Effect of Working Capital on Profitability in Private Sugar Factories of Rayalaseema Region, Andhra Pradesh

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Abstract

Over the years there has been a big debate on the effect of working capital on the profitability. Few researchers argue that working capital is just an idle resource with a high cost and low benefit associated with it so, companies should follow zero working capital policy but such a policy is very risky because it reduces the liquidity and it might leads to a default. Other researchers support companies to have a working capital policy because they believe that proper management of components of working capital can balance cost and benefits of the company and it will reduce the risk of default by raising the level of liquidity. Companies can choose among three different types of working capital i.e. aggressive, conservative and moderate but their choice depends on their desire level of liquidity and risk. Researchers realize the importance of the topic and lot of research has been carried out all over the world especially in developing countries like Pakistan, India, and Taiwan etc. Hence the present study is to analyse how the working capital components will affect the profitability of private sugar factories of Rayala Seema Region, Andhra Pradesh.

Keywords:- *working capital, profitability, Return on Total Assets, Cash Conversion Cycle.*

I. INTRODUCTION

This paper investigates the relationship between working capital management and the firms" performance for a sample of private sugar factories in Rayala Seema region, Andhra Pradesh. Working capital management decisions are very important and strategic because they affect the firm profitability and firm value. Working capital management involves managing current assets and current liabilities of firms. The current assets are cash and cash equivalents, marketable securities, accounts receivable and inventories. The current liabilities are accounts payable, expenses payable, including accrued wages and taxes and notes payable. A narrower definition for the working capital is inventory + accounts receivable – accounts payable. So according to this definition, working capital management is managing inventory, accounts receivable and accounts payable. The effective working capital management is very important because it affects the performance and liquidity of the firms (Taleb et al., 2010). The main objective of working capital management is to reach optimal balance between working capital management components (Gill,2011). The efficient management of working capital is a fundamental part of the overall corporate strategy to create shareholders" value (Nazir and Afza, 2008). Therefore firms try to keep an optimal level of working capital that maximizes their value (Deloof, 2003). Most popular measurement of working capital management is cash conversion cycle (CCC) which is the time lag between purchase of raw materials or render of services and the collection of cash from the sale of goods or services rendered. If the time lag is longer, it means greater investment to working capital components and this causes greater financing needs.

II. LITERATURE SURVEY

Paul Aondona Angahar, Agbo Alematu(2014) in the present study empirically examined the impact of working capital management (the number of days accounts receivable are outstanding, the number of days inventory are held, and the cash conversion cycle-CCC), on profitability (measured by return on assets-ROA) of Nigerian Cement Industry for a period of eight years from 2002 to 2009. Data from a sample of four out of the five cement companies quoted on the Nigerian Stock Exchange were analyzed through descriptive statistics and multiple regression analysis. They found an insignificant negative relationship between the ROA of selected cement companies and the number of days accounts receivable. They also found a significant negative relationship between the profitability of these cement companies and the number of days inventory are held. The study finally revealed a significant positive relationship between the profitability and the cash conversion cycle. The study concludes that, the profitability of cement companies during the study period is influenced by inventory days and CCC. The study therefore recommends that managers of these cement companies should manage their working capital in more efficient ways by reducing the number of days inventory are held to an optimal level in order to enhance their profitability as well as create value for their shareholders. Managers of Nigerian cement companies should also improve on their cash flows, through the reduction of their cash conversion cycle.

Snober Javid, Velontrasina Prudence Marie Zita(2014 this study is to investigate the relationship between working capital policy and firm's profitability in the cement sector of Pakistan. Working capital management is considered to be a crucial element in determining the performance of an organization. An optimal WCM practice is expected to contribute positively to the creation of firm's value and enrichment of its profitability. Working capital policy, growth of firm, size of firm and debt, and size (capital) of the firm as control variables are also used to investigate theireffect on profitability. Profitability of Pakistan cement sector measured in terms of market as well as in accounting terms. Tobin's Q, return on equity (ROE) return on asset (ROA) and Net operating Profitability (NOP) used to measure profitability. For regard this research adopted ordinary least square regression method of research approach to test a research hypothesis. This research used 20 cement companies listed in Karachi stock exchange during the period of 2006 – 2011. The result of study showed that there is significant negative relationship between working capital policies on profitability of the firms.

Titto Varghese, Kamal Kishore Dhote(2014) The efficient management of working capital plays a crucial role in the successful functioning of a firm. . Firm should always keep monitoring the liquidity position as it projects the company's credit image. Lack of liquidity can create a bad image among the parties interested in the firms functioning. Also firm must ensure that there should be a proper balance between current assets and current liabilities , as it can affect the profitability of the firm. For making the analysis of Liquidity-profitability relationship of HUL, ratio analysis techniques of Financial Management have been used. By observation of this it can be seen that even though the profitability position was strong, the liquidity position of HUL is not up to the ideal level. The short term solvency position of the firm must be strengthened so that it is able to meet its obligations timely. These things facilitate the maximization of the wealth of the firm. From this study it can be concluded that there is no significant difference in the profitability & liquidity position of the company because it has been seen that the profitability position was strong were as the liquidity position was not satisfactory. The risk factor of the firm is high as compared to profitability. The total risk of the firm is also high as compared to the ROCE, which was not worthwhile for the future prospects of the firm

Asif Iqbal & Wang Zhuquan(2015) Efficient working capital management is an essential component of overall corporate strategy to boost shareholders value. The aim of our study is to examine the relationship between working capital management and profitability of Pakistani firms listed on Karachi Stock Exchange for a period of 6 years during 2008-2013. Correlations analysis using panel data and panel least square was conceded to check the impact of working capital management on profitability. The study found considerable negative relationship between the measure of profitability and Average Payment Period, Average Collection period, Inventory turnover in days, Cash conversion cycle and Debt while positive relationship was found between ROA and Size, GDPGR and Sales growth of Pakistani firms. The study suggests that shareholders wealth can be maximize by well-organized management of working capital. The study suggest that managers can improve the profitability and value of their firms by dropping accounts receivable days, accounts payable days, inventory turnover in days and also make substantial efforts towards maintaining an optimal cash conversion cycle level.

Gamlath G.M.R,Rathiranee Yogendrarajah(2014) Decisions relating to working capital and short term financing are referred to as working capital management (W. These involve managing the relationship between a firm's short-term assets and its short-term liabilities. Working capital management is one of the essential determinants of firms' market value because it directly affects the profitability. This study investigates the relationship between working capital management and profitability of Colombo Stock Exchange (CSE) listed commercial banks in Sri Lanka. The objective of the study is to identify the relationship between the working capital management and profitability and its impact on profitability. The working capital management represents the variables of the current ratio (CR), loans to deposit ratio (LDR) and cash ratio (CSR) and the profitability including the net profit margin (NPM), return on equity (ROA) and return on capital employed (ROCE)). The conclusion of the study is that The CSR has great impact on NPM and ROA than other components which are influenced by other factors such as savings, interest rates other than CR and LDR. Working capital management has a great impact on the profitability of the Sri Lankan listed commercial banks and the value of the managers of commercial banks will have to increase value of the firm thereby controlling the level of optimal working capital position

Shagufta Nasreen, Farida Khanam, Syed Shahzaib Pirzada(2014) Management of working capital play very essential role in the firm's profitability. Therefore, this study aims to inquire the impact of working capital management on firm's profitability. For measuring working capital management inventory conversion period, debtor's conversion period, creditor's conversion period, cash conversion cycle, and cash conversion efficiency are taken as independent variables. Firm's profitability is measured by using the four dependent variables which are net profit margin, return on assets, return on equity, and return on capital employed. Regression analysis is used to discover the impact of working capital management on firm's profitability by using secondary data. This data is gathered from annual reports of 45 companies listed at KSE for five years from 2008-2012. Therefore, it is concluded that working capital management has significant impact on firm's profitability in food sector. It is concluded that if firms in food sector efficiently manage working capital then, firm's profitability is enhanced. This study also find descriptive statistics which tells how well performance of firms in food sector is and how efficiently these firms are managing working capital.

III. STATEMENT OF THE PROBLEM

Working capital policy is an important issue in any organization because without a proper management of working capital components it will be difficult for the organization to run its operations smoothly. Furthermore working capital policy has been major issue especially in developing countries and in order to explain the relationship between working capital policy and profitability different researches had been carried out in different parts of the world especially in developing countries like India.

IV. OBJECTIVES OF THE STUDY

The broad objective of the study is to examine effects of working capital management on the profitability of private sugar manufacturing company in Rayala Seema Region, Andhra Pradesha. The specific objectives of the study are:

• To examine the impact of various components of working capital management on profitability of private sugar manufacturing company in Rayala Seema Region, Andhra Pradesha
• To establish the relationship between liquidity and profitability of private sugar manufacturing company in Rayala Seema Region, Andhra Pradesha

Hypothesis

H0: Working capital management has no significant influence on the Return on Total Assets . H1: Working capital management has significant influence on the Return on Total Assets .

V. DATA ANALYSIS AND INTERPRETATIONS

FINANCIAL ANALYSIS

Calculation Of Inv Days Of Select Sugar Manufacturing Units In Rayalaseema Region

Name Of The Companies			
Year	Prudential Sugars	Sagar Sugars	Suddalagunta Sugars
2005-06	128	68	50
2006-07	139	43	97
2007-08	85	138	148
2008-09	58	89	132
2009-10	125	102	150
2010-11	149	128	142
2011-12	128	109	137
2012-13	122	128	124
Average	117	101	122

A. Interpretation

The Inventory days of sugar companies produced in the Rayalaseema region of Andhra Pradesh and the relative position of the selected sugar manufacturing units under study. The Inventory days gives investors an idea of how long it takes a company to turn its inventory into sales. It is an efficiency measure of average number of days the company holds its inventory before selling it. The ratio measures the number of days funds are tied up in inventory. Shorter number of days inventory outstanding means the company can convert its inventory into cash sooner. Longer number of days represents the company will have more inventory with it and it takes longer time to convert inventory into sales. Over the period of analysis, out of the three selected sugar manufacturing units the Number of days of Inventory of only one company (Prudential sugars) were decreased and the remaining two companies (Sagar sugars and Suddalagunta sugars) ratio values during the study period were increased. Concerned about the number of days, the only one company (Prudential sugars) because of decreasing ratio values will depicts that the companies are effectively managing its Inventory and can able to convert its inventory with a short period of time. The highest number of days (i.e., 122 days) was found in Suddalagunta sugars. The analysis brings out the observation that, the Inventory days of the selected sugar manufacturing the three Companies (Sagar sugars and Suddalagunta sugars) were efficient at converting its inventory into cash sooner when compared to Sagar sugars.

Calculation Of Ar Days Of Select Sugar Manufacturing Units In Rayalaseema Region

NAME OF THE COMPANIES			
Years	Prudential Sugars	SAGAR SUGARS	SUDDALAGUNTA SUGARS
2005-06	25	15	19
2006-07	36	26	29
2007-08	26	36	16
2008-09	39	29	15
2009-10	28	18	19
2010-11	23	33	45
2011-12	29	39	41
2012-13	16	19	43
Average	28	27	28

Source: Data compiled from the annual reports of sugar manufacturing units of Rayalaseema region.

B. Interpretation

The Accounts Receivables days of sugar produced in the Rayalaseema region of Andhra Pradesh and the relative position of the selected sugar manufacturing units under study. The Accounts Receivables measures efficiency of a firm in terms of how many times a business can turn its accounts receivable into cash during a period. A higher Accounts Receivables would be more favorable. Higher ratios mean that companies are collecting their receivables more frequently throughout the year. Higher efficiency is favorable from a cash flow standpoint as well. A lesser ratio indicates the company is not able to collect cash from its customers at a faster rate. Over the period of analysis, out of the three selected sugar manufacturing units the Accounts Receivables of only one company (Prudential sugars) were decreased and the remaining two companies (Sagar sugars and Suddalagunta sugars) values during the study period were increased. Concerned about the ratio, the two companies (Sagar sugars and Suddalagunta sugars) because of increasing ratio values will effectively can turn its accounts receivable into cash during a period. The highest average number of days (i.e., 28 days) was found in Prudential sugars and Suddalagunta sugars.

Calculation Of Ap Days Of Select Sugar Manufacturing Units In Rayalaseema Region

Name Of The Companies			
Year	Prudential Sugars	Sagar Sugars	Suddalagunta Sugars
2005-06	18	18	15
2006-07	13	13	19
2007-08	8	8	22
2008-09	28	19	29
2009-10	25	22	24
2010-11	29	28	30

2011-12	27	29	17
2012-13	22	18	14
Average	21	19	21

Source: Data compiled from the annual reports of sugar manufacturing units of coastal region.

C. Interpretation:

The Accounts payable days of sugar companies produced in the Rayalaseema region of Andhra Pradesh and the relative position of the selected sugar manufacturing units under study. The Accounts payable measures efficiency of a firm in terms of how long it takes a company to pay its invoices from trade creditors, The longer they take to pay their creditors, the more money the company has on hand, which is good for working capital and free cash flow. The number of days increases from one period to the next, this indicates that the company is paying its suppliers more slowly, and may be an indicator of worsening financial condition.

Over the period of analysis, out of the three selected sugar manufacturing units the Accounts payable of only one company (Suddalagunta sugars) were decreased, the other sugar company SAGAR sugars the Accounts payable in days remaining same and there is no change in it. The remaining company sugar manufacturing company Prudential sugars values during the study period were increased. Concerned about the ratio, the only company (Prudential sugars) because of increasing ratio values will effectively can effectively pay their accounts to the trade creditors. The highest average number of days (i.e., 21 days) was found in Prudentail sugars and Suddalagunta sugars. The analysis brings out the observation that, the Accounts payable of the two selected sugar manufacturing Companies (Prudentail sugars and Suddalagunta sugars) were at efficient in accounts payable when compared to Sagar sugars.

Calculation Of Ccc Days Of Select Sugar Manufacturing Units In Rayalaseema Region

Name Of The Companies			
Year	Prudential Sugars	Sagar Sugars	Suddalagunta Sugars
2005-06	135	65	54
2006-07	162	56	107
2007-08	103	166	142
2008-09	69	99	118
2009-10	128	98	145
2010-11	143	133	157
2011-12	130	119	161
2012-13	116	129	153
Average	123	108	130

Source: Data compiled from the annual reports of sugar manufacturing units of Rayalaseema region.

D. Interpretation

The Cash Conversion Cycle days of sugar companies produced in the Rayalaseema region of Andhra Pradesh and the relative position of the selected sugar manufacturing units under study. The Cash Conversion Cycle measures the length of time, in days, that it takes for a company to convert resource inputs into cash flow. Cash conversion Cycle gives us the amount of time needed to sell inventory, the amount of time needed to collect receivables and the length of time of payment of credits. Shorter Cash Conversion Cycle is favorable as the company can pay its bills and can generate cash at short period of time. Over the period of analysis, out of the three selected sugar manufacturing units the Cash Conversion cycle of all the three companies (Sagar sugars and Suddalagunta sugars) values during the study period were increased. Concerned about the cash conversion days, THE remaining only one company i.e., Prudential sugars decreases in the number of days they can effectively convert their inputs into resources and can convert them into cash with a less period of time. The highest number of Cash Conversion days (i.e., 123) was found in Prudential sugars.

Calculation Of Return On Total Assets Of Select Sugar Manufacturing Units In Rayalaseema Region

Name Of The Companies			
Year	Prudential Sugars	Sagar Sugars	Suddalagunta Sugars
2005-06	0.1381	0.1069	0.0002
2006-07	0.1157	0.1251	0.0006
2007-08	-0.1956	0.0452	0.0002
2008-09	0.0489	0.0418	0.0014
2009-10	0.0344	0.0039	0.0013
2010-11	0.0268	0.0034	0.0013
2011-12	0.0285	0.5663	0.0019
2012-13	0.0269	0.5663	0.0090
Average	0.1381	0.1069	0.0002

Source: Data compiled from the annual reports of sugar manufacturing units of Rayalaseema region.

E. Interpretation

Table-3.26 presents the Return on total assets ratio of sugar produced in the Rayalaseema region of Andhra Pradesh and the relative position of the selected sugar manufacturing units under study. The Return on Assets ratio measures how effectively a company can turn earn a return on its investment in assets. a higher ratio is more favorable to investors because it shows that the company is more effectively managing its assets to produce greater amounts of net income. A positive ROTA ratio usually indicates an upward profit trend as well. Over the period of analysis, out of the three selected sugar manufacturing units the Return on total assets ratio of only one company (Prudentail sugars) were decreased and the remaining two companies(Sagar sugars and Suddalagunta sugars) ratio values during the study period were increased. Concerned about the ratio, the four companies (Sagar sugars and Suddalagunta sugars) because of increasing ratio values will effectively managing its assets to produce greater amounts of net income. The highest average ratio (i.e., 0.1381) was found in Prudential sugars. The analysis brings out the observation that, the Return on total assets ratio of the selected sugar manufacturing Companies were at safest maintenance of their Assets except (Suddalagunta sugars).

VI. STATISTICAL ANALYSIS

CALCULATION OF ANOVA IN RAYALASEEMA REGION

A. *Hypothesis:*

H_0: single factor analysis of variance for Rayalaseema region is done on the three components of working capital management i.e., INV, RECEIVABLES, PAYABLES to find if the means of the working capital management components are significantly different.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
INVENTORY DAYS	Between Groups	2057.583	2	1028.792	.990	.388
	Within Groups	21827.375	21	1039.399		
	Total	23884.958	23			
ACCOUNT PAYABLE DAYS	Between Groups	18.750	2	9.375	.194	.825
	Within Groups	1014.875	21	48.327		
	Total	1033.625	23			
ACCOUNT RECEIVABLE DAYS	Between Groups	9.083	2	4.542	.046	.955
	Within Groups	2080.250	21	99.060		
	Total	2089.333	23			

VII. RESULTS AND DISCUSSION

Overall the study period with respect to Inventory days of sugar companies in Rayala Seema region, out of the three sugar manufacturing units Prudential sugars is showing high inventory days followed by Suddalaguntala sugars and Sagar sugars during the study period. The analysis brings out the observation that, the Accounts Receivables of the three selected sugar manufacturing Companies (Prudential Sugars, Sagar Sugars And Suddalagunta Sugars) were at efficient in accounts receivables. Overall the study period of accounts receivables in Rayalaseema region, out of the three sugar manufacturing units Sagar sugars have least days in receivables and the remaining two companies Prudential sugars and Suddalagunta sugars are having the same average number of days (i.e., 28 days) during the study period. Out of the three sugar manufacturing units Highest a average of Cash Conversion is at Prudential Sugars followed by Sagar sugars and Suddalagunta sugars with respect to Cash Conversion Cycle days during the study period. The analysis brings out the observation that, the Cash Conversion of two selected sugar manufacturing Companies (Sagar sugars and Suddalagunta sugars) were at efficient in converting their inputs into cash when compared to the remaining company ie., Prudential sugars. Return on total assets ratio in coastal region, out of the three sugar manufacturing units Prudential sugars stood at first followed by Sagar sugars and Suddalagunta sugars with respect to maximization of Return on assets during the study period. The results of this analysis explains that three variables namely, inventory days, Accounts Payable and Accounts Receivable are showing insignificant relationship. Hence we conclude that approaches used by the firms with respect to managing inventory days(INV) ,AP days, AR days insignificantly vary within sugar industry in Rayalaseema region it indicates the results produced by the selected companies in Rayalaseema region are maintaining heterogeneity.

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1. Sagar Sugars
2. Prudential Tirumala Sugars Limited
3. Sudalagunta Sugars Limited