Journal of Internet Banking and Commerce

An open access Internet journal (http://www.icommercecentral.com)

Journal of Internet Banking and Commerce, December 2016, vol. 21, no. 3

EXPLORING THE IMPACT OF LIQUIDITY ON PROFITABILITY: EVIDENCE FROM BANKING SECTOR OF PAKISTAN

AHMAD WALEED

National College of Business Administration & Economics, Pakistan,

Tel: 923136051799;

Email: awaleedpk@gmail.com

AHMAD TISMAN PASHA

University Utara Malaysia, Malaysia

ADEEL AKHTAR

Bahauddin Zakariya University, Multan, Pakistan

Abstract

This purpose of the research was directed to review the trade-off among liquidity and profitability in the banking sector. The research was applied to all listed banks of Pakistan Stock Exchange during the time period of 2010-2015. Document investigation was the key research method adopted to gather secondary data for the research. Six research models were stated and valued via Ordinary Least Squares (OLS) method. The observed outcomes exposed significant connection among bank liquidity ratios and return on assets, return on equity, net profit margin, and Tobin Q. However, return on

investment and earning per share relationship with liquidity is insignificant. These outcomes are chiefly appropriate as policymakers plan new standards establishing a suitable level of liquidity for banks. This will expand the profits of shareholders but will correspondingly improve the usage of the assets of the bank.

Keywords: **Liquidity, Profitability, ROE, ROA, EPS, ROI, Bank**

INTRODUCTION

The banks perform a significant part in the growth and progress of economy [1]. The banking sector is an essential part of the financial structure, plays a significant part of intermediation among depositors and borrower [2]. Banks perform the valuable action on the both sides of the financial statement. On the assets side of the financial statement, banks increase the movement of assets by loaning to the money needy peoples, while banks deliver liquidity to depositors on the liability side of the financial statement [3].

Banks simplify the payments and support the even allocation of goods and services for their customers. Banks certify productive asset of capital to prompt the financial progress. The banking sectors assist to growing the new business because new business rises the jobs and easing the growth. The banks as financial organization handle the demand and supply of liquidity in a suitable way with the aim to continue their business safe and sound, sustain decent relationships with the stakeholders and avoid liquidity issue. The liquidity issue usually happens due to failures in the managing of resources, negative economic situations which lead towards uncertain cash drawings by the account holder [4] and it negatively affects the effectiveness of the bank [5,6].

The long-term lending creates liquidity complications for a banking sector [7]. The effect of liquidity on the profitability is to explain the investments or assets of the bank such a means that the bank perhaps capable of paying the rapid liability due upon it without substantial damage. The pre-arrangement of assets will lead toward gain profit. A wide literature is nearby the investigation of liquidity holdings for organizations. While a limited amount of literature appear to contain liquidity as an independent variable for bank profitability. Still, there are gap lies in the literature of liquidity in the emerging economies like Pakistan. There is a huge amount of work in uncomplete related to the matter of liquidity in the banking sector of Pakistan.

Pakistani Banking Sector

The banking sector is an important immediate for progress and chief lender to private and public segments [8]. A well-established financial sector can consume financial crisis and can give a stage to build up the financial structure of the state [9]. Pakistan banking

had experienced turmoil since the time of independence [10]. State Bank of Pakistan (SBP) controls banking sector, under the Banking Companies Ordinance of 1962. SBP is an autonomous figure for the regulation of the banks. This is the responsibility of SBP to check the performance of banks and confirm that the bank is following definite standards, rules, and guidelines. SBP promote the banking sector through the process of privatization which driven foreign and local investors in Pakistan. SBP has authority to make action against any noncompliance by the banking sector. At present, there are 54 banks and financial development organizations operating in Pakistan [11].

PROBLEM OF STUDY

Banking sector of Pakistan is fronting many variations and challenges, and most especially deliver liquidity, as the failure in the level of liquidity of any bank can be reflected negatively on the financial performance as an outcome of its incapacity to implement operational plans, in view of that the financial performance is detailed measure for the success of the bank. Many studies have established that there is close connection between liquidity ratios and profitability ratios as delimiters of financial performance of the companies [12-14]. In view of the above the research question for this research also evolved: What is the nature of the link among liquidity ratios and profitability ratios.

LITERATURE REVIEW

Liquidity

The concept of “liquidity” is use to address financial condition of the bank. Another author defined liquidity as “the ability to settle obligations with immediacy”. The management of liquidity is essential for financial and non-financial firms [15]. This is a responsibility of the bank to pay the financial obligations, the financial obligations contain long and short-term debts and other financial expenses. Liquidity is a way which is used by the bank or banking sector to transform assets into the shape of cash to made payment in cash [3].

This is a responsibility of all banks to encounter their fiscal duties, banks convert their current assets into the shape of cash to pay the due obligations. The banks having less amount in current assets will face difficulties in ongoing its processes and if the amount of currents assets is too high, this displays that the return on investment for the bank is not in the unspoiled state [16,17].

The liquidity ratio is important in mostly organizations like banks because banks typically work through the huge number of funds deposited by savers. Liquidity ratios calculate a bank capacity to see the payment responsibilities by relating the cash with the payment responsibilities. Liquid assets mostly comprise of cash, marketable securities, sovereign debt central bank reserves [18]. This is good if the liquid assets of the banks must be marketable securities because marketable securities are easy to

convert into the form of cash without [19].

The Liquidity risk management is a crucial factor for risk management framework of the banking sector and other financial institutions because it affects the profitability [20]. A well-managed liquidity monitoring regulates more or less managing decisions on the basis of on bank liquidity situations to avoid losses [21].

Profitability

The matter of bank profitability is a central forecaster of financial crises [22]. The profitability of banking sector is important with the aim to estimate the constancy and reliability of the financial and banking sector [23].

Another author described profitability as the variation between expenses and revenues through a fixed period of time, generally fixed period is consisting of one financial year [24]. This is essential of banks for to generate sufficient amount of income endure that will lead on the way additional growth and expansion.

Author claimed that preparation for bank profitability is furthermost major and challenging part made by the administration of the bank because numerous factors are tangled in the decision [25]. The profit planning and management is more complex in the highly challenging economic environment.

The profitability is represented by three alternative variables [26]. First, most important profitability ratio is the return on asset (ROA), ROA shows the ability of bank asset to produce the profit. Another ratio is the return on equity (ROE), this ratio mentions the returns to shareholders on their equity. The next one is the return on Investment (ROI), it measures the bank's efficiency by using invested capital. Scholar stated that Earnings per share (EPS) serve as a pointer of a bank’s profitability [27]. Another scholar stated that Net profit margin (NPM) and Tobin Q as bank’s profitability factor [28].

Association among Liquidity and Profitability

There are many theories demonstrate the link between liquidity and profitability of the banks. Researchers conducted research in on banking sector of United States and proposed that more liquidity is typically costly for banks, signifying that more liquidity cuts profitability of the banks [29]. Another researcher argues that liquidity level vary time to time, holding larger capital would risk their profitability lead towards less lending [30]. Liquidity problems can interrupt a bank’s incomes in risky circumstances may result in the downfall or bankrupt [31,32].

In earlier research stated that the banks with high liquidity have a lower rate of net interest margins [33,34]. In the time of liquidity crisis, the bank may borrow from the market remarkably high rate and this is eventually reasons decline in the profitability of the bank. Another scholar makes clear the connection among liquidity and profitability in

short [25]. They stated that banks preserve the high quantity of cash funds compared to the deposits held by the bank. The reserve will not earn a profit for the bank but if they approve the plan financing reserved money for raising the profit of bank they might face the serious issue like liquidity crisis. Banking sector of Pakistan faced a hard time in loaning to the private sector in 2008 because of the liquidity crisis.

RESEARCH DESIGN

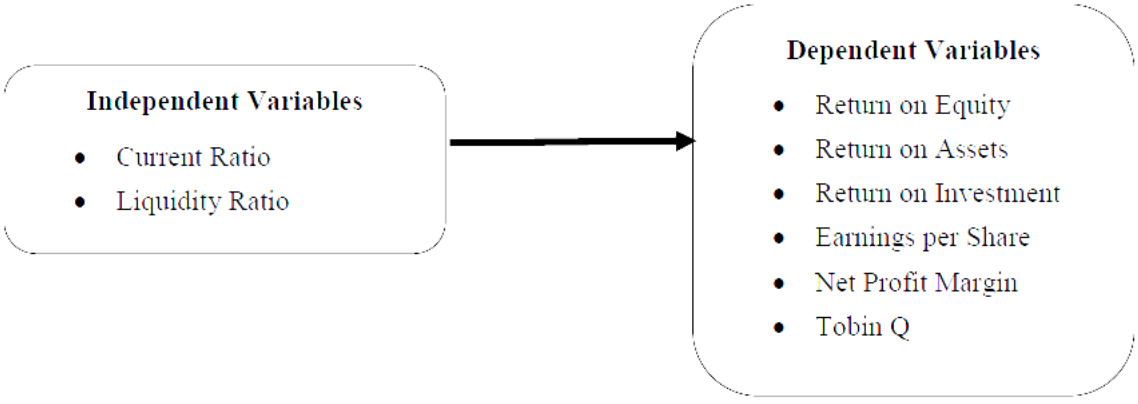
This research is quantitative explanatory study. The research is based on the panel data of variables. The aim of this research to observed phenomenon with a perception to approve a suitable liquidity management strategy for the banks [35].

Sources of Data

The research used data from the annual reports of all KSE-100 index banking sector for the reason that there is no record which may deliver the firm-level statistics for Pakistani firms, mainly concentrating on the board features. The research period involved of six years ranging from 2010-2015. The yearly reports of the banks were together from different sources for example, firms' authorized websites, and from the Pakistan stock exchange (PSX). The annual reports of the firms deliver the credible data [36,37] for the reason that these reports are organized by the accounting experts in accord with the International Accounting Standards, Companies Ordinance, 1984, and stock exchange specification. Additional, all annual reports are also examined by the autonomous external accountants. So here is no problematic of authentically of the data used in this research. Throughout the research time, it was found that some banks were delisted or not listed, so, those were let off from the concluding sample (Figure 1).

Specification of Model

Figure 1: Showing Independent variables and Dependent Variables.



Explanation of Variables

Liquidity ratios: This study is two most important liquidity ratios to find the link among two variables. Current ratio (CR=current assets divided by current liabilities) and liquidity ratio (LR=cash plus investment divided by current liabilities).

Profitability ratios: This study characterized bank profitability into two actions i.e. and firm profitability (accounting based bank performance) and firm value (market-based bank performance).

Bank profitability used five indicators: return on assets (ROA=net profit divided by total assets), return on equity (ROE=net profit divided by total equity), return on investment (ROI=Net income divided by Investment), earning per share (EPS=net income divided by average outstanding common shares) and Net Profit Margin (NPM=Net Income divided by Total sales).

Bank value was measured through: Tobin's Q (market capitalization divided by total assets).

Analytical Methodology

This study is estimating the result of liquidity on profitability by probing the financial numbers of the banking sector by applying Ordinary Least Squares (OLS) using Eviews 9. Eviews is a modern statistical method which allows structure models in addition to the check of series of connection.

Model

$ROA=\alpha 1 + \beta 1\ CR + \beta 2\ LR + Ui$ MODEL (1)

$ROE=\alpha 1 + \beta 1\ CR + \beta 2\ LR + Ui$ MODEL (2)

$ROI=\alpha 1 + \beta 1\ CR + \beta 2\ LR + Ui$ MODEL (3)

$EPS=\alpha 1 + \beta 1\ CR + \beta 2\ LR + Ui$ MODEL (4)

$NPM=\alpha 1 + \beta 1\ CR + \beta 2\ LR + Ui$ MODEL (5)

$TobinQ=\alpha 1 + \beta 1\ CR + \beta 2\ LR + Ui$ MODEL (6)

Where:

ROA: Return on Assets; ROE: Return on Equity; ROI: Return on Investment; EPS: Earning per Share; NPM: Net profit Margin; TobinQ: Firm's Market Value; CR: Current Ratio; LR: Liquidity Ratio; α: The constant; β: The regression coefficient.

RESULTS

Table 1: Analysis of ROE.

Sr. no	Dependent	Independent	Co efficient (β)	P-vale	R^2
1	ROE	CR	0.055969	0.0042	0.068257
2		LR	-0.110527	0.0035	

As a result, from the Table 1 analysis, ROE is affected by the two ratios Current Ratio and Liquidity Ratio. Both independent variable p-values are less than 5%. ROE is directly affected by the CR 0.055969, and LR -0.110527 and Standard error (S.E) is CR 0.019173, LQ 0.037073 and P-value CR 0.0042and LR 0.0035 and R-square value 0.1198.

Table 2: Showing that ROA is directly affected by the two ratios Current Ratio and Liquidity Ratio.

Sr. no	Dependent	Independent	Co efficient (β)	P-vale	R^2
1	ROA	CR	0.003263	0.0011	0.083388
2		LR	-0.0058	0.0026	

Table 3: ROI has no sufficient impact on Liquidity Ratio.

Sr. no	Dependent	Independent	Co efficient (β)	P-vale	R^2
1	ROI	CR	0.006428	0.069	0.044311
2		LR	-0.0081	0.2345	

The outcomes of Table 2 examination, ROA is directly affected by the two ratios Current Ratio and Liquidity Ratio. Both independent variable p-value is less than 5%. ROA is directly affected by the CR 0.003263, and LR -0.0058 and Standard error (S.E) is CR

0.000977, LQ 0.001889 and P-value CR 0.0042and LR 0.0035 and R-square value 0.1198.

The conclusion of Table 3 inspection, ROI has no sufficient impact on Liquidity ratio. Both independent variable p-value is more than 5%. ROI is not affected by the CR 0.006428, and LR -0.0081 and Standard error (S.E) is CR 0.003505, LQ 0.006777 and P-value CR 0.069 and LR 0.2345 and R-square value 0.044311.

Table 4: EPS have a negative impact on liquidity ratio.

Sr. no	Dependent	Independent	Co efficient (β)	P-vale	R^2
1	EPS	CR	0.523942	0.4465	0.022261
2		LR	-1.18844	0.3391	

The Table 4 shows that EPS have a negative impact on liquidity ratio. The p-value of model 4 is greater than 5%. EPS is not directly affected by the CR 0.523942, and LR -1.18844 and Standard error (S.E) is CR 0.68215, LQ 1.229933 and P-value CR 0.4465 and LR 0.3391 and R-square value 0.022261.

Table 5: Shows that NPM has a positive impact on liquidity ratios.

Sr. no	Dependent	Independent	Co efficient (β)	P-vale	R^2
1	NPM	CR	0.047156	0.01	0.056057
2		LR	-0.09369	0.0082	

The Table 5 express that NPM has a positive impact on liquidity ratios. Both dependent variable p-value is less 5%. NPM is affected by the CR 0.047156, and LR -0.09369 and Standard error (S.E) is CR 0.018018, LQ 0.034839 and P-value CR 0.01 and LR 0.0082 and R-square value 0.056057.

Table 6: Demonstrates that independent variable TobinQ have a positive impact on liquidity ratios.

Sr. no	Dependent	Independent	Co efficient (β)	P-vale	R^2
1	TobinQ	CR	1.053128	0.0087	0.058481
2		LR	-1.72151	0.0259	

The Table 6 demonstrates that independent variable TobinQ have a positive impact on liquidity ratios. Both dependent variable p-values are less 5%. TobinQ is affected by the CR 1.053128, and LR -1.72151 and Standard error (S.E) is CR 0.394736, LQ 0.763259 and P-value CR 0.0087 and LR 0.0259 and R-square value 0.058481.

CONCLUSION

This study exhibits empirical evidence about the bond among liquidity and profitability of listed banks of Pakistan Stock Exchange over the period of 2010 to 2015. This research studies six models to find a link between liquidity and profitability. The results of fours models show positive impact and two models shows a negative effect. The empirical consequences deliver also the conclusion that the profitability of banking sector can be increased together with the growth of the number of accounts payables days. In the opinion of the statistic that liquidity has a quantity of impact on the profitability of a bank, it is significant that financial institutions like banks handle their liquidity splendidly.

When banking sector grip adequate liquid assets, banks profitability would expand. Adequate liquidity supports the bank to lessen financial crises and liquidity risk. The bank can consume any possible unexpected shock wave produced by an unforeseen want for the reduction in liabilities or rise in assets side of the balance sheet. Though, if liquid assets of the bank are detained extremely, the profitability of the bank could reduce.

REFERENCES

1. Halling M, Hayden E (2006) Bank failure prediction: a two-step survival time approach.
2. Minsky HP (1992) The financial instability hypothesis. The Jerome Levy Economics Institute Working pp: 74.
3. Diamond DW, Rajan RG (2005) Liquidity shortages and banking crises. The Journal of finance 60: 615-647.
4. Siddiqi MN (2009) Current financial crisis and Islamic economics. Insights 1: 141.
5. Chaplin G, Emblow A, Michael I (2000) Banking system liquidity: developments and issues. Financial Stability Review 4: 93-112.
6. Sohaimi ANA (2013) Liquidity Risk and Performance of Banking System in Malaysia.

7. Kashyap AK, Rajan R, Stein JC (2002) Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking. The Journal of finance 57: 33-73.
8. Raza A, Farhan M, Akram M (2011) A comparison of financial performance in investment banking sector in Pakistan. International Journal of Business and Social Science 2.
9. Aburime T (2009) Impact of political affiliation on bank profitability in Nigeria. African Journal of Accounting, Economics, Finance and Banking Research 4.
10. Shah SQ, Jan R (2014) Analysis of financial performance of private banks in Pakistan. Procedia-Social and Behavioral Sciences 109: 1021-1025.
11. SBP (2016) Quarterly Compendium: Statistics of the Banking System. State Bank of Pakistan.
12. Alagathurai A (2013) A nexus between liquidity & profitability: a study of trading companies in Sri Lanka. In: Ajanthan A (eds) A Nexus Between Liquidity & Profitability: A Study of Trading Companies In Sri Lanka. European Journal of Business and Management 5: 221-237.
13. Durrah O, Rahman AAA, Jamil SA, Ghafeer NA (2016) Exploring the Relationship between Liquidity Ratios and Indicators of Financial Performance: An Analytical Study on Food Industrial Companies Listed in Amman Bursa. International Journal of Economics and Financial Issues 6.
14. Saleem Q, Rehman RU (2011) Impacts of liquidity ratios on profitability. Interdisciplinary Journal of Research in Business 1: 95-98.
15. Drehmann M, Nikolaou K (2013) Funding liquidity risk: definition and measurement. Journal of Banking & Finance 37: 2173-2182.
16. Jagongo A, Makori D (2013) Working Capital Management and Firm Profitability: Empirical Evidence from Manufacturing and Construction Firms Listed on Nairobi S ecurities Exchange, Kenya.
17. Van Horne JC, Wachowicz JM (2008) Fundamentals of financial management. Pearson Education.

18. Duijm P, Wierts P (2016) The effects of liquidity regulation on bank assets and liabilities. International Journal of Central Banking 12: 385-411.
19. Carlin BI, Kogan S, Lowery R (2013) Trading complex assets. The Journal of finance 68: 1937-1960.
20. Majid A, Rais A (2003) Development of liquidity management instruments: challenges and opportunities. Paper presented at the International Conference on Islamic Banking: Risk Management, Regulation and Supervision, held in Jakarta Indonesia September.
21. Merrouche O, Schanz J (2010) Banks' intraday liquidity management during operational outages: Theory and evidence from the UK payment system. Journal of Banking & Finance 34: 314-323.
22. Demirgüç-Kunt A, Detragiache E (2000) Monitoring banking sector fragility: a multivariate logit approach. The World Bank Economic Review 14: 287-307.
23. Albertazzi U, Gambacorta L (2009) Bank profitability and the business cycle. Journal of Financial Stability 5: 393-409.
24. Heibati F, Seid Noorani M, Dadkhah S (2009) Evaluation of private banks compared to banks performance of countries around Arabic Gulf. Journal of Economic 6: 91-108.
25. Agbada AO, Osuji C (2013) The efficacy of liquidity management and banking performance in Nigeria. International review of management and business research 2: 223-233.
26. Kabajeh MAM, Al Nuaimat S, Dahmash FN (2012) The relationship between the ROA, ROE and ROI ratios with Jordanian insurance public companies market share prices. International Journal of Humanities and Social Science 2: 115-120.
27. Pearce JA, Freeman EB, Robinson RB (1987) The tenuous link between formal strategic planning and financial performance. Academy of Management review 12: 658-675.
28. Darko J, Aribi ZA, Uzonwanne GC (2016) Corporate governance: the impact of director and board structure, ownership structure and corporate control on the

performance of listed companies on the Ghana stock exchange. Corporate Governance 16: 259-277.

29. Osborne M, Fuertes A, Milne A (2009) Capital and profitability in banking: Evidence from US banks.
30. Osborne M, Fuertes AM, Milne A (2016) In good times and in bad: Bank capital ratios and lending rates. International Review of Financial Analysis.
31. Arif A, Nauman Anees A (2012) Liquidity risk and performance of banking system. Journal of Financial Regulation and Compliance 20: 182-195.
32. Duttagupta R, Cashin MP (2008) The anatomy of banking crises: International Monetary Fund.
33. Halling M, Hayden E (2006) Bank failure prediction: a two-step survival time approach.
34. Demirgüç-Kunt A, Huizinga H (1999) Determinants of commercial bank interest margins and profitability: some international evidence. The World Bank Economic Review 13: 379-408.
35. Naceur SB, Kandil M (2009) The impact of capital requirements on banks' cost of intermediation and performance: The case of Egypt. Journal of Economics and Business 61: 70-89.
36. Alvesson M, Sköldberg K (2009) Positivism, social constructionism, critical realism: Three reference points in the philosophy of science. Reflexive methodology: New vistas for qualitative research 15-52.
37. Neu D, Warsame H, Pedwell K (1998) Managing public impressions: environmental disclosures in annual reports. Accounting, organizations and society 23: 265-282.