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RESEARCH ARTICLE

Liquidity Ratios to Profitability: The Case Of Selected Branches of Cooperative Bank of Oromia, Oromia Regional State, Ethiopia

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ABSTRACT

Liquidity is a financial term that means the amount of capital that is available for investment. The liquidity ratio of the bank is imperative in Ethiopia. Although the liquidity ratio has been studied by some researchers but appreciable efforts have not been made on the sectors of cooperative banks. Therefore, the present study was carried out to investigate liquidity ratio of cooperative bank of oromia, selected branches in oromia. The quantitative research approach was employed to accomplish the objectives of this study. The secondary data were collected from eight selected branches of CBO that fulfill the criteria of the data availability from the financial statement during the study period from 2007-08 to 2013-14 G.C. Descriptive statistics model was used to analysis the panel data for the standard determinants of liquidity ratio. The results for regression cash and bank balance to total liability and liquid asset to demand deposit are a negative effect on the profit of the bank and also revealed that if the is variables increase it leads the bank branches to low profitability. Financial variable performance will be developed from the three broad perspectives: Assets Quality Ratio, Earning Capacity Ratio and Liquidity Ratio. To indicators of liquidity ratio includes: Cash and Bank Balances to Total Liabilities, Loans and Advances to Total Assets, and Liquid Asset to Demand Deposits. The beneficiaries of the results of this study was corporate finance academicians whose interest is in the area of liquidity ratio on the profitability of cooperative banks and also helps as a baseline for further studies and the bank managers to understand the liquidity ratio for the management of the banks in Ethiopia.

1.1 INTRODUCTION

Cooperative Bank of Oromia Share Company has been established with the authorized capital of Birr 300,000,000 in October, 2004 G.C with the objective to engage in banking service in accordance with the Monetary and Banking Proclamation number 83/1994 E.C and Supervision of Banking Proclamation number 84/1994 of the National Bank of Ethiopia. The bank has started fully fledged banking operation in March, 2005 G.C. CBO's vision is to be provide full fledged and customer responsive banking services for cooperative societies, other entities, and individuals with special emphasis to agricultural and agro based businesses financing, and to maximize shareholders' value through use of competent and disciplined employees, visionary leaders, and modern banking technologies. Cooperative Bank of Oromia upholds the core values and principles which includes respect to socio cultural attributes of the people; integrity, honesty, and loyalty; valuing customers' comment; accountability and

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social responsibility; and professionalism. The financial statement is prepared under the historical cost convention in accordance with generally accepted accounting standards and the laws and regulation of commercial Code of Ethiopia 1960. Nowadays, CBO's have 122 branches in different city and towns also the bank total capital has reached 697.50 million birr.

2. Statement of the Problem

The ultimate objective of any firm is to maximize the profit. But, preserving asset quality ratio is an important objective too. The problem is that increasing profits at the financial variables factors can bring serious problems to the bank. Therefore, there must be a trade-off between these two objectives of the bank. If we do not care about profit, we cannot survive for a longer period. On the other hand, if we do not care about financial variables, we may face the problem of insolvency or bankruptcy. For these reasons, financial variables of the bank should be given proper consideration and will ultimately affect the profitability of the bank. The Cooperative Bank of Oromia (CBO) has shown a considerable expansion in its assets, outlaying branches and also involved human capital. The aggressive expansion also forced the Bank to incur considerable costs. In detail to indicate that, except interest expenses, all other costs went up considerably. Employees' salaries and benefits and general administration expenses and also the CBO's profit after tax showed a remarkable increase the profit after tax figure has been constantly on the up over the past few years. The aforementioned facts gives a clue to the Cooperative Bank of Oromia growth in profits is due to underdeveloped nature of the sector. Therefore, this growth may not continue when the finance sector becomes highly developed and the competition become tough, so investigation of the key financial variables that influence the profitability of banks is vital. The main purpose of this study will be to analyze the financial data of cooperative bank of Oromia for the fiscal year from 2008 to 2014 in order to investigate liquidity ratio of bank.

3. Review of Related Literature

Several individual researchers had studied a few facets of liquidity ratio of selected CBOBs (Cooperative Bank of Oromia Branches) in selected areas. To know how far the ground is already prepared and to identify the gaps therein, and to spell out the issues which need further intensive and comprehensive analysis, an attempt is made to review the related literature.

3.1 Lartey V., et al. (2013) in their study, the relationship between the liquidity and the profitability of banks listed on Ghana Stock Exchange. Seven out of the nine listed banks were involved in the study. The study was descriptive in nature. It used the longitudinal time dimension, specifically, the panel method. Document analysis was the main research procedure used to collect secondary data for the study. The financial reports of the seven listed banks were studied and relevant liquidity and profitability ratios were computed. The trend in liquidity and profitability were determined by the use of time series analysis. The main liquidity ratio was regressed on the profitability ratio. It was revealed that for the period 2005-2010, both the liquidity and the profitability were dropping. It was also revealed that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana.

3.2 Uremadu S. (2012), in his study, the effect of bank capital structure and liquidity on profitability using Nigerian data during the period from1980 to 2006 studied. The data were analyzed using descriptive statistics and the auto-regressive distributed lag (ADL) model. The study practiced data on an OLS methodology that incorporated unit root tests for stationary and co- integration. The study found a positive impact of cash reserve ratio, liquidity ratio and corporate income tax; and a negative effect of bank credits to the domestic economy, savings deposit rate, gross national savings (proxy for deposits with the central bank), balances with the central bank, inflation rate and foreign private investments, on banking system profits. They equally noticed that liquidity ratio drive banks' profits in Nigeria, closely followed by balances with the central bank and then, gross national savings and foreign private investments, followed case in that order.

3.3 Shahchera M. (2012) in his study, the influence of liquid asset holdings on Iranian banks profitability is study by using the Generalized Method of Moment (GMM), this study analyzed the profitability of listed banks using unbalanced panel data for the period 2002-2009, and used the liquidity asset and liquidity asset- square for estimating liquid asset and profitability relationship. The estimated relationship between liquid assets and bank profitability is as predictable. Coefficients for the liquid assets ratio, its square, business cycle, regulation and its product of interaction business cycle and regulation are all statistically significant. The study found evidence of a non-linear relationship between profitability and liquid asset holdings. A substantial result of this study is that the business cycle significantly influences bank profits. The coefficient of regulation is negative and significant. Therefore if regulators minimize the constraints imposed on banks, banks obtain profit.

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3.4 Adebayo O. et al. (2011) in their study, the point to which effective liquidity management impacts profitability in commercial banks and how commercial banks can stimulate their liquidity and profitability situation is study by using quantitative methods of research. Many findings were reaching through the analysis of both the structured and unstructured questionnaire on the management of banks and the financial reports of the tested banks. The data obtained from the Primary and Secondary sources were analyzed through collection, sorting and grouping of the data in tables of percentages and frequency distribution. The hypothesis was statistically tested through Pearson correlation data analysis. Findings indicated that there is significant relationship between liquidity and profitability. That means profitability in commercial banks is significantly influenced by liquidity and vice versa. The study concluded that for the prosperity of operations and survival, commercial banks should not expose efficient and effective liquidity management and that both illiquidity and excess liquidity are "financial diseases" that can simply wear out the profit rule of a bank as they affect banks in order to arrive high profitability level.

3.5 Saleem Q., et al. (2011) in their study, the relationship between liquidity and profitability; the results revealed that there is a significant impact of only liquid ratio on ROA while insignificant on ROE and ROI; the results also revealed that ROE is no significant effected by three ratios current ratio, quick ratio and liquid ratio while ROI is greatly affected by current ratios, quick ratios and liquid ratio. The main results of the study explained that each ratio (variable) has a significant effect on the financial positions of enterprises with differing amounts and that along with the liquidity ratios in the first place. Profitability ratios also play an important role in the financial positions of enterprises.

3.6 Bordeleau É., et al. (2010) in their study, the effect of liquid asset holdings on U.S. and Canadian banks is studied. Results proposed that profitability is improved for banks that hold some liquid assets, however, there is a place at which holding further liquid assets minimize a banks' profitability, all else equal. Furthermore, empirical evidence also indicated that this relationship varies depending on a bank's business model and the state of the economy. These results are particularly relevant as policymakers devise new standards establishing an appropriate level of liquidity for banks.

3.7 Kehoe and Levine (2001) in their study, it's a model research in the general economics literature supports the idea of increased profitability with decreased liquidity. The effect of liquidity constraints on asset holders, they find that these asset holders experience greater persistence of shocks, whereas asset holders facing constraints on leverage instead of on liquidity experience no long-run effects from short-run shocks. In this case, managers may choose risk management strategies which tend to increase efficient use of resources.

3.8 Habtamu Berhanu (2004), in his study, the liquidity condition of the commercial banks was also reliable in all cases, thought some measures should be made by the individual banks respective to their matter as per. A bank must always be liquid to meet depositors' and creditors' demand to maintain public confidence. There needs to be an effective asset and liability management system to minimize maturity mismatches between assets and liabilities and to optimize returns. As liquidity has inverse relationship with profitability, and banks must strike a balance between liquidity and profitability. Current and quick ratios are inappropriate for measuring banks liquidity. A loan-to-deposit ratio is more relevant. However, a bank's liquidity and solvency are directly affected by portfolio quality.

3.9 Athanasoglu *et al.* (2006) in their study paper, which presents two main categories of determinants: internal determinants, such as bank's liquidity, bank's capital ratio or bank's efficiency ratio. The author emphasize that liquidity has a positive effect on bank's profitability, while capital ratio and efficiency ratio have a negative effect.

4. Objectives of the Study

The specific objectives of the present study are:

1. To examine the effect of liquidity ratio on profitability of the bank.
2. To offer suitable suggestions for the development of the CBOBs

4. Data Source and Collection and Analysis Methods

4.1. Source of data

For this study quantitative data was employed from secondary sources based on the selected bank branches for the study. The secondary data was needed for analysis is mainly obtained from the audited financial statements of Cooperative Bank of Oromia. The financial statement was considered basically on Balance Sheet and profit and loss of consecutive seven years data i.e. 2007-08 to 2013-14 G.C.

4.2. Data Collection Methods

Data collection is an important aspect of any type of research study. So, appropriate attention will be given for it while inaccurate data collection can impact the result of a study an ultimately lead to invalid results. For this study, the researcher will be used mainly quantitative methods for data collection. So, the researcher will collect the secondary data from audited financial statements mostly the balance sheet, income statement and profit and loss of cooperative bank of Oromia for the consecutive seven years (2007-08 up to 2013-14 G.C) data by using data sheet.

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4.3. Method of Data Analysis

The collected data was analyzed by using descriptive statistics model. Descriptive analysis is the first step in the analysis; it helps the researcher to describe relevant aspects of variables and provide detailed information about each relevant variable through like mean, standard deviation, minimum and maximum was used to analyze the collected data from 2007-08 to 2013-14 for the variables which included in the study.

5. Sampling

Cooperative bank of Oromia is purposively selected in the study because; it is the first cooperative bank in the country. But the criterion used in selecting the bank branches in the study based on the holding of a complete 7 years financial statement data (2007-08 to 2013-14 G.C), date of establishments that are established before 2010 G.C and the capital they run in business . There are 22 branches operating in this selected bank. The sampling process is based on the availability of financial statements. Among these Bank branches, 8 branches viz. Merkato, Waliso, Ambo, Adama, Shashemene, Burayu, Shanan Gibe and Nekemte were selected and collected with data of asset quality ratio. The study analysis was undertaken for 7 consecutive years of operation for the banks.

6. Scope of the study

This study was confined only to know the Major operational of asset quality of Cooperative Bank of Oromia by analyzing the financial statements start from 2007-08 to 2013-14 fiscal years. From the topic in the Major operational of liquidity ratio of the bank the study selects the area of analysis of financial Variables and assesses their relevance in cooperatives bank concept. Even though there are so many banks in Ethiopia, the study was limited to Cooperative Bank of Oromia with the ownership o f cooperatives.

7. Results and Discussion

7.1. Ratio Analysis

The relationship between two figures expressed mathematically is called a 'Ratio'. It is a numerical relationship between two numbers which are related in some manner. Ratio analysis is technique of analysis and interpretation of financial statements. It is the process of determination and interpretation of various ratios for helping in decision making. Ratio analysis involves three steps.

7.2. Liquidity

Liquidity is a financial term that means the amount of capital that is available for investment. Today, most of this capital is credit, not cash. Bank liquidity simply means the ability of the bank to maintain sufficient funds to pay for its maturing obligations. It is the bank's ability to immediately meet cash, cheque and other withdrawal obligations and legitimate new loan demands while abiding by existing reserve requirements. Nwaezeaku (2006) defined liquidity as the degree of convertibility to cash or the ease with which any assets can be converted to cash (Sold at a fair market price). So, bank liquidity is measured using loans and advances to total assets, and cash and bank advances to total liabilities. These are more conservative than the current ratio, because they are only the more liquid current assets in relation to total assets and liabilities. Loans and advances to total assets, and cash and bank advances to total liabilities may be better indicators of liquidity than the current ratio.

7.3 Cash and Bank Balances to Total Liabilities Ratio

This is the ratio of cash and bank balances to total liabilities. It indicates the ability of the bank to maintain sufficient funds to pay for its maturing obligations.

Table-1.1

Ratio of Cash and Bank Balances to Total Liabilities

Ratio	Details of Branches	Year							Descriptive Statistics			
		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	Min	Max
Cash and Bank Balances to Total	Hora Arsade	7.76	5.23	6.74	6.74	4.17	6.42	3.51	6.03	1.38	3.51	8.88
	Waliso	5.87	7.18	4.97	3.92	4.64	3.97	6.19				
	Ambo	8.09	6.87	7.19	7.09	5.17	5.42	3.92				
	Adama	8.88	5.75	6.74	7.80	4.97	6.93	3.92				
	Shashemene	8.08	5.87	7.74	7.23	5.02	6.93	4.22				

	Burayu	8.08	5.87	6.21	7.48	5.17	5.42	5.50				
	Shanen Gibe	7.75	5.23	6.74	6.74	4.17	6.42	3.92				
	Nekemte	7.50	5.87	7.11	6.09	3.97	6.93	4.22				

Loans and advances to total assets indicates the ability to convert an asset to cash, the bank shows 37.95 percent mean value and 7.40 percent of standard deviation this means the lower ratio when compare to other ratios so the bank have the ability to convert the asset to a cash with a minimum delay and cost of 31.4 percent and maximum cost 49.57 percent.

7.4 Loans and Advances to Total Assets Ratio

This is the ratio of total loans and advances to total assets. This ratio indicates a bank's aggressiveness in lending which ultimately result in better profitability. Higher ratio of loans and advance/ total assets is preferred.

Table-1.2
Ratio of Loans and Advances to Total Assets

Ratio	Details of Branches	Year							Descriptive Statistics			
		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	Min	Max
Loans and Advances to Total Assets	Hora Arsade	5.86	7.18	4.97	3.92	4.64	3.97	6.19	6.24	2.09	3.28	11.27
	Waliso	9.76	10.58	11.15	11.26	11.09	11.16	10.65				
	Ambo	5.86	7.42	4.19	4.92	4.27	5.53	6.98				
	Adama	5.68	7.76	5.91	4.86	4.27	4.53	6.71				
	Shashemene	6.87	6.18	5.21	4.62	5.32	4.65	6.97				
	Burayu	6.86	6.18	5.21	4.62	5.32	4.65	6.97				
	Shanen Gibe	5.86	7.84	4.72	3.28	4.43	3.76	6.71				
	Nekemte	6.86	7.27	5.97	4.92	5.64	4.97	7.19				

Cash and bank balance to total liability indicates the ability of the bank to maintain sufficient funds to pay for its maturing obligations. The bank shows 44.57 percent of mean value and 12.43 percent standard deviation this means the Moderate ratio when compare to other ratios so the bank to maintain sufficient funds to pay for its maturing obligations with a minimum of 28.87 percent and a maximum of 53.98 percent and it indicates that the bank have capable of paying their liability.

7.5 Liquid Asset to Demand Deposits Ratio

This ratio measures the ability of a bank to meet the demand from deposits in a particular year. It is arrived at dividing the liquid assets by total demand deposits .Demand deposits offer high liquidity to the depositor and hence banks have to invest these assets in a highly liquid form.

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Table-1.3

Ratio of Liquid Assets to Demand Deposits

Ratio	Details of Branches	Year							Descriptive Statistics			
		2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	Min	Max
Liquid Assets to Demand Deposits	Hora Arsade	29.55	39.50	39.99	35.52	29.08	31.50	31.31	33.65	4.76	25.67	42.23
	Waliso	25.76	38.79	37.93	36.52	30.08	31.50	33.31				
	Ambo	30.69	39.50	40.36	36.95	29.22	30.50	31.95				
	Adama	29.55	39.50	36.98	34.98	30.25	31.50	31.31				
	Shashemene	42.23	41.23	40.56	35.52	37.45	38.25	38.56				
	Burayu	25.68	26.32	27.89	26.89	29.08	27.36	28.65				
	Shanen Gibe	30.56	40.50	38.34	36.95	29.22	32.02	31.59				
	Nekemte	30.57	39.50	40.67	34.95	29.08	30.50	30.59				

Liquidity assets are the essential balance sheet items which have the capacity to maintain the confidence of depositors which is the most valuable intangible asset of the commercial banking business (Spindt, 1980). The bank indicates 267.89 percent mean value and 34.55 percent of standard deviation this means the higher ratio when compare to other ratios so the bank have the capacity to maintain the confidence of depositors with a minimum 233 percent and maximum 320 percent this means the Cooperative bank of Oromia have higher capacity to facilitate the accesses for depositors and the depositors have full confidences on the bank to deposit there.

7.6. Regression Results Using GLS (Cluster Robust) of Asset Quality Ratio

Random Effect (GLS with Cluster Robust)			
Variables	Coefficient	Std. Error	P-value
CABB to TL	-0.02	0.02	0.40
LAA to TA	0.02	0.02	0.00*
NP to AA	-0.01	0.02	0.08
Significant Levels	Level of significance *refers statistically significant at 1%, ** statistically significant at 5% and *** statistically significant at 10%		

The variables that is used to measure liquidity is cash and bank balance to total liability, Loan and advance to total asset and liquid asset to demand deposit . The model that is applied for this regression is:

$ROAit = \alpha_0 + \alpha 1$CABB/TLi t + $\alpha 2$ LAA/TA it + $\alpha 3$ LAA/DD it + $e$it……

As it can be seen from the above table, cash and bank balance to total liability and liquid asset to demand deposit are statistically not significant at any significant level, but only Loan and advance to total asset was statistically significant at 1 percent with return on asset. Previous research predicts positive relationship between liquidity and bank profitability, similarly from those variables Loan and advance to total asset and banks' profitability is positive coefficients. The results are in line with these findings. The coefficient of the Loan and advance to total asset variable is positive and highly significant, and implies that an increase in the Loan and advance is associated with a increase in return on asset .The finding indicates that low loan distributions practice is correlated with low profitability. This variable showed the bank has less converting ability of asset to cash to generate profit when compare with their total asset it has . Hence, the estimate showed that the distribution of loan and advance of the bank branches to generate profit has positively related to the return on assets. This finding implies that managers can improve profitability by increasing the cash converting ability or distribution of loan and advance to their customers and keep the balance between liquidity and profitability.

8. Findings

The results showed that there is an liquidity to profitability of Branches of Cooperative Bank of Oromia. It was noted that the effect of financial variables, as it was hypothesized, showed some consistency with an empirical studies. From this view, the implication that the financial variables can influence the profitability of the bank seems to be considered in decision-making process of the bank branches. Further studying of this fact had to be properly taken into consideration while drawing conclusions from the empirical results.

8.1 Cash and Bank Balances to Total Liabilities Ratio

The result indicates the ability to convert an asset to cash, the bank shows 37.95 percent mean value and 7.40 percent of standard deviation this means the lower ratio when compare to other ratios. The bank's branches have the ability to convert the asset to cash with a minimum delay and cost of 31.4 percent and maximum cost 49.57 percent.

8.2 Loans and Advances to Total Assets Ratio

The results indicate the ability of the bank's branches to maintain sufficient funds to pay for its maturing obligations. The bank shows 44.57 percent of mean value and 12.43 percent standard deviation compare to other ratios so the bank's branches to maintain sufficient funds to pay for its maturing obligations with a minimum of 28.87 percent and a maximum of 53.98 percent. The result indicates that the bank's branches have capable of paying their liability.

8.3 Liquid Asset to Demand Deposits Ratio

The results indicates 33.65 percent mean value and 4.76 percent of standard deviation this means the higher ratio when compare to other ratios. The bank's branches have the capacity to maintain the confidence of depositors with a minimum 25.67 percent and maximum 42.23 percent this means the Cooperative bank of Oromia branches have higher capacity to facilitate the accesses for depositors and the depositors have full confidences on the bank to deposit.

9. Conclusions

The liquidity of the bank measured by cash and bank balance to total liability, loan and advance to total asset and liquid asset to demand deposit. Liquid asset to demand deposit is the highest mean values across the bank branches and loan and advance to total asset is the lowest means value. This implies that the bank have low capacity of maintaining the confidence of the depositors and low ability of conversion of assets to cash. Cash and bank balance to total liability and liquid asset to demand deposit has a positive relationship with profitability. This means that if this variables increase the profitability of the bank decrease across the bank branches. But loan and advance to total assets indicate a positive relationship with profitability. It means that if loan and advance against total asset increase the profitability of the bank's branch increases. These variables have significant influence on return on asset, which means any increase (decrease) on the value of these variable leads to an increase (decrease) on profitability of bank's branches. The positive effect of loan and advance to total assets on the profitability of the bank's branches shows that the bank have an ability to immediately meet cash, but the degree of convertibility to cash or the easiness with which any assets were converted to cash through a branches is low. The study concluded that the bank's branches have low capacity of maintaining the confidence of the depositors and also low ability of conversion of assets to cash. But for the prosperity of operations and survival, CBO's should not expose efficient and effective liquidity management and that both illiquidity and excess liquidity are "financial diseases" that can simply were out the profit rule of the bank as they affect bank in order to arrive high profitability level.

10. Recommendations

In order to hold up risky surprises and maintaining financial stability, it is vital to identify the effect financial variables that mostly influence the overall performance of Cooperative Bank of Oromia. Therefore, based on the above findings and conclusions the following recommendations are forwarded.

Loan and advance to total asset variable is positive and highly significant effect on profitability of CBO's branches. From this finding the researcher recommends that the bank's

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branches can improve profitability by increasing the cash converting ability/ distribution of loan and advance to their customers across their branches and keep the balance between liquidity and profitability. This means efficient liquidity management requires maintaining sufficient cash reserves on hand (to meet client withdrawals, disburse loans and fund unexpected cash shortages) while also investing as many funds as possible to maximize earnings.

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