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**Liquidity Management and Returns of Shareholders in Quoted Banks of  
Nigeria**

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### **Abstract**

**Purpose:** This study access liquidity management with the aim of determining its effect on returns of shareholders. Ex-post factor design was adopted. Data on ROE, ROA, Log of Sales and EPS were collected from the selected Banks financial statement and Nigerian Stock Exchange statistical bulletin. ROA and ROE proxied performance while EPS proxied returns to shareholders. Liquidity stood for liquidity management.

**Purpose:** The study covered a period of 2000-2014. Unit root was used to test the data for stationarity issue and where there was unit root problem, the data were differenced. Autoregressive method was also applied to solve auto-regression issues. Linear regression and Pearson correlation were used to test the hypotheses.

**Results:** The result showed that there is no significant relationship between liquidity management and Nigerian quoted Banks performance as well as return of Shareholders.

Recommendation; the researcher therefore recommended that policies should be put in place to reduce the cost of loan and encourage investment in Nigeria.

**Key Words:** *Liquidity management, returns of shareholders, bank's performance*

### **1.0 Introduction**

The financial needs of the society and businesses are meet by financial institutions and intermediaries. Samuels & walkers (1993) posit that the management of receivables is a practical problem and businesses can find their liquidity under considerable strain if the levels of their accounts receivables are not properly regulated. Therefore it will be business prudence to manage receivables.

Nigeria is currently witnessing growth in economic activities while the present democratic government with its attendant limited financial resources available to the operators of the market has no doubt brought about increase in credit transaction (Ifurueze, 2013).

Further, consequent to the rapid movement in technology and its resulting effect on the dynamism in business caused by changes in the internal and external environment, the ways in which businesses are conducted today differ significantly from yester years. It means therefore, that credit policy should not be static in order (Ojeka, 2012).

Devraj (2014) defined Liquidity as the ability of the business to meet its cash obligations within a specific time period. Profitability and liquidity are related concepts, but by no means are they equivalent. Unlike profit, cash flow includes loan principal payments, proceeds from liquidated

assets and family living expenses. Cash flow does not include profitability factors such as depreciation, the value of inventory changes, or capital gains and losses. Liquidity is best measured with cash flow statements or budgets. When firms have problems with liquidity they may defer their payments to creditors which is a harmful for companies and can result in several consequences such as worse credit terms in the future. This in the long run adversely affects profitability.

The basic problem facing Banks is the ability to meet liquidity demands, especially those unpredicted ones, which could embarrass the bank and cause loss of trust over time; considering the intensive competition in the banking sector in Nigeria today each commercial bank has to work to maximize its profits, and at the same time be able to meet the financial requirements of its depositors by holding an adequate amount of liquidity, in order to realize a balance between the profitability and liquidity. Banks should therefore determine the optimal amount of cash that enable them in achieving balance between profitability and liquidity together. This is so because, according Ali-Suliman, (2015) each level of liquidity has a different effect on the levels of profitability, and the problem arises when the commercial banks try to maximize their Profit at the expense of neglecting the liquidity effect, which may cause a technical and financial hardship with the consequent withdraw of deposits.

There have been several studies on the effects of liquidity management on performance of public companies and various conclusions reached (Ashok, 2013; Ngira, Oluoch, & Kalui, 2014; Agbada, & Osuji, 2013). To the best of the researcher's knowledge, most of the study focused on only an aspect or two of the liquidity management components while others studied only the cash conversion cycle. None of these studies delved on the effect liquidity management have on shareholders returns; this study therefore hopes to cover that gap.

## **1.1 Conceptual Framework**

### **1.1.1 The Concept of Liquidity**

Liquidity has been defined severally with most of the definition conveying the same meaning: Olagunji, Adeyanju, & Olabode, (2011) defined liquidity as the ability of a bank to guarantee the availability of funds to meet financial commitments or maturing obligations at a reasonable price at all times. Bassey & Moses, (2015) posit liquidity as banks having money when they need it particularly to satisfy the withdrawal needs of their customers.

Nigerian Banks suffered inefficient liquidity management which became obvious during the liquidation and distress era of the late 1980s and early 1990s. This phenomena persisted up till the re-capitalization era in 2005 in which banks were mandated to increase their capital base from N2 billion to N25 billion; this CBN believed would stabilize and remedy the bank liquidity problem that was prevalent in the economy (Fadare, 2011). However, the Central Bank of Nigeria moved to rescue five Banks in 2009 from liquidity shortage. In order wards, the liquidity problem persists. This seems not to be a good signal to the shareholders who invest their monies for the sole purpose of returns. This study therefore hopes to investigate the effect liquidity management have on profitability and shareholders returns.

### **1.1.2 The Concept of Performance**

The main motivation of shareholders is the returns they can get. One of the indicators for investing in any company appears to be the profitability of that company.

Heibati, Nourani and Dadkhah (2009) theorized that a business is organic; it survives and grows. This simply means banks must make enough profit to ensure it survives and have a long run growth. It further means to avoid dissolution profitability must be a driving factor. Enough profit must be earned to sustain the activities of the business and be able to obtain funds for expansion and growth of the bank.

Moreover, Agbada and Osuji (2013) debated that corporate profit planning remains one of the most challenging aspects of bank management as a result of the many variables involved in the decision, which are outside the control of the bank. It is even more difficult if the bank is operating in a highly competitive economic environment, such as that of Nigeria

The key performance indicators are Return on Assets, Operating Profit margin, Earnings before Interest and Tax, Economic Value Added or Sales growth (Crabtree & DeBusk, 2008). Accounting ratios are best used when compared or benchmarked against another reference, such as an industry standard or "best in class" within the industry. This type of comparison helps to establish financial goals and identify problem areas (Devraj, 2014).

Business owners which includes shareholders of Banks are interested on the strategy of managing the day to day operations of the business in order to meet obligations as they fall due and increase profitability and shareholder's wealth. Thus, one of the most important tasks is to estimate and evaluate cash flows of the business as well as identify both the long run and short run cash inflows and outflows in order to timely sort out the cash shortages and excess and formulate financing and investing strategies respectively.

## **2.0 Theoretical Framework**

This study is anchored on the cash management theory. James and Carl (2006) posit that cash management is concerned with three problems (1) The amount of resources to hold (2) the division of liquid resources between cash and the marketable securities (3) the maturity structure of the marketable securities portfolio. Eugene, Brigham and Joel (2001) also asserted that the purpose of cash management is to regulate and achieve the appropriate level and structure of cash, and marketable securities, which must be consistent with the nature of the business's operations and objectives. This theory is therefore in tune with this study because the study aims at determining how liquidity management influences profitability and the returns of shareholders in the listed Banks in the Nigerian stock exchange.

## **2.1 Empirical Review**

Heibati, Nourani, & Dadkhah, (2009) examined and linked the performance of private banks in Iran and Arabic countries of Persian Gulf area. They calculated the parameters of banks' performance in four groups of profitability, liquidity, efficiency and capital. The empirical results via regression analysis of cross-country panel data of the banks showed statistically significant relationship between liquidity and profitability of the banks especially during initial years of their activity. Also, Bordeleau and Graham (2010) examined the effect of liquid asset holdings on the profitability of U.S. and Canadian banks. The empirical results from the study as shown by the ordinary least squares regression analysis of panel data of the banks suggested that profitability is improved for banks that hold some liquid assets. However, there is a point at which holding further liquid assets minimizes a bank's profitability.

Ferrouhi (2014) analyzed the relationship between liquidity risk and financial performance of



Moroccan banks tried to define the determinants of bank's performance in Morocco during the period 2001–2012. This was done by first evaluating the Moroccan banks' liquidity positions through different liquidity and performance ratios then applying a panel data regression to identify determinants of Moroccan banks performance. Four bank's performance ratios were used with six liquidity ratios, five specific determinants and five macroeconomic determinants of bank performance. The results showed that Moroccan bank's performance is mainly determined by 7 determinants: liquidity ratio, size of banks, logarithm of the total assets squared, external funding to total liabilities, share of own bank's capital of the bank's total assets, foreign direct investments, unemployment rate and the realization of the financial crisis variable.

Further, Agbada & Osuji(2013) explored the efficacy of liquidity management and banking performance in Nigeria. The study examined empirically the effect of efficient liquidity management on banking performance in Nigeria particularly in the aftermath of several banking reforms, rescue mission by the Central bank of Nigeria (CBN) and the attendant Merger and Acquisitions. Profitability and Return on Capital Employed (ROCE) were adopted performance indicators or dependent variables. The study revealed that there is significant relationship between efficient liquidity management and banking performance and that efficient liquidity management enhances the soundness of bank.

Similarly, Bassey and Moses(2015) examined the liquidity-profitability trade off of deposit money banks in Nigeria. The study was carried on fifteen deposit money banks in Nigeria and covered a panel data of 2010 to 2012. Two models were specified and estimated using Ordinary Least Squares (OLS) technique. The empirical results revealed that there is a statistically significant relationship between bank liquidity measures-current ratio, liquid ratio, cash ratio, loans to deposit ratio, loans to asset ratio- and return on equity. However, when return on asset was used as proxy for profitability, the relationship became statistically insignificant. This is also in consonant with the study of Asian (2015) who assessed the impact of liquidity and profitability ratios on growth of profits in Pharmaceutical firms in Nigeria. Eight ratios: acid test, current ratio, net working Capital. Return on assets, returns on capital employed, returns on equity, gross profit ratio and net profit ratio were regressed against the dependent variable growth of profit. The results indicate significant contributions of all the variables to profit growth of pharmaceutical companies in Nigeria implying that continued improvement in the variables can lead to increases in growth of profit by the Pharmaceutical firms

The view of Ware (2015) differ a bit from the forgone, his study sees liquidity management, especially at the wake of the global financial crisis as becoming a major source of concern for business managers due to bank loans becoming too expensive to maintain which is consequent to tightening of both the local and international financial market and the reluctance of the public to invest in the share of companies as a result to the crash of the capital market. His study therefore measured the relationship between liquidity and profitability and its effect on profitability in a tough economy using data from all the 33 companies listed on the Ghana Stock Exchange. The result of the study was obtained using descriptive analysis and the finding showed that liquidity measured in terms of the companies Cash Conversion Cycle, Average Collection Period and Average Payment Period have no statistical significant on profitability and it is concluded that managers can increase profitability by putting in place good credit policy, short cash conversion cycle and an increase in current ratios.

ALI (2016) conducted a survey study on liquidity management factors affecting financial performance of the commercial banks in Mogadishu, Somalia. A sample size of 87 respondents was selected using Slog van's formula. Data was analyzed using SPSS version. The key findings were that liquidity management drivers individually had a positive influence on the financial performance of commercial banks in Mogadishu-Somalia. The overall results indicated that there was a significant linear relationship between account receivable management, account payable and cash management on financial performance of commercial banks in Mogadishu.

Virtually all the studies reviewed investigated the relationship between liquidity management and firms' profitability. However, none of these studies delved into the effect of liquidity management on the returns of shareholders who are the real owners of the company and whose primary objective for investment is returns on their investment. This study therefore intends to bridge this gap.

### **3.0 Methodology**

The Ex post factor research design was adopted. This is so because Ex post factor design seek to establish the meaningful relationship between intellectual capital indices and firm's financial performance. This study is treated as ex-post facto research since it relied on historical data. This is appropriate because ex-post facto research aims at measuring and establishing the relationship between one variable and another or the impact of one variable on another, in which the variables involved are not manipulated by the researcher (Onwumere, 2005).

The population studied is the entire deposit Banks listed on the Nigerian Stock Exchange. The researcher purposively selected a sample of thirteen (13) Banks from the population. The sampled Banks were those that made the list of the top one thousand World Bank ranking as published by the Bankers' magazine of Nigeria on 8th of July, 2013 (Omoh, 2015).

Return on Asset (ROA) and Return on Equity (ROE) were used to proxy performance while Earnings per Share was used as Shareholders returns. Loan and advances were used to proxy liquidity management. ROA, ROE, EPS and Loan and advances were collected from the selected Bank's financial statement and Nigerian Stock Exchange financial statement.

The hypothesis to be tested in this study is stated below:

HO<sub>1</sub>: There is no significant relation between liquidity and the performance of Banks listed on the Nigerian Stock Exchange.

HO<sub>2</sub>: There is no significant relationship between liquidity and the Earnings per Share of Banks listed on the Nigerian Stock Exchange.

Unit root test was carried out to avoid spurious result and the data were differenced with the aim of generating non stationary data. The result is shown on appendix I.

## Test of Hypotheses

### Test of Hypothesis One

HO<sub>1</sub>: There is no significant relation between liquidity and the performance of Banks listed on the Nigerian Stock Exchange.

The model is:

$$ROA = a + xL + \text{Logsales} + e_{t-1}$$

$$ROE = a + xL + x\text{LogSales} + e_{t-1}$$

Where:

ROA = return on Asset

ROE = return on Equity

LogSales = Log of sales as control variable

a = Constant x = parameter  $e_{t-1}$  = standard error

L = Liquidity

**Table 1: Regression Result between Liquidity and Return on Equity**

Dependent Variable: DROE

Method: Least Squares

Date: 08/18/16 Time: 13:08

Sample (adjusted): 2001 2015

Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLIQUIDITY	-6.061602	21.46554	-0.282388	0.7825
DSALES	12.78085	14.11591	0.905421	0.3831
C	-1.636495	3.332782	-0.491030	0.6323
R-squared	0.065801	Mean dependent var		-
Adjusted R-squared	-0.089899	S.D. dependent var		0.632173
S.E. of regression	9.162227	Akaike info criterion		8.776228
Sum squared resid	1007.357	Schwarz criterion		7.444912
Log likelihood	-52.83684	Hannan-Quinn criter.		7.586522
F-statistic	0.422613	Durbin-Watson stat		7.443404
Prob(F-statistic)	0.664718			2.910025

An auto regressive method was used to correct the Durbin Watson as shown below:

**Table 2: Auto-regressive Result between Liquidity and Return on Equity**

Dependent Variable: DROE

Method: Least Squares

Date: 08/18/16 Time: 13:06

Sample (adjusted): 2002 2015

Included observations: 14 after adjustments

Convergence achieved after 10 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLIQUIDITY	-48.31557	16.67611	-2.897292	0.0159
DSALES	3.294754	14.23456	0.231462	0.8216
C	3.116524	2.878230	1.082792	0.3043
AR(1)	-0.778981	0.199921	-3.896450	0.0030
<hr/>				
R-squared	0.614531	Mean dependent var	-	
Adjusted R-squared	0.368890	S.D. dependent var	9.100094	
S.E. of regression	7.229336	Akaike info criterion	7.029128	



Sum squared resid	522.6330	Schwarz criterion	7.211716
Log likelihood	-45.20390	Hannan-Quinn criter.	7.012226
F-statistic	3.532876	Durbin-Watson stat	2.089895
Prob(F-statistic)	0.056240		

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Inverted AR Roots	-.78
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**Table 3: The Pearson Correlation between Liquidity and ROE**

	DROE	DLIQUIDITY	DSALES
DROE	1	-0.04450051592955595	0.2441162658728748
DLIQUIDITY	-0.04450051592955595	1	0.1374050041087675
DSALES	0.2441162658728748	0.1374050041087675	1

**Table 4: Regression Result between Liquidity and Return on Equity**

Dependent Variable: DLIQUIDITY

Method: Least Squares

Date: 08/18/16 Time: 13:17

Sample (adjusted): 2002 2015

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DSALES	0.031532	0.242908	0.129812	0.8993
DROA	0.022410	0.065462	0.342329	0.7392
C	0.074699	0.042833	1.743958	0.1118

AR(1)	-0.163096	0.345872	-0.471551	0.6474
R-squared	0.035461	Mean dependent var		0.076429
Adjusted R-squared	-0.253901	S.D. dependent var		0.111190
S.E. of regression	0.124508	Akaike info criterion	-	1.093939
Sum squared resid	0.155022	Schwarz criterion	-	0.911352
Log likelihood	11.65758	Hannan-Quinn criter.	-	1.110841
F-statistic	0.122549	Durbin-Watson stat		2.014835
Prob(F-statistic)	0.944681			

The R<sup>2</sup> of 0.614531 shows that the independent variable can explain the dependent variable 61%, this is quite high following the rule of thumb of 60%. The F statistics of 0.0159 is lower than 5% showing a significant relationship. However, the B-factor of -48.31557 shows a negative relationship. The Pearson correlation further explains a weak relationship between Liquidity and ROE with a negative relationship of -0.044. The regression on table 4 further confirms this position. Consequently, we can therefore assert that there is a significant relationship between Liquidity and the performance of Banks in Nigeria. This is quite different from the *a priori* expectation considering the fact that Banks need liquidity for their business. However, this could be possible if Banks' returns (profit) are not shown in their Equity and Assets.

#### Test of Hypothesis Two

HO<sub>2</sub>: There is no significant relationship between liquidity and the Earnings per Share of Banks listed on the Nigerian Stock Exchange.

**Table 5: Regression Result between Liquidity and EPS**

Dependent Variable: DEPS

Method: Least Squares

Date: 08/18/16 Time: 13:49

Sample (adjusted): 2001 2015

Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLIQUIDITY	-0.656143	10.00542	-0.065579	0.9488
DSALES	29.07838	6.579643	4.419447	0.0008
C	-3.582103	1.553461	-2.305886	0.0398
R-squared	0.623004	Mean dependent var	-	0.150000
Adjusted R-squared	0.560171	S.D. dependent var		6.439506
S.E. of regression	4.270654	Akaike info criterion		5.918267
Sum squared resid	218.8618	Schwarz criterion		6.059877
Log likelihood	-41.38701	Hannan-Quinn criter.		5.916759
F-statistic	9.915287	Durbin-Watson stat		1.881516
Prob(F-statistic)	0.002871			

	DEPS	DLIQUIDITY	DSALES
DEPS	1	0.09692947802968531	0.789220409091027
DLIQUIDITY	0.09692947802968531	1	0.1374050041087675
DSALES	0.789220409091027	0.1374050041087675	1

The R<sup>2</sup> of 0.6230 shows that the independent variables can explain the dependent variable at about 62%. The regression result shows an insignificant result with a P-value of 0.9488 between liquidity and earnings per share. The correlation also show a weak relationship between EPS and Liquidity with a coefficient of 0.0969. We can therefore accept the null hypothesis which states that there is no significant relationship between liquidity and the Earnings perShare of Banks listed on the Nigerian Stock Exchange. It means liquidity level of the Banks does not determine the EPS of shareholders.

## 4.0 Discussion and Recommendation

### 4.1 Discussion of Findings

Findings of Ali (2016) who posit that liquidity management the first findings differ from the has effect on performance; the reason could be because the study used primary source of data. Also, Agbada & suji (2013), Ferrouhi (2014)

Heibati, Nourani, & Dadkhah, all toll the same assertions with However, Ware (2015) posits that liquidity is becoming a major source of concern for business managers due to bank loans becoming too expensive to maintain which is consequent to tightening of both the local and international financial market. Meaning that loans are becoming too expensive hence, demotivating people from assessing loans; little wonder why there seem to be a negative relationship between performance and liquidity management.

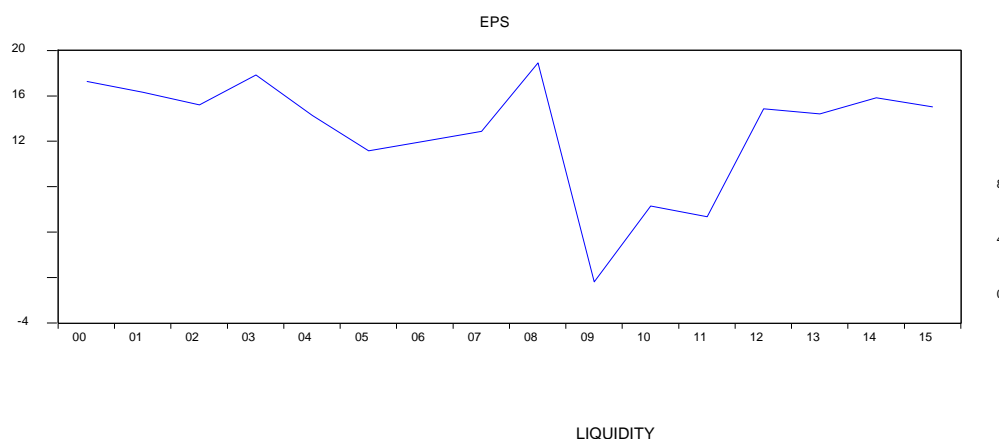
Further, Liquidity does not determine Earnings per share of shareholders. This is in line with the first findings; since liquidity does not necessarily determining earnings, it will consequently not determine EPS.

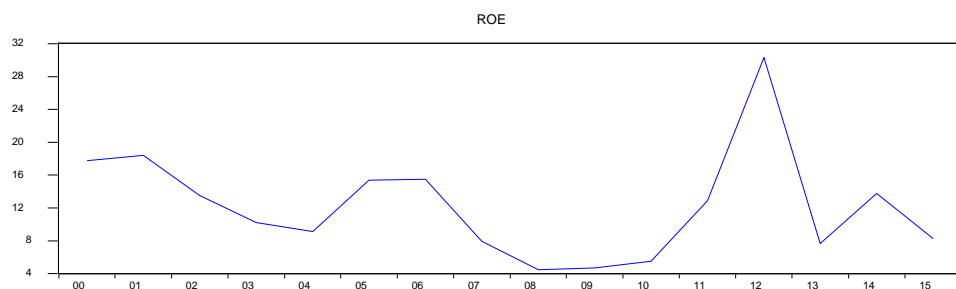
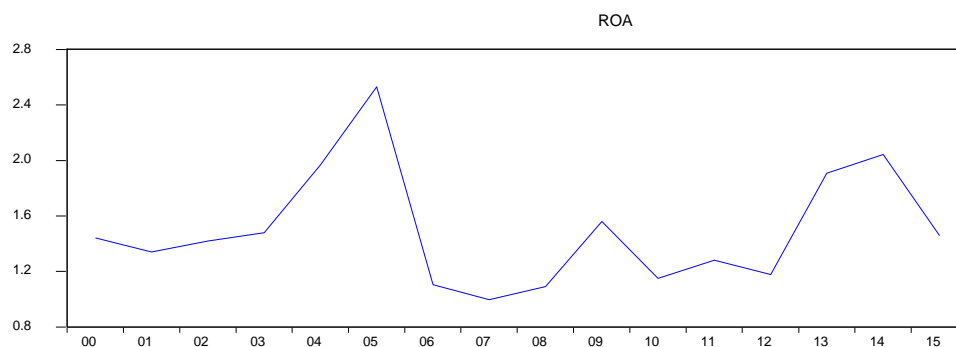
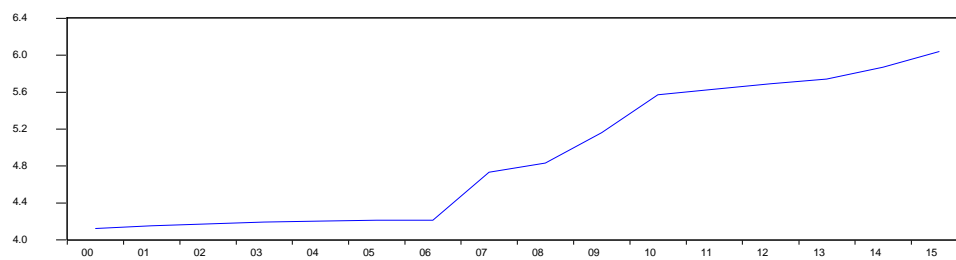
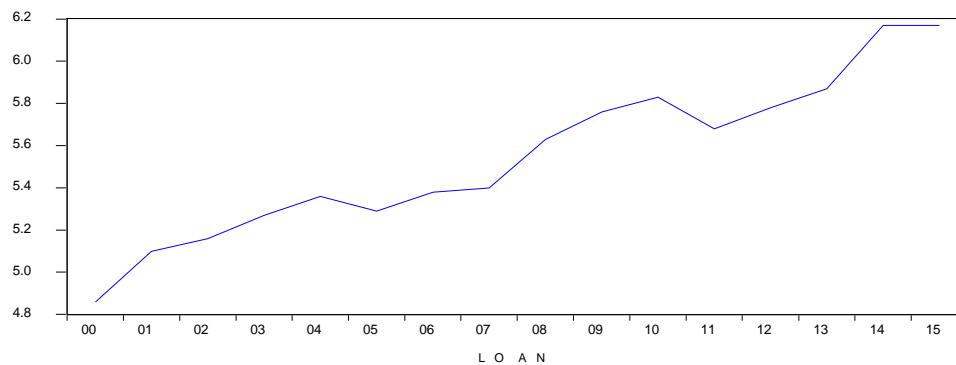
### 4.2 Recommendation

Bases on the findings of this study, the following recommendations are needful:

1. The management of Banks should relapse on stringent credit policies especially on interest rate.
2. Government should endeavor to put policies in place to encourage investment and a better economy; this will encourage investors to utilize more loans.

## APPENDIX 1





	ADF	10%	5%	1%	
EPS	-5.663915	-4.004425	-3.098896	-2.690439	2(1)
Liquidity	-7.101140	-4.200056	-3.175352	-2.728985	2(1)
Loan	-5.880094	-4.057910	-3.119910	-2.701103	2(2)



ROA -4.904292 -4.886426 -3.828975 -3.362984 2(2)

ROE -5.100399 -4.004425 -3.098896 -2.690439 2(1)

Source: The researcher using Eview 7.1