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A STUDY ON THE EFFECT OF LIQUIDITY MANAGEMENT ON PROFITABILITY IN INDIAN OVERSEAS BANK

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Abstract: Liquidity and Profitability management is of crucial importance in financial management decision. This study deals with the impact of liquidity management on profitability in Indian Overseas Bank. The study is descriptive in nature. The secondary data is used for this study and taken from the annual reports for the period of 2015-2019. The liquidity ratios are current ratio, cash ratio, quick ratio, loan to deposit ratio, cash reserve ratio, interest coverage ratio and capital adequacy ratio, while Return on Equity (ROE) and Return on Assets (ROA), Earnings Per Share (EPS) were the proxies for profitability. Ratio analysis, Trend analysis, Descriptive Statistics and Correlation Analysis has been used to analyze the relationship between liquidity and profitability. The results shows that the Liquid ratios have weak strong relationship on Profitability Ratios.

Index Terms **- Liquidity Management, Profitability, Liquidity Ratios, Profitability Ratios, Analysis.**

I. INTRODUCTION

Liquidity Management is an idea which has severe attention everywhere in the earth especially with the financial situations and the state of the economy. Liquidity means an immediate capacity to fulfill one's financial needs. Bank Liquidity means the flexibility of the bank to take care of sufficient funds to pay money for its maturing obligations. Every bank wants to deploy maximum funds in advances and investments in hope of getting maximum possible returns. If all the funds available with any bank are lent or invested, there is also possibility that such funds don't seem to be recovered by the bank immediately and also the bank is not able to meet its obligations towards its customers so as to retain the customer base the banks must adopt a liquidity/investment policy to be ready to repay to depositors on demand. Incase bank deploys its maximum funds in loans/investment without caring for the requisite amount of liquidity ready to meet the immediate financial requirements particularly towards demand depositors, it's going to tarnish its image which might be a fatal event for any bank. In banking sector the liquidity management is critical element which will be considered to evaluate the bank's profitability. Banks maintain their liquidity primarily from deposits made by their customers. Liquidity management may be a crucial part of asset-liability & risk management framework of the Banking system. It is a process of constructing proper & timely bridge of Bank's sources & uses of funds at reasonable cost at all times. Liquidity means its ability to fulfill its current liabilities and is typically measured by different financial ratios. The profitability of a company can by described as its ability to come up with income which surpasses its liabilities. Profitability is typically measured by different ratios like ROA and ROE. Efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of the inability to meet due short-term obligations. Every bank should have sufficient liquidity to meet the contractual obligations as and when they arise without any delay.

Objectives

Primary

To Analyze the Effect of Liquidity on Profitability of Indian Overseas Bank

Secondary

1. To analyze the Liquidity Ratios.
2. To analyze the Profitability Ratios.
3. Analyzing the relationship between Liquidity and Profitability.

Need of the Study

The aim is to see the effect of liquidity management on the performance to attain both corporate goals of maintaining high level of liquidity and profitability. Liquidity is the life blood of a banking setup.

Scope of the Study

This study aimed at understanding the liquidity management in Indian Overseas Bank. This study try to address the issues in Indian Overseas Bank.

Limitations

The study is confined to 5 years of balance sheet from 2014-2015 to 2018-2019.

The changes that took place before and after this period were not taken into consideration.

Period

This study covers the period of four months.

II. REVIEW OF LITERATURE

Abdulla Ibrahim Aziz, Atheer Anwar Sharif, Delan Ghafoor Salih (2017) has undergone a study on the effect of Liquidity Management and Profitability in Islamic Banks of Kurdistan Region of Iraq. The results showed profitability ratios were very responsive to changes in current and quick ratios. Pearson correlation was used in analyzing this relationship.

Ali Abdi Sheikhdon, Stanley Kavale (2017) has analyzed the effect of Liquidity Management on financial performance of commercial banks in Mogadishu, Somalia. The results established that liquidity management drivers were found to significantly and positively influence financial performance. ANOVA and Regression is used for analysis.

Ali Sulieman Alshatti (2015) has analyzed the effect of the liquidity management on profitability in the Jordanian Commercial banks and found that increase in the investment ratio, capital ratio and quick ratio leads to an increase in profitability by rising the Return on Equity (ROE) and Return on Assets (ROA). Correlation is used to analyze the data.

Dr. Amalendu Bhunia, Mr. Islamuddin Khan, Mr. Somnath Mukhuti (2011) has studied about managing Liquidity. The study shows that correlation and regression results are significantly positive associated to the firm profitability. Descriptive Statistics, Correlation, Regression is used for analysis of data.

Dr. Munther Al Nimer, Dr. Lina Warrad, Dr. Rania Al Omari (2015) has undergone a study on the Impact of Liquidity on Jordanian Banks Profitability through Return on Assets. The result shows profitability in Jordanian banks is significantly influenced by liquidity. ANOVA and simple regression is used for analysis.

Muhammad Nabeel, Sobia Muhammad Hussain (2017) has undergone a study on Liquidity Management and Its Impact on Profitability: A Perspective of Pakistan. The result shows that most liquidity ratios has positively related with bank's profitability. The data is analyzed using correlation and regression.

Olagunju, Adebayo, Adeyanju Olanrewaju David, Olabode Oluwayinka Samuel (2011) has undergone a study on Liquidity Management and Commercial Banks' Profitability in Nigeria. The study shows that that there is significant relationship between liquidity and profitability. Pearson Correlation analysis is used.

Rizwan Ali Khan & Mutahhar Ali (2016) has studied the Impact of Liquidity on Profitability of Commercial Banks in Pakistan. The result shows that liquidity has positive relationship with profitability. With the growing liquidity level to ascertain the limit the profitability also increases. Correlation, Regression, Descriptive Statistics is used for analysis of data.

Sunny Obilor Ibe (2013) examined the effect of liquidity management on the profitability of the banks in Nigeria. It is concluded that for banks to resolve the liquidity/ profitability there is need for banks to determine its optimal liquidity position. Regression is used to analyze the data.

Tarek A. Elsharif (2017) has analyzed the impact of Liquidity on Profitability. This study has examined the impact of the liquidity management on the Profitability of firms and banks. The results were varied, where some result of them positive and the other was negative. Correlation and Regression is used for analysis of data.

III. RESEARCH METHODOLOGY

3.1 Meaning of Research

Research is the process of solving problems and finding facts in an organized way. Research is a process step used to collect and analyse information to increase the understanding of a topic or issue. It refers to a search for knowledge. It is a movement from known to unknown.

3.2 Research Type

The study is Descriptive in nature because it gives better and deeper understanding of a phenomenon on the basis of an in depth study of phenomenon and provides a basis for decision making.

3.3 Data Collection

The data is collected using secondary sources. The secondary data are collected from company's annual report and company's website.

3.4 Tools used

Ratio analysis, Trend analysis and Descriptive Statistics and Correlation Analysis is used to analyse the relationship between liquidity and profitability. Descriptive Statistics and Correlation Analysis is run through Microsoft Excel 2013.

IV. DATA ANALYSIS

Data analysis is a method in which data is collected and organized so that one can derive helpful information from it. The data analysis and Interpretation is a process representing the application of deductive and inductive logic to the research and data analysis.

4.1 RATIO ANALYSIS

A ratio is an expression of the quantitative relationship between two numbers. Ratio Analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency and profitability by studying its financial statement such as the balance sheet and income statement. Ratio Analysis can mark how a company is performing over time, while comparing a company to another within the same industry or sector.

4.1.1 Current Ratio

Current Ratio is the most common measure for measuring liquidity. Current Ratio measures the ability of the organisation to repay its short term debts within the period of one year. It shows the relationship between total current assets and current liabilities. Current ratio is also called as working capital ratio or banker's ratio.

Current Ratio= Current Assets / Current Liabilities

4.1.2 Liquid Ratio

The liquid ratio is an indicator of a company's short term liquidity position and measures a company's ability to meet its short term obligations with its most liquid assets. It indicates the company's ability to instantly use its near cash assets to pay down its current liabilities. It is also called as Acid Test Ratio. The higher the ratio result, the better company's liquidity and financial health, the lower the ratio the more likely the company will struggle with paying debts. It is also called as Quick Ratio.

Liquid Ratio = Liquid Assets / Current Liabilities

4.1.3 Cash Ratio

Cash ratio is a liquidity metric that deals with the company's capacity to pay off short term debt obligations with its cash and cash equivalents. It is more conservative measure since only cash and cash equivalents i.e., a company's most liquid assets are used for calculation. It is used to value the current assets that could quickly be turned into cash and what percentage of the company's current liabilities these cash and near cash assets could cover

Cash Ratio = Cash + Bank Balance / Current Liabilities

4.1.4 Loan to Deposit Ratio

The Loan to Deposit Ratio (LDR) is used to assess a bank's liquidity by comparing a bank's total loans to its total deposits for the same period. The LDR is expressed as percentage. If the ratio is too high, it means that the bank may not have enough liquidity to cover any unforeseen fund requirements. Conversely, if the ratio is too low, the bank may not be earning as much as it could be. A ratio of 100% or less shows that the bank is funding all its loan from deposits rather than relying on wholesale funding (funding from capital markets or other banks).

Loan to Deposit Ratio = Total Loans / Total Deposits

4.1.5 Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is critical measure to ensure that banks have enough cushion to absorb a reasonable amount of losses before they become insolvent. CAR is used by regulators to determine capital adequacy for banks and to run stress tests. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process. It helps in protecting depositors and promote stability and efficiency in the financial system

4.1.6 Interest Coverage Ratio

The Interest Coverage Ratio is a debt ratio and profitability ratio used to determine how easily a company can pay interest on its outstanding debt. It is used to determine a company's riskiness relative to its current debt or for future borrowing. The ratio is used by creditors and prospective lenders to assess the risk of lending capital to a firm. An interest coverage ratio of at least 2 is considered the minimum acceptable amount. In contrast, a coverage ratio below one indicates the bank cannot meet its current interest payment obligations and therefore it is not in good financial health.

Interest Coverage Ratio = Profit before income & tax / Total interest expenses

4.1.7 Debt Equity Ratio

The Debt to Equity Ratio is used to evaluate a company's financial leverage. It is a measure of the degree to which a company is financing its operations through debt versus wholly owned funds. It reflects the ability of shareholder equity to cover all outstanding debts.

Debt Equity Ratio = Current Liabilities / Shareholder's Equity

4.1.8 Return on Capital Employed

Return on Capital Employed is a profitability ratio that measures how efficiently a company can generate profits from its capital employed by comparing net operating profit to capital employed. It shows how efficiently assets ate performing while taking into consideration long term financing.

Return on Capital Employed = (Operating Profit / Capital Employed) * 100

4.1.9 Return on Shareholder's Investment

Return on shareholder's investment ratio is a measure of overall profitability of the business. The ratio is expressed in percentage. The ratio also indicates the efficiency of the management in using the resources of the business. Higher ratio means higher return on shareholder's investment.

Return on Shareholder's Investment = (Net income before interest & tax / Shareholder's Equity)*100

4.1.10 Return on Equity

Return on Equity (ROE) is a measure of financial performance. Shareholder's equity is equal to a company's assets. ROE is considered a measure of how efficiently management is using a company's assets to create profits.

Return on Equity = Net Income / Owner's Equity

4.1.11 Return on Assets

Return on Assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor or analyst an idea as to how efficient a company's management is at using at its assets to generate earnings. The higher the return the more productive and efficient management is in utilizing economic resources.

4.1.12 Earnings per Share

Earnings per Share (EPS) is calculated as a company's profit divided by the outstanding shares of its common stock. The resulting number serves as an indicator of a company's profitability. EPS indicates how much money a company makes for each share of its stock and is a widely used metric for corporate profits. A higher EPS indicates more value because investors will pay more for a company with higher profits.

4.1.13 Cash Reserve Ratio

The Cash Reserve Ratio in India is decided by RBI's monetary policy committee in the periodic monetary and credit policy. The lower the CRR, the higher liquidity with the banks, which in turn goes into investment and lending.

Cash Reserve Ratio = (Reserve maintained with central bank / Bank deposits) * 100

4.2 TREND ANALYSIS

Trend analysis is a technique used in technical analysis that attempts to predict the future stock price movements based on recently observed trend data. Trend analysis is based on the idea that what has happened in the past gives traders an idea of what will happen in the future. Trend Analysis is the process of comparing business data over time to identify any consistent results or trends. Trend Analysis helps to understand how business has performed and predict where current business operations and practices will take you.

4.3 DESCRIPTIVE STATISTICS

Descriptive Statistics provide simple summarises about the sample and about the observations that have been made. Such summarises may be either quantitative, i.e. simple to understand graphs. These summarises may either form the basis of initial description of the data as part of a more extensive statistical analysis, or they may be sufficient in and of themselves for a particular investigation.

4.4. CORRELATION ANALYSIS

Correlation analysis is a statistic that measures the degree to which two variables move in relation to each other. The correlation coefficient values ranges between -1.0 and 1.0. A perfect positive correlation means that the correlation coefficient is exactly 1.

Abbreviation

ROA	-	Return on Assets
ROE	-	Return on Equity
EPS	-	Earnings per Share
LR	-	Liquidity Ratio
CR	-	Current Ratio
CASR	-	Cash Ratio
ICR	-	Interest Coverage Ratio
CADR	-	Capital Adequacy Ratio

Tables

Table 1 Current Ratio

Year	Current Assets	Current Liabilities	Ratio
2014-15	1,96,65,456.68	2,51,76,355.5	0.78
2015-16	1,83,10,690	23,158,764	0.79
2016-17	1,63,68,166	2,64,22,065	0.62
2017-18	1,59,03,380	2,25,46,597	0.71
2018-19	1,63,48,913	2,27,50,160	0.72

Source: Secondary Data

Interpretation

A current ratio indicates high liquidity position and low current ratio indicates low liquidity position of the company. Generally, a standard current ratio of 2:1 is considered desirable. From the above Table clearly indicates that the current ratio has not touch the standard current ratio for the past five years, and it falls from 0.78 to 0.72.

Table 2 Liquid Ratio

Year	Liquid Assets	Current Liabilities	Ratio
2014-15	4,60,93,569.91	2,51,76,355.5	1.83
2015-16	4,34,80,445	2,31,58,764	1.88
2016-17	3,91,12,196	2,64,22,065	1.48
2017-18	3,85,09,369	2,25,46,597	1.70
2018-19	3,92,16,925	2,27,50,160	1.72

Source: Secondary Data

Interpretation

A high liquid ratio indicates high liquidity position and vice versa. Generally, a standard liquid ratio of 1:1 is desirable. That means liquid assets must be equal to liquid liabilities. From the above Table it is clear evidence that the liquid ratio has not been in a healthy trend for the past five years. It was 1.83 percentage in the year of 2014-2015 and decreased to 1.72 in the year of 2018-2019 and higher (1.88) in the year 2015-2016.

Table 3 Cash Ratio

Year	Cash	Current Liabilities	Ratio
2014-15	24,89,854.62	2,51,76,355.5	0.099
2015-16	22,24,623	2,31,58,764	0.096
2016-17	23,22,304	2,64,22,065	0.088
2017-18	26,54,499	2,25,46,597	0.118
2018-19	30,89,150	2,27,50,160	0.136

Source: Secondary Data

Interpretation

The cash ratio above 1 means that the company can easily pay off its debts, ratio of not lower than 0.5 to 1 is usually preferred. From the Table in the financial year 2014-2015 the cash ratio is 0.099 which is decreased to 0.096 in the financial year 2015-2016, and increased to 0.118 in the year is 2017-2018 and increased to 0.136 in the financial year 2018-2019.

Table 4 Loan to Deposit Ratio

Year	Total Loans	Total Deposits	Percentage (%)
2014-15	1,71,75,602.06	2,46,04,872.15	70
2015-16	1,60,86,067	2,24,51,424	72
2016-17	1,40,45,862	2,11,34,263	66
2017-18	1,32,48,881	2,16,83,181	61
2018-19	1,32,59,763	2,22,53,408	60

Sources: Secondary Data

Interpretation

The above table shows the current ratio for the period from 2014-2019. It was 70 percentage in the year of 2014-2015 and decreased to 60 in the year of 2018-2019 and higher (72) in the year 2015-2016. Since all the values are less than 100%, it shows that bank rely upon deposits for providing loans to the customers.

Table 5 Capital Adequacy Ratio

Year	Ratio
2014-15	10.11
2015-16	9.66
2016-17	10.50
2017-18	9.25
2018-19	10.21

Interpretation

The above table shows the capital adequacy ratio for the period from 2014-2019. It was 10.11 percentage in the year of 2014-2015 and increased to 10.21 in the year of 2018-2019 and higher (10.50) in the year 2016-2017.

Table 6 Interest Coverage Ratio

Year	PBIT	Total interest expenses	Ratio
2014-15	11,143	23,93,833	0.05
2015-16	-3,72,811	23,51,729	-0.16
2016-17	-3,38,093	19,71,861	-0.17
2017-18	-8,63,170	17,91,521	-0.48
2018-19	-5,96,054	17,63,126	-0.34

Interpretation

The above table shows the interest coverage ratio for the period from 2014-2019. It was 0.05 percentage in the year of 2014-2015 and decreased to -0.34 in the year of 2018-2019 and higher (0.05) in the year 2014-2015. Since all the values are in negative it indicates that the bank is not in good financial health.

Table 7 Debt Equity Ratio

Year	Current Liabilities	Shareholder's Equity	Ratio
2014-15	2,51,76,355.5	15,64,101.77	16.10
2015-16	2,31,58,764	15,66,581	14.78
2016-17	2,64,22,065	13,74,455	19.22
2017-18	2,25,46,597	13,27,398	16.99
2018-19	2,27,50,160	16,35,988	13.91

Interpretation

The above table shows the debt equity ratio for the period from 2014-2019. It was 16.10 percentage in the year of 2014-2015 and decreased to 13.91 in the year of 2018-2019 and higher (19.22) in the year 2016-2017.

Table 8 Return on Capital Employed

Year	Operating Profit	Capital Employed	Percentage
2014-15	3,32,234	15,64,102	21.24
2015-16	2,88,545	15,66,581	18.42
2016-17	3,65,020	13,74,455	26.56
2017-18	3,62,908	13,27,397	27.34
2018-19	5,03,384	16,35,989	30.77

Interpretation

The above table shows the return on capital employed ratio for the period from 2014-2019. It was 21.24 percentage in the year of 2014-2015 and decreased to 30.77 in the year of 2018-2019 and higher (30.77) in the year 2018-2019.

Table 9 Return on Shareholder's Investment

Year	Net income after interest & tax	Shareholder's Equity	Percentage
2014-15	-45,433	15,64,101.77	-3
2015-16	-2,89,733	15,66,581	-18
2016-17	-3,41,674	13,74,455	-25
2017-18	-6,29,949	13,27,398	-47
2018-19	-3,73,788	16,35,988	-23

Interpretation

The above table shows the return on shareholder's investment ratio for the period from 2014-2019. It was -3 percentage in the year of 2014-2015 and decreased to -23 in the year of 2018-2019 and higher (-3) in the year 2014-2015.

Table 10 Return on Equity

Year	Net Income	Owner's Equity	Ratio
2014-15	26,07,693	15,64,101.77	1.67
2015-16	26,04,555	15,66,581	1.66
2016-17	23,09,125	13,74,455	1.68
2017-18	21,66,165	13,27,398	1.63
2018-19	21,83,758	16,35,988	1.33

Interpretation

The above table shows the return on equity ratio for the period from 2014-2019. It was 1.67 percentage in the year of 2014-2015 and decreased to 1.33 in the year of 2018-2019 and higher (1.68) in the year 2016-2017.

Table 11 Return on Assets

Year	Ratio
2014-15	-0.16
2015-16	-0.97
2016-17	-1.21
2017-18	2.33
2018-19	1.35

Interpretation

The above table shows the return on assets ratio for the period from 2014-2019. It was -0.16 percentage in the year of 2014-2015 and increased to 1.35 in the year of 2018-2019 and higher (1.35) in the year 2018-2019.

Table 12 Earnings per Share

Year	Ratio
2014-15	-3.68
2015-16	-19.86
2016-17	-15.78
2017-18	-23.25
2018-19	-6.83

Interpretation

The above table shows the earnings per share for the period from 2014-2019. It was -3.68 percentage in the year of 2014-2015 and decreased to -6.83 in the year of 2018-2019 and higher (-3.68) in the year 2014-2015.

Table 13 Cash Reserve Ratio

Year	Reserve maintained with central bank	Bank deposits	Percentage
2014-15	12,63,777.47	2,46,04,872.15	5.13
2015-16	14,03,349	2,24,51,424	6.26
2016-17	11,49,997	2,11,34,263	5.44
2017-18	11,57,945	2,16,83,181	5.34
2018-19	10,29,253	2,22,53,408	4.62

Interpretation

The above table shows the cash reserve ratio for the period from 2014-2019. It was 5.13 percentage in the year of 2014-2015 and decreased to 4.62 in the year of 2018-2019 and higher (6.26) in the year 2015-2016.

Table 14 Trend Analysis

Year	Current Assets		Current Liabilities	
	Amount	Trend %	Amount	Trend %
2014-15	1,96,65,456.68	100	2,51,76,355.5	100
2015-16	1,83,10,690	93	2,31,58,764	92
2016-17	1,63,68,166	83	2,64,22,065	105
2017-18	1,59,03,380	81	2,25,46,597	89
2018-19	1,63,48,913	83	2,27,50,160	90

Interpretation

The above table shows that the current assets have decreased to 83% over the five years period and current liabilities has also decreased to 90% but it was higher in the year 2016-2017 with 105%. The trend percentages reflect an unfavorable impact on net income.

Table 15 Descriptive Statistics

Variable	Mean	Maximum	Minimum	Standard Deviation
Current Ratio	0.71	0.79	0.62	0.069761
Cash Ratio	0.0475	0.06	0.04	0.009574
Quick Ratio	1.695	1.88	1.48	0.164418
Capital Adequacy Ratio	9.905	10.5	9.25	0.558599
Return on Equity	1.575	1.68	1.33	0.164620
Return on Assets	0.375	2.33	-1.21	1.741062
Interest Coverage Ratio	-0.2875	-0.16	-0.48	0.152616
Earnings Per Share	-6.5	19.86	-23.25	18.811693

Interpretation

This table shows the liquidity position and profitability position of the bank. Capital Adequacy Ratio has the highest average value while Earnings per Share has the lowest average value. This descriptive statistics table also shows that standard deviation is highest for Earnings per share whereas cash ratio has the lowest standard deviation value.

Table 16 Correlation Analysis

Variable	ROA	ROE	EPS	QC	CR	CASR	ICR	CADR
ROA	1							
ROE	-0.4983	1						
EPS	-0.5513	0.0658	1					
QC	0.0723	-0.0265	0.70081	1				
CR	0.0357	0.00543	0.69672	0.99679	1			
CASR	-0.1648	0.49010	0.66808	0.77666	0.76409	1		
ICR	-0.7588	0.42804	0.47843	0.26185	0.32963	0.19362	1	
CADR	-0.5602	-0.1826	-0.0201	-0.4818	-0.4374	-0.6699	0.51654	1

Interpretation

The correlation analysis shows that some of the liquid ratios like quick ratio and current ratio have positive relationship on profitability ratios like Return on Assets while some of the liquid ratios have negative relationship on profitability ratios.

V. RESULTS AND DISCUSSION

Results

- The Liquidity ratios such as Current Ratio, Cash Ratio, Quick Ratio, Loan to Deposit Ratio and Profitability Ratios such as Return on Assets, Return on Equity, Earnings per Share, Return on Capital Employed has been decreased throughout the study period.
- The Trend Analysis value of current assets was 100% in the year 2014-2015 and it decreased to 83% in the year 2018-2019.
- The Trend Analysis value of current liabilities was higher in the year 2016-2017 as 105% and it decreased to 90% in the year 2018-2019.
- The Descriptive Statistics analysis shows the liquidity position and solvency position of the bank during the period. It is found that Capital Adequacy Ratio has highest average value while Earnings per Share has the highest standard deviation.
- The Correlation analysis shows that liquid ratios such as Quick Ratio has positively correlated with Return on Assets and Earnings per Share while negatively correlated on Return on Equity.
- The Correlation analysis shows that liquid ratios such as Current Ratio has positively correlated on all the profitability ratios such as Return on Assets, Earnings per Share and Return on Equity.
- The Correlation analysis shows that liquid ratios such as Cash Ratio has positively correlated on the profitability ratios such as Earnings per Share and Return on Equity while negatively correlated on Return on Assets.
- The Correlation analysis shows that liquid ratios such as Interest Coverage Ratio has positively correlated on the profitability ratios such as Earnings per Share and Return on Equity while negatively correlated on Return on Assets.
- The Correlation analysis shows that liquid ratios such as Capital Adequacy Ratio has negatively correlated on all the profitability ratios such as Return on Assets, Earnings per Share and Return on Equity.

Discussion

- The results of this study shows that liquidity management is a crucial problem in the Indian Overseas Bank. The liquidity was decreasing in the study period.
- They should adopt a general framework of liquidity management to ensure sufficient liquidity for executing day-today operations and to achieve the balance between sources of funds and uses of funds.
- They should identify the factors that affect liquidity and liquidity management and it helps in increasing the liquidity of the bank.
- The bank can use their sources of funds in an effective way to make profit in the upcoming years.
- To avoid liquidity risk the bank should maintain proper cash flow.
- Efforts should be taken to get better return out of the investment made.

Conclusion

This research aims at investigating the effect of liquidity on profitability in Indian Overseas Bank. The results shows that both the liquidity and profitability for the year 2015-2019 is decreasing. It is concluded that the bank should maintain adequate liquidity to increase the profitability of the bank. There is a need for optimum utilization of the available liquidity in various investment to increase the profit of the banks. When banks hold adequate liquid assets their profit would improve. Thus adequate liquidity helps in minimizing liquid assets and financial crisis.

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