13, 111-126.
- Eljelli M. A. (2004), Liquidity-profitability tradeoff: An empirical investigation in emerging market. *International Journal of Management* Vol. 14. Emerald Publishing Ltd.

- Ehiedu, V. C. (2014). The impact of liquidity on profitability of some selected companies: The financial statement analysis (FSA) approach. *Research Journal of Finance and Accounting*, 5(5), 81-90.
- Faden, C. (2014). Driving firm performance based on an integrated operations approach consisting of manufacturing, supply chain management, working capital management and supply chain risk steering. In *Optimizing Firm Performance* (pp. 78-110) Springer Fachmedien Wiesbaden.
- Ibe, S. O. (2013). The Impact of Liquidity Management on the Profitability of Banks in Nigeria. *Journal of Finance and Banking Management*, 1(1), 37–48. Retrieved from <http://www.aripd.org/jfbm>
- Haron, S. (2004). Determinants of Islamic bank profitability. *Global Journal of Finance and Economics*, 1(1), 11-33.
- Ismail, R. (2016). Impact of Liquidity Management on Profitability of Pakistani Firms: A Case of KSE-100 Index. *International Journal of Innovation and Applied Studies*, 14(2), 304
- .Ibe, S. O. (2013). The impact of liquidity management on the profitability of banks in Nigeria. *Journal of Finance and Bank Management*, 1(1), 37-48.
- Hakimi, A., & Zaghdoudi, K. (2017). Liquidity Risk and Bank Performance: An Empirical Test for Tunisian Banks. *Business and Economic Research*, 7(1), 46-57.
- Kashyap, A. K., Rajan, R., & Stein, J. C. (2002). Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking. *The Journal of Finance*, 57(1), 33-73.
- Kouser, R., Bano, T., & Azeem, M. (2012). Inter-Relationship between Profitability, Growth and Size: A Case of Non-Financial Companies from Pakistan. *Pakistan Journal of Commerce & Social Sciences*, 6(2).
- Khan, A., & Mutahhar Ali, R. (2016). Impact of Liquidity on Profitability of Commercial Banks in Pakistan: An Analysis on Banking Sector in Pakistan. *Global Journal of Management and Business Research*, 16(1).
- Mercy, O. E. (2014). Corporate Governance and Organizational Performance in Nigerian Banks. *Corporate Governance*, 6(16)
- Mushtaq, H., Chishti, A. F., Kanwal, S., & Saeed, S. (2015). Trade off between Liquidity and Profitability. *International Journal of Scientific Research and Management*, 13(5), 2823-2842
- Niresh, J. A. (2012). Trade-off between liquidity & profitability: A study of selected manufacturing firms in Sri Lanka. *Researchers World*, 3(4), 34
- Nyaga, L. M. (2014). The relationship between liquidity management and stock market return: evidence from commercial banks (Doctoral dissertation, University of Nairobi).
- Nwaezeaku, N. C. (2006). *Theories and Practice of Financial Management* Owerri: Ever Standard Publishing
- Nahum and Amarjit S. Gill (2013), *The impact of corporate governance on working capital management efficiency of American manufacturing firms*, Emerald Publishing Ltd.
- Masud, M., Hossain, K., & Rekha, R. S. (2016). Profitability and liquidity of conventional banking and Islamic banking in Bangladesh: A comparative study. *IJAR*, 2(9), 318-327.
- Pandey I. M. (2005): *Financial Management*, New Delhi, India, Vikas Publishing House.

- Priya, K., & Nimalathan, B. (2013). Liquidity management and profitability: A case study of listed manufacturing companies in Sri Lanka. *International Journal of Technological Exploration and Learning*, 2(4), 135-151.
- Rehman, M. Z., Khan, M. N., & Khokhar, I. (2015). Investigating Liquidity-Profitability Relationship: Evidence from Companies Listed in Saudi Stock Exchange (Tadawul). *Journal of Applied Finance and Banking*, 5(3), 159.
- Rasul, L. M. (2013). Impact of Liquidity on Islamic Banks' Profitability: Evidence from Bangladesh. *Acta Universitatis Danubius. Œconomica*, 9(2).
- Saleem, Q., & Rehman, R. U. (2011). Impacts of liquidity ratios on profitability (Case of oil and gas companies of Pakistan). *Interdisciplinary Journal of Research in Business*, 1(7), 95-98.
- Soyibo, A., Alashi, S. O., & Ahmad, M. K. (2004). A positive and normative analysis of bank supervision in Nigeria (Vol. 145). Nairobi: African Economic Research Consortium.
- Siame, C. (2012). The relationship between profitability and liquidity in South African listed firms (Doctoral dissertation, University of Cape Town).
- Saunders, M. N. (2011). *Research methods for business students*, 5/e. Pearson Education India.
- Sanghani, D. A. (2014). The Effect of Liquidity on the Financial Performance of Non-Financial Companies Listed At the Nairobi Securities Exchange. Unpublished MBA Project
- Vodovà, P. (2011), "Liquidity of Czech Commercial Banks and its Determinants", *International Journal of Mathematical Models and Methods in Applied Sciences*, Vol. 6, No. 5, pp. 1060-1067.
- Zhang, M. J. (2011). Firm-level performance impact of IS support for product innovation. *European Journal of Innovation Management*, 14(1), 118-132.

Appendix
Table 3.1
List of Banks to be Analyzed (Listed with PSX)

<u>List of Banks Analyzed (Listed with PSX)</u>			
S.No.	Names of Banks	S.No.	Names of Banks
1	Habib Bank Limited	16	JS Bank Limited
2	United Bank Limited	17	Citi Bank Limited
3	Askari Bank Limited	18	Royal Bank Limited
4	Bank Al Falha	19	Metropolitan Bank Limited
5	Bank Al Habib Limited	20	The Bank Of Khyber Limited
6	Faysal Bank Limited	21	The Bank Of Punjab Limited
7	Allied Bank Limited	22	Standard Chartered Pak-Limited
8	Summit Bank Limited	23	Meezan Bank Limited
9	Suadi Commercial Bank	24	Prime Commercial Bank Limited
10	Muslims Commercial Bank Limited	25	PICIC Bank Limited
11	Nib Limited	26	Atlas Bank Limited
12	Samba Bank Limited	27	Bolan Bank Limited
13	Silk Bank Limited	28	Standard Chartered Bank
14	Soneri Bank Limited	29	Union Bank Limited
15	The Bank Of Sindh Limited	30	KASB Bank Limited