Impact of Liquidity Performance Indicators on Profitability of NALCO

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Abstract:Liquidity Management has become an important issue in financial management because of its effects on the firm's profitability, risk and consequently its value. Keeping this in view, t*he objective of the present paper is to examine the relationship between liquidity and profitability as well as to find out the impact of liquidity on profitability of NALCO Ltd., a central public sector undertaking. The data for the study has been collected from the annual reports of the company. The study period covers 11 years i.e. from 2009-10 to 2019-20. To examine the relationship between the liquidity and profitability position of the company, eight liquidity ratios wereselected and calculated and their association with profitability was determined. For data analysis purpose, the statistical tools namely correlation and regression analysis were used. The findings of the study revealsthat there are mixed relationships between the liquidity indicators and profitability. Further, two liquidity ratios namely inventory turnover ratio and debtor turnover ratio along with age factor have significant effect on the profitability position of the NALCO. Based on the findings of the study, the researchers suggest that the company should down size the quantum of liquidassets to enhance its profitability position.*

Key Words: Impact, Liquidity, NALCO, Profitability,ROCE.

1. INTRODUCTION

Liquidity and profitability are two major aspects to evaluate a company's health status. Through liquidity the short-term solvency of a company is judged. On the other hand, profitability is measured to know the long term survival of a company and its contribution for the maximization of wealth of shareholders. It is pertinent to mention that profitability and liquidity do not move in the same direction meaning thereby that they have an inverse relationship. Therefore, the role of the financial manager becomes crucial and he must find the right balance between liquidity and profitability to ensure the survival of the company and also keep on maintaining profitability to give the optimal return to its shareholders (Shin &Soenen, 1998). However, despite the risk and return theories indicate that the relationship between liquidity and profitability is negative, there have been some studies that produce altogether different results. The findings these studies are quite interesting because they reveal different kind of relationship between liquidity and profitability in different industries, and also difference in relationship in industries of different countries. Therefore, these difference in relationship between liquidity and profitability drew the attention of corporate analysts to make a comprehensive study on the liquidity parameters affecting the overall performance of the company. Hence, it is imperative to know the nature of liquidity and how it affects the profitability position of a company.

2. IMPORTANCE OF THE STUDY

Liquidity and profitability are two vital parameters which can impact on the overall performance of a company. Liquidity ensures whether short term obligations of the business are met in time or not and profitability indicates the ability of a company to generate return on its investments. These two parameters are closely related and they have inverse relationship. When one increases, the other one will decrease and vice-versa. Therefore, there is a need to maintain a proper balance between liquidity and profitability by the financial manager. Since liquidity affects the profitability and overall financial performance of a company, it is essential to find out the relationship between liquidity and profitability and to what extent the liquidity parameters are affecting the profitability. So in this study,

few important liquidity variables such as current ratio, quick ratio, cash ratio, working capital turnover ratio, inventory turnover ratio, etc. are used to ascertain the impact on profitability of NALCO, a central public sector company.

3. STATEMENT OF THE PROBLEM

Liquidity and profitability are two important issues that govern the very survival and growth of business organization. Many studies reveal that there should be a proper balance between liquidity and profitability otherwise, either it may cause insolvency (liquidation) or may lead to generate poor return on investment. The former arises due to shortage of liquidity while the latter arises due to excess liquidity. Hence, the financial manager should make a trade-off between liquidity and profitability judiciously. In this connection, it is necessary to find out the liquidity factors that impact on company profitability and accordingly necessary corrective measures may be taken up to overcome the problem. The problem to be addressed in this study is to evaluate the relationship between liquidity and profitability of NALCO and to determine the key factors that affect the profitability of the said company.

4. REVIEW OF LITERATURE

Shin and Soenen (1998) carried out a research study to examine the relationship between efficient working capital management and a firm's profitability. They used Net-Trade Cycle (NTC) as a measure of working capital management. The relationship was examined through correlation and regression analysis, by industry and working capital intensity. They included a sample of 58,985 firm covering the period from 1975to 94. They found a strong negative relationship between the lengths of the firm's NTC and its profitability. Further, they pointed out that NTC was associated with higher risk-adjusted stock returns. They concluded that the importance of reducing NTC is to create shareholder value.

Wang (2002) in his research paper examined the relationship between liquidity management and operating performance and also between liquidity management and corporate value for firms in Japan and Taiwan. The empirical findings for both Japan and Taiwan showed negative relationships between cash conversion cycle and return on assets as well as return on equity. The study supported the results of Jose et al. (1996) and Shin and Soenen (1998) that a lower cash conversion cycle would correspond with better operating performance. The study further disclosed that aggressive liquidity management was associated with higher corporate value for both the countries despite the differences in the financial system of the firms.

Raheman and Nasr (2007) in their study examined the working capital management and its effect on liquidity as well on profitability of the firms. They selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange and collected the data for a period of 6 years i.e. from 1999 to 2004. They examined the effect of different variables of working capital management including the average collection period, inventory turnover in days, average payment period, cash conversion cycle and current ratio on the net operating profitability of Pakistani firms. Debt ratio, size of the firm (measured in terms of natural logarithm of sales) and financial assets to total assets ratio have been used as control variables. Pearson's correlation and regression analysis (Pooled least square and general least square with cross section weight models) were used for analysis. The results showed that there was a strong negative relationship between variables of the working capital management and profitability of the firm**.**

Sen and Oruc (2009) in their study intended to determine the relationship between efficiency level of firms traded in Istanbul Stock Exchange in working capital management and their return on total assets. They selected 49 manufacturing firms whose data were collected from financial statements for the period from 1993 to 2007. They analyzed the relationship between different indicators relating to efficiency in working capital management and their return on total assets through two regression models. The results of the study in terms of both the models revealed that there is a significant negative relationship between liquidity parameters namely cash conversion cycle, net working capital level, current ratio, accounts receivable period, inventory period and return on total assets.

Charitou et al. (2010) carried out a study to investigate the effect of working capital management on firm's financial performance. For this study, they selected 43 non-financial firms listed on the Cyprus Stock Exchange and collected financial information of such sample units for 10 years i.e. from 1998 to 2007. They selected liquidity ratios and included in the multivariate regression model to examine the effect of such variables on the firms' performance. The results of the study indicate that the cash conversion cycle and all major components namely, days in inventory, days in sales outstanding and creditors payment period are significantly associated with the firm's profitability.

Sharma and Kumar (2011) conducted a study to examine the effect of working capital management on profitability of Indian firms. They collected data about a sample of 263 non-financial firms listed at the Bombay Stock Exchange

from 2000 to 2008 and evaluated the data using multiple regression analysis. The results of the study revealed that working capital management and profitability was positively correlated in Indian companies. The study further revealed that number of day's inventory and number of day's accounts payable were negatively correlated with firm profitability, whereas number of days accounts receivables and cash conversion period demonstrated a positive relationship with firm profitability.

Owolabiand Obida (2012) conducted a research work to measure the relationship between liquidity management and corporate profitability using data from 12 manufacturing companies quoted on the floor of the Nigerian Stock Exchange. The period of the study covered for 5 years i.e. from 2004 to 2009. The result of the study showed that liquidity management measured in terms of the company's credit policies, cash flow management and cash conversion cycle had significant impact on corporate profitability. The study concluded that managers could increase profitability by putting in place good credit policy, short cash conversion cycle and an effective cash flow management procedures.

Ebenezer and Asiedu (2013) carried out a study to examine the effect of working capital management on the profitability of companies listed on the Ghana Stock Exchange. Secondary data from the Ghana Stock Exchange on manufacturing companies within the Accra metropolis was used to examine whether working capital management could influence the profitability of manufacturing companies. The study covered 5 years data i.e. from 2007 to 2011. The study revealed that the major component of working capital management such as inventory days, account payable and cash conversion cycle have significant influence on the profitability of manufacturing companies. The study recommended that manufacturing companies should adopt efficient and effective ways of managing these components of working capital management for improving the profitability of such companies.

Ramana et al. (2015) carried out a study on the impact of liquidity on profitability of select cement companies in Andhra Pradesh. The data was collected from financial statements of select cement companies for a period of 10 years i.e. from 2003-04 to 2012-13. Further, they computed financial ratios such as current ratio, quick ratio, and absolute liquid ratio for liquidity analysis, and gross profit ratio, net profit ratio, return on capital employed, return on investment and earnings per share for profitability analysis to meet objective of the study. The result of the study revealed that the liquidity and profitability position of select cement companies were not satisfactory. Further, there was no significant impact of liquidity on Profitability.

Tamragundi and Vaidya (2016) conducted a study to find out the relationship between liquidity and profitability of ten leading FMCG companies in India. The financial reports of the ten leading FMCG companies were collected and relevant liquidity and profitability ratios were computed. The study period covered for 10 years i.e. from 2005-06 to 2014-15. They used statistical tools namely Spearman's Rank correlation and t-tests. It was found that there was a very strong positive relationship between the liquidity and the profitability of the selected FMCG companies in India.

Ahmed et al. (2017) carried out a study on the impact of working capital management on the profitability of Bangladeshi textile companies. To examine that researchers used 8 years data i.e. from 2007 to 2014. They collected randomly 22 textile companies listed in Dhaka Stock Exchange. The logistic regression analysis was used to analyze the data. The findings of the study showed that, there was statistically significant relationship between working capital management and profitability of the Bangladeshi textile companies. Further, this study revealed that current ratio and current liabilities to total asset had most significant impact on profitability of textile companies in Bangladesh.

Megaladevi (2018) in her study aimed to examine the relationship between liquidity and profitability as well as the impact of liquidity on profitability of selected cement companies in India. For analyzing the liquidity ratios on profitability, the researcher has used 3 liquidity ratios such as current ratio, quick ratio and interest coverage ratio to study the impact on profitability. The study was conducted for 10 years data i.e. from 2008 to 2017. The results of the study showed that current ratio and quick ratio were having significant relationship with profitability. The findings of the analysis revealed that liquidity had negative relationship with profitability and had considerable impact on the profitability of select cement companies chosen for the study.

Yameen et al. (2019) conducted a study where the main aim was to investigate the impact of liquidity on the profitability of pharmaceutical companies listed on Bombay Stock Exchange. The data were extracted from ProwessIQ database. The analysis was done using a balanced panel data of 82 pharmaceutical companies for the period of 10 years i.e. from 2008 to 2017. The statistical tools namely correlation and regression analysis were used to analyze and interpret the data. The findings of the study revealed that current ratio and quick ratio had a positive and significant impact on the profitability of pharmaceutical companies measured by return on assets, while control variables namely leverage, firms' size, and age had a negative impact on the profitability of pharmaceutical companies.

Li et al. (2020) conducted a research study to establish the nexus between liquidity and financial performance of non-financial companies in Ghana. They collected 15 companies on purposive sampling technique for the study. The published annual reports of the sample companies were used to collect the data for a period of 10 years i.e. from 2008 to 2017. The findings of the study established that there existed no cross-sectional reliance, and input variables were stationary and co-integrated with no presence of heteroscedasticity and serial correlation. The regression results revealed that liquidity had significant adverse effect on the firms' Return on Equity (ROE) but had insignificantly positive effect on ROE when surrogated by the cash flow ratio.

5. OBJECTIVE AND SCOPE OF THE STUDY

The present research work has been carried out on the impact of liquidity on profitability of NALCO and following are the objectives of the study.

1) To examine the relationship between various liquidity factors and profitability of NALCO.
2) To determine the impact of liquidity factors on profitability of NALCO.
3) To provide suggestions based on the outcome of the study.

Moreover, the scope of the study is limited to liquidity and profitability aspects of NALCO only.

6. HYPOTHESIS FOR THE STUDY

Keeping in view the above mentioned objectives, the following null hypothesis has been formulated.

1. H_O: Liquidity has no significant impact on the profitability position of NALCO.
   H_1: Liquidity hassignificant impact on the profitability position of NALCO.

7. METHODOLOGY FOR THE STUDY

The following methodology has been followed to carry out the current research work.

Data Collection:The data for the study has been collected mainly from the secondary sources i.e. annual reports of NALCO. The important components of balance sheet and profit and loss statement were extracted from the annual reports and then relevant liquidity and profitability ratios were calculated for the analysis and interpretation.

Period of the study:The period of study is 11 years i.e. from 2009-10 to 2019-20. The researchers consider that a minimum of 10 years or more continues data is necessary to determine the trend and behavior of liquidity and profitabilityposition of NALCO with high degree of accuracy.

Sample Size:The sample size for this study is only one company i.e. NALCO. This company has been selected to carry out the research work since the sample company is an age old company and the company has been generating profit continuously over a period of time.

Tools and Techniques used for the study:In this study, ratio analysis technique has been mainly used for data analysis. To study the impact of liquidity on profitability position of NALCO, both liquidity and profitability ratios werecalculated and used in this study. Apart from this, mean, standard deviation, variance, correlation and regression analysis werealso used to analyze and interpret the data. To test the hypothesis and the regression model, t-test and f-test were applied.

8. CONCEPTUAL FRAMEWORK ON SELECT LIQUIDITY PARAMETERS IMPACTING PROFITABILITY

In order to determine the impact of liquidity on profitability position of the NALCO, the following liquidity ratios are selected and the importance of such ratios are briefly mentioned below.

Current ratio: Current ratio implies the financial capacity of the firm to clear off the current obligations by using its current assets. Here the current assets include cash, deposits, marketable securities, stock, receivables, prepaid expenditures, etc. The current liabilities include short-term loans, payroll liabilities, outstanding expenses, creditors, various other payables, etc. A current ratio of 2:1 is a standard one. If the current ratio is less than 1, it means that the financial performance of the firm is said to be unsatisfactory. To study the effect of liquidity on profitability Sen and Oruc (2009), Pandian and Narendra (2015) and Yameen et al (2019) have used the current ratio as an important variable in their studies. The formula used to calculate current ratio is given below.

Current ratio = Current assets / Current liabilities

Quick ratio: Quick ratio or otherwise known as acid test ratio is another liquidity ratio that determines a firm's current available liquidity position. Here easily convertible marketable securities, receivables and present holding of cash are considered while calculating the quick ratio. However, inventories are excluded when acid test ratio is considered. Quick ratio of 1:1 is ideal one and it reflects a stable financial position of a firm. To examine the effect of liquidity on profitability the quick ratio was used by Thuraisingam(2015) and Umobong (2015) in their studies. The formula used to calculate quick ratio is given below.

Quick ratio = (Current assets – Inventory) / Current liabilities

Cash ratio: Cash and equivalent ratio measures a firm's most liquid assets such as cash and cash equivalent to the entire current liabilities of the concerned firm. Since cash is the most liquid form of current asset, this ratio indicates

how quickly and to what limit a company can repay its current dues with the help of its readily available highly liquid current assets.The authors have included this variable to measure the impact on the profitability of the company. The formula used to calculate cash ratio is given below.

Cash ratio = Cash and equivalent / Current liabilities

Absolute liquidity ratio: Absolute liquidity ratio considers cash and equivalents as well as marketable securities against current liabilities. Firms should make every effort for an absolute liquidity ratio of 0.5 or above in order to avoid short term insolvency situation.Ramana et al. (2015) included this variable in their study to examine the effect of liquidity on profitability. The formula used to calculate absolute liquidity ratio is given below.

Absolute liquidity ratio = (Cash and equivalent + Marketable securities)/Current liabilities

Inventory turnover ratio: Inventory turnover ratio explains how much of stock held by the business has been converted into sales. In simple words, the number of times the company sells its inventory during the period. A high inventory turnover ratio implies that a company is following an efficient inventory control measures compounded with sound sales policies. The higher ratio is a positive sign for any business. On the other hand, low inventory turnover ratio indicates a lack of demand, outdated product or poor selling/ inventory policy etc. Gill et al (2010), Charitou et al (2010), Ebenezer et al (2013) and others have used this variable to study the impact of liquidity on profitability.The formula used to calculate inventory turnover ratio is given below.

Inventory turnover ratio = Net sales/Average inventory

Debtor turnover ratio: Debtor turnover ratio is also known as receivables turnover ratio. This ratio indicates the number of times average debtors have been converted into cash during a year. This is also referred to as the efficiency ratio that measures the company's ability to collect revenue. It also helps interpret the efficiency in using a company's assets in the most optimum way. A high ratio indicates a company's ability to collect its receivables on time, pay off its short term obligations, etc. On the other hand, a low debtor turnover ratio is an indicator of poor collection process, extending credit terms to bad customers, or extending its credit policy for too long period. Charitou et al (2010), Ebenezer et al (2013), and Pandian and Narendra (2015) have included debtor turnover ratio in their studies to ascertain the effect on profitability.The formula used to calculate debtors turnover ratio is mentioned below.

Debtors turnover ratio = Net credit sales/Average debtors

Creditor turnover ratio:Creditor turnover ratio is also known as payables turnover ratio**.** It is an activity ratio that finds out the relationship between net credit purchases and average trade payables of a business.It finds out how efficiently the assets are employed by a firm and indicates the average speed with which the payments are made to the trade creditors. A high creditor turnover ratio signals that a company is paying its creditors and suppliers quickly, while a low ratio suggests the business is slower in paying its bills.Charitou et al (2010) and Ebenezer et al (2013)used the creditor turnover ratio in their studies to measure the effect on profitability. The formula used to calculate creditors turnover ratio is given below.

Creditors turnover ratio = Net credit purchases/Average creditors

Working capital turnover ratio: Working capital turnover ratio helps in determining how efficiently the firm is using its working capital in the business. This ratio signifies that how efficiently a firm is generating its sales with respect to the working capital. Here the working capital means the difference between the current assets and current liabilities.A high turnover ratio indicates that the firm is being extremely efficient in using its current assets and liabilities to support sales. On the contrary, a low ratio indicates that the business is investing in too many accounts receivable and inventory assets to support its sales, which could eventually lead to an excessive amount of bad debts and obsolete inventory write-offs.Sen and Oruc (2009) and Umobong (2015) have used the working capital turnover ratio to know the effect of this ratio on profitability. The formula used to calculate inventory turnover ratio is given below.

Working capital turnover ratio = Netsales/ Working capital

Size: Many empirical studies show that size is an important determinant of a firm’s profitability and is positively related to return on investment. Large firms are highly diversified and have stable cash flows. Here, size refers to the total assets of the firm. In the present study the natural logarithm of total assets is used as a proxy for size. Waswa et al (2018) and Yameen et al (2019) have used the size variable in their studies to measure the effect on profitability.The size variable is represented as follows.

Size= Natural logarithm of total assets

Age: Mature companies earn more and have greater return on investment. Firms which reach the maturity stage are likely to generate more profit. However, such firms are most likely to retain major part of their earnings in earlier stages. The firm lifecycle theory and maturity hypothesis are based on this concept. In the present study, the age of a firm is represented by the natural Logarithm of age. Waswa et al (2018) and Yameen et al (2019) have used the age

variable in their studies to measure the effect on profitability. The formula to calculate age variable is presented below.

Age= Natural Logarithm of (Current Year- first year of commercial production)

Return on capital employed: Return on Capital Employed (ROCE) is a profitability ratio that measures how well a company is able to generate profits from its capital. It is an important ratio that is mostly used by investors while screening out the companies to invest. The higher percentage means the company is doing a good job using its assets to generate more revenue. In the present study, ROCE is considered as dependent variable.Umobong (2015), Yameen and Pervez (2016) and others used ROCE as dependent variable in their studies. The formula for calculating return on capital employed is as follows.

Return on capital employed= EBIT/Capital employed*100

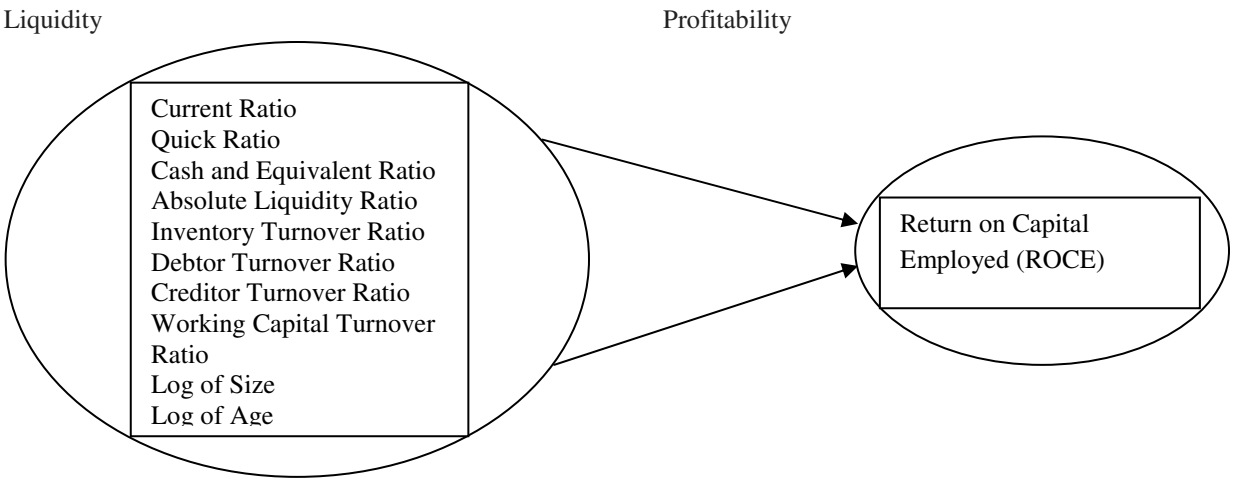

Fig. 1: Proposed theoretical model

9. ANALYSIS AND INTERPRETATION OF DATA

The analysis and interpretation of the entire study has been presented in two sections i.e. section-1 deals with descriptive analysis and section-II deals with inferential analysis.

Descriptive analysis

The descriptive analysis is carried out on the data collected from NALCO for a period of 11 years i.e. from 2009-10 to 2019-20 with regard to liquidity and profitability parameters and they are presented in the following section.

Table-1: Descriptive statistics of select variables

Variable	Mean	Minimum	Maximum	Std. deviation	Variance
CR	2.50	1.95	22.45	5.64	31.77
QR	2.03	1.05	3.33	0.67	0.45
CER	1.41	0.73	2.57	0.57	0.33
ALR	1.66	0.75	2.84	0.60	0.36
ITR	6.21	4.93	9.41	1.35	1.82
DTR	43.33	27.30	60.14	12.11	146.68
CTR	4.74	1.76	7.15	1.40	2.22
WCTR	2.28	1.27	4.61	1.19	1.41
LOG SIZE	4.18	4.13	4.22.	0.03	0.00
LOG AGE	1.46	1.38	1.53	0.05	0.00
ROCE	10.75	1.95	22.45	5.63	31.77

Source: Compiled and computed from the annual reports of sample companies

The table-1 furnishes the descriptive statistics on mean, minimum, maximum, standard deviation and variance of selected parameters of liquidity and profitability of NALCO. It is observed from the table that there is wide fluctuation in DTR, CR and ROCE as revealed from standard deviation and variance values. The least fluctuation was marked in size and age parameters. However, the remaining variables have low degree of variance as observed

from the said table.Apart from this, the table also shows the mean, minimum and maximum values of various parameters used in the study.

Inferential analysis

The inferential analysis is carried out with regard to the association among CR, QR, CER, ALR, ITR, DTR, CTR, WCTR Size, Age and ROCE in one hand and the impact of these variables on ROCE on the other hand. They are presented in the following section.

Correlation analysis

Table-2: Correlation matrix of select variables

	ROCE	CR	QR	CER	ALR	ITR	DTR	CTR	WCTR	LOG SIZE	LOG AGE
ROCE	1										
CR	0.1177	1									
QR	0.1485	0.9928	1								
CER	0.1717	0.9624	0.9612	1							
ALR	0.1557	0.9782	0.9913	0.9454	1						
ITR	0.8563	-0.0487	-0.0387	0.0223	-0.0571	1					
DTR	0.0569	-0.0455	-0.1046	-0.1313	-0.0426	-0.1087	1				
CTR	-0.3595	0.1334	0.094	0.0194	0.1553	-0.3109	0.4228	1			
WCTR	0.1438	-0.6732	-0.7348	-0.625	-0.7521	0.4422	0.3198	-0.0071	1		
LOG SIZE	-0.0921	0.5371	0.5537	0.5322	0.6173	-0.0805	-0.0172	0.6962	-0.4238	1	
LOG AGE	0.1466	-0.1868	-0.2565	-0.2099	-0.2828	0.5549	0.1805	0.2764	0.7531	0.0397	1

Source: Compiled and computed from the annual reports of sample companies

The table-2 depicts the correlation matrix of the select variables and their association. A glance into the table reveals that there is high degree of positive relationship betweenCR, QR, CER, ALR, WCTR and LA variables. Similarly, there is high degree of negative relationship among QR, ALR and WCTR variables. On the whole, the coefficient of correlation of these variables indicates that there ispresence of multicollinearity among few select variables. Hence, to remove the multicollinearity, the VIF technique has been used to find out the variables which are highly correlated to each other. The table-2 presents the VIF values of the select variables.

Table-3: Variance inflation factor of select variables

Sl. No	Name of the variable	VIF
1	Current ratio	16.33
2	Quick ratio	14.26
3	Cash and equivalent ratio	12.06
4	Absolute liquidity ratio	16.55
5	Inventory turnover ratio	7.48
6	Debtors turnover ratio	9.18
7	Creditors turnover ratio	11.13
8	Working capital turnover ratio	13.31
9	Log value of size	11.38
10	Log value of age	9.50

It is observed from the table that only 3 variables namely ITR, DTR and LA are having the VIF value less than 10 which is generally considered as safe tolerance limit. The rest variables exhibit VIF values more than 10. Hence, these 3 variables are considered for construct of regression model to study their impact on profitability.

Multiple regression analysis

In order to determine the impact of liquidity variables on profitability position of NALCO, a three variable regression model has been constructed and the results of the same are presented in the following tables.

Table-4(i): Model summary of regression Analysis

Model	Multiple R	R^2	Adj. R^2	Std. Error of Estimate
1	0.9832	0.9666	0.9524	1.2302

Table-4(ii): ANOVA summary

Model		Sum of squares	DF	Mean square	F-value	F-sig.
1	Regression	307.1288	3	102.3763	67.6385	0.0000
	Residual	10.5951	7	1.5136		
	Total	317.7239	10			

Table-4(iii): Regression coefficients of select variables

Model/Variables		Unstandardized Coefficients		T-value	P-value
1		Beta	Std. Error		
	Constant	66.9609	12.5549	5.3335	0.0011
	ITR (X1)	5.0492	0.3586	14.0783	0.0000
	DTR (X2)	0.1361	0.0338	4.0294	0.0050
	LOGAGE(X3)	-63.9971	9.6250	-6.6490	0.0003

Y=66.96+5.04X1+0.13X2-63.99X3

From the table-4(i), it is revealed that the R^2 value is 0.9666 which reflects that explanatory power ofR^2 is 96.66%. That means about 96.66% of change in ROCE can be explained jointly by the three factors namely ITR, DTR and Age while the remaining is attributed by other factors outside the model. Further, the explanatory power of adjusted R^2 is 95.24% which indicates that the net explanatory power of three variables is 95.24%. Moreover, as observed from the table-4(iii), the explanatory variables namely ITR, DTR and age are found to be significant as per the t-statistic and p-value. Since F-value is 67. 6385 as mentioned in table-4(ii) which is higher than tabulated value at the 95% confidence level, the model can be said to be a best fit.Further, all the determinants are found to be statistically significant since the individual p- values are below 0.05. Hence, the null hypothesis is rejected. It can be concluded that the factors namely ITR, DTR and age have significant impact on profitability of the company.

10. FINDINGS OF THE STUDY

The major findings of the study are presented below.

- The standard deviation and variance values of DTR, CR and ROCE showhigh degree fluctuation whereas the rest variables show low degree of fluctuation during the study period.
- The analysis reveals that there is high degree of positive relationship among CR, QR, CER, ALR, WCTR and LA variables. On the other hand, there is high degree of negative relationship among QR, ALR and WCTR variables.
- The model summary of 3 variable regression analysis explains 96.66% variation on profitability.
- The t-statistics reveals that all the explanatory variables i.e. ITR, DTR, AGE are found to be statistically significant at 5% level since the p- value is less than 0.05.
- The regression model is considered as best fit since the calculated F-value is higher than the tabulated value.

11. CONCLUSION AND SUGGESTIONS

The present research work has been conductedtaking into account NALCO, an age old public sector company which has been generating profit since its inception. Since liquidity and profitability are two keyaspects in financial management, the objective of this study is to find out their relationship as well as the effect of key liquidity factors on the profitability position of the company. The regression analysis reveals that ITR,DTR and age show a significant impact on profitability.It is noticed from the result that the beta coefficients of inventory turnover and debtors turnover variables are positive while the beta coefficient of age factor is negative. As observed from the values of liquidity parameters such as current ratio, quick ratio and cash ratio, the company has been maintaining higherlevel of liquidity which adversely impacts the profitability position of the company. Hence, the study suggests that the company should down size the excess liquidassets to keep the working capital at optimal level. This would definitely improve the profitability position of the company.

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