Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.7, No.5, 2016

Impact of Working Capital Management Approaches (Aggressive/Conservative) on the Profitability and Shareholder's Worth: Comparative Analysis of Cement and Sugar Industry

Ghulam Nabi
Lecturer:College of Statistical and Actuarial SciencesUniversity of the Punjab, New Campus, Lahore

M. Salman Yousaf
Lecturer:University of Central Punjab, Lahore, Sialkot

Iman Ali
Research Associate:University of Gujrat, Sialkot

Rabia Najaf*
University of Lahore, Lahore

Abstract
This study investigates that how sugar and cement companies listed at Karachi stock exchange manage the working capital approaches (aggressive/conservative) mix. Sample of 18 cement and 31 sugar companies used in this thesis. In this study impact of working capital approaches namely aggressive investment policy and aggressive financing policy is checked on the profitability and shareholder's worth. All the companies selected from sugar and cement sector are listed at Karachi stock exchange and have active status. The time period for this study is from 2006 to 2012. Regression analysis is use to analyze the impact of working capital investment and financing policies. Regression analysis is supported by SPSS software. The result of this study indicate that if companies follow the aggressive investment and financing policies then they will not be able to yield more profit as both these policies yields negative effect on the profitability and shareholder' worth. There is inverse relationship between degree of aggressiveness with profitability and shareholder' worth.
Keywords: Working capital efficiency, aggressive investment policy, working capital financing policy, firm' profitability, shareholder's worth, Cement industry, sugar industry

Introduction

What is management of working capital?

Operation activities are one of most important phenomenon now days in organizations as financial executive are trying to find the appropriate amount of operating activities. Money a business use in the daily activities basically concerns all about the management of liquid holdings of any business and its obligations (Dr. KhalafTaani, 2012).Basically the difference between the liquid cash and responsibilities is known as the management of its operating performance. Working capital is very important as it indicates the proportion of the liquidity in the firm. In the corporate finance supervision of functional units of any business are focal points that require special attention as these units directly affects the profitability and the liquidity level (HasnainManzoor, 2013)

It is worthy to admit that firms could not continue to exist without the balanced handling of functional units. Expert and professional supervision of ongoing processes contributes in the short term financial decision making. It considers all the aspect effecting leveled running of business. Special care toward the ongoing processes of business is directly associated with high return with low cost to earn that return (Binti Mohamad and MohadSaad, 2010)

High rate of return is a factor that ensures the existence of the any business. Good financial decisions, high investment, appropriate allocation of funds, individual shares and good will of the business are considered among those factors that enhance the long term return. In simple words the expertise handling of ongoing activities directly associated with return rate.

Concepts of ongoing activities of any business

There are two basic concepts of ongoing activities of any business.

Gross Working Capital

Ongoing activities that consider the liquid holdings of the firm. Efficient management of current asset results in progress and enhances the market value of the firm.

Net working Capital

The difference between short term beneficial quantity and obligations that are less than 1 year is referred as the net handling of functional units (NWC) = functional unit with less than one year - obligations in nature of less than one year. (Arshad and Gondal, 2013).Total current asset and the working capital can be substitute as the functional units before interest and tax and the gap among functional asset and short term liability , known as net working capital (Qazi et.al, 2011)

Aggressive/ conservative policies

Aggressive and conservative two approaches are there that affect the profitability of any Business. Management of working capital is accompanied by two approaches aggressive working capital approach and conservative approach. Companies adopt working capital approaches based on the business. Firms with minimum level of valuable quantities with less than one year status to total asset percentage use aggressive investment working capital approach. Firms with optimum level of current obligations to total obligation percentage use the aggressive financing policy. Aggressive working capital policy refers to the maximum return with high risk and conservative policy followed by lower risk with minimum return. (Afza and Nazir, 2008).

Performance is in itself a difficult term to explain but in simple words the business that is successful in achieving its goals, effectively implementing its planned action and appropriately following its working approach is consider a well performing firm (Otley , 1999).

Literature review

Afza and Nazir (2009) worked on the panel data analysis of management of working capital policies. Data range for this study was 8 year from 1998 to 2005. Data population of this study was 204 non financial firms registered at Karachi stock exchange. Reward on asset and Tobin q use for estimation of the market value of the firm was as the dependent variables. Independent variables were size, growth, leverage, GDP, total current asset to total asset ratio and total current obligation to total asset ratio. Data is evaluated through panel data regression analysis. This study concluded that there is negative relation between profitability measures of firms and degree of aggressiveness of investment and financing policies. And firms gain more attention in the stock market if they are more aggressive in managing in current obligations.

Afza and Nazir (2008) examined the Impact of working capital approaches on the firm's return. This study investigates the relationship of aggressive and conservative approaches with firm's return. This study was held in Pakistan and considered the seventeen public limited companies listed at Karachi stock exchange. Data range for this study was 5 year from 1998 to 2003. Reward on asset and reward on equity were dependent variables of this study. In dependent variables of this study were average total current asset to total asset ratio and average total current obligation to total asset ratio. Average total asset to total current asset ratio is aggressive investment policy and denoted as AIP and average total current liabilities to total asset ratio is considered as aggressive financing policy and denoted as AFP. Ordinary least square regression analysis and ANOVAs test was used to investigate the relationship between working capital approaches and firm's return. Findings of this paper referred that financing policies for different industries were different. According to the research findings aggressive investment working capital policy followed the aggressive working capital financing policy. There is negative relation between profitability standards and aggressive working capital financing and investment policies.

Vishnani and Bhupesh (2008) checked the impact of management of working capital policies on corporate performance. To check the impact of working capital policies and practices Indian consumer electronics industry was selected in this study. For this study period of 1994 -2005 was selected. To confirm the relationship of liquidity and profitability current ratio, finish goods inventory, average collection period and average payment period were considered through reward on capital employed ratio. Correlation and regression analysis was used to analyze the data. Conclusion draw on the basis of respondent and manipulated variables suggested that managers should pay attention towards policy planning and should implement it at their best to achieve good results.

Chowdhury and Amin (2007) choose to work on the topic of management of working capital practiced in the pharmaceutical companies. This research was evidenced from Bangladesh for the period of 2000 to 2003 and for this purpose eight firms listed at Dhaka stock exchange was choose. In this study mixture of primary and secondary data was used. Primary data was collected from questionnaire that was divided in four sections that were management of cash, inventory, accruals and payable and management of account receivables. In secondary data liquidity and efficiency dimension included. Regression analysis was used in this study. From conclusion it is clear that working capital played crucial role in the profitability of Pharmaceutical companies. In this study it was also suggested that firms should be very conscious about choosing working capital policy according to the nature of firm.

Afza and Nazir (2007) discussed the choice of aggressive or conservative policy in management of working capital. 208 public limited companies registered at KSE from the period of 1998 to 2005 were considered. Reward on asset, reward on equity and market value (Tobin Q) were the dependent variables of this study. Total current asset to total asset and total current obligation to total asset were the independent variables. Regression analysis and Durbin Watson analysis were used to finalize the result. From results negative relationship between profitability measures and degree of aggressiveness of working capital investment and financing policy was determined.

Lazaridis and Tryfonidis (2006) investigated the relationship between management of working capital and profitability. This study considered the companies that were listed at Athens stock exchange (ASE). To confirm the relationship 131 companies for the period of 2001-2004 were selected in this research. Gross operating profit was the dependent variable of this study. Independent variables of this study were financial debt ratio, fixed financial asset ratio and cash conversion cycle. Regression analysis was used to analyze the data. According to the result cash conversion cycle is negatively associated with profitability.

Weinraub and Visscher (1998) worked on the topic of industry practice relating to aggressive conservative working capital policies. This study considers the data from the US market. This study looked at the ten year data from 1984 to 1993 from ten different industrial groups. Respondent measure was return on asset and manipulated measures were aggressive investment policy and aggressive financing policy. One way ANOVA and regression analysis was used to conclude the data. From the analysis it is concluded that different firms use different aggressive and conservative policies and firms remain stable over year according to that approach. Use of aggressive approach in one area is compensated with conservative approach in other area.

Objectives and hypothesis development:

Objectives

1. The purpose of this study is to examine the impact of working capital approaches on the financial performance of cement vs. sugar industry.
2. Is aggressive/conservative working capital investment approach negatively associated with profitability?
3. Is aggressive working capital financing policy negatively associated with profitability?
4. Is working capital approaches (aggressive investment and financing policies) negatively associated with shareholder's worth?

Hypothesis

Hypothesis is defined as the preliminary supposition to support further investigation.
Hypothesis used in this study are as:

1. Hypothesis Ho: There is negative relation between working capital approaches, ROA and ROE
2. Hypothesis H1: There is positive relation between working capital approaches, ROA and ROE.

Variables and Methodology

Dependent variables:

Reward on asset and Reward on equity are dependent variable. Reward on asset is used as the estimation for profitability and reward on equity use as estimation to determine the worth of shareholders. Profitability is used as the measure of corporate performance as it investigates the efficiency through which current assets converted into profit.

Return on asset: (ROA)

Reward on asset is dependent variable and defined as net income after tax dividedby total asset. In the Numerator of ROA operating income is not used because the purpose study is to check the impact of working capital policies on reward and for this purpose net income after tax that is calculated after managing all the operating and non operating expense, continuing and non continuing operations. To calculate the denominator of ROA, I choose the total asset against which the net income after tax is calculate and how the working capital policies affect that asset to generate the net income.
Return on asset is calculated as (ROA) = (Net income / total asset).

Return on equity :(ROE)

Reward on equity is another dependent variable which is use as the estimation to the shareholder's worth. ROE is calculated as the net income divided by share holder's equity. Reward on equity is the amount of profit earned on the behalf of shareholders investment. Numerator is defined as the income after all the business expense and denominator is defined as profit on the basis of shareholder's money.
Return on equity (ROE) = Net income /total share holder's equity

Independent variables
In this study two independent variables are used namely aggressive investment policy and aggressive financing policy.

Aggressive investment policy
Aggressive investment policy is the policy that efforts to maximize the return by availing maximum degree of risk. Primary objective of the aggressive investment strategy is to maximize the value of capital. Aggressive investment policy focuses on portfolio allocation of high reward equity over debt for the sake of higher reward with high risk. High risk tolerance is the prior condition for the aggressive investment policy. Current asset to total asset ratio which is aggressive investment policy is used to define the degree of aggressive investment.
Aggressive investment policy: AIP= (current asset/total asset).
(Where lower ratio indicate more aggressive policy)
Aggressive financing policy:
Aggressive financing policy tries to gain maximum return from the investment. Maximumreturn also maximizes the degree of risk. Basically aggressive financing policy use less costly current asset. Most of the business operations under aggressive financing policy are held by using short term funds. Aggressive financing policy uses a portion of its fixed asset and its entire current asset to continue its business. Aggressive financing policy is opposite to the matching or conservative policy. With the use of aggressive financing policy funding cost can be lower as the short term funds are less costly to purchase. Aggressive financing policy which is calculated as the total current liabilities divided by total asset and this ratio measure the degree of aggressiveness.
Aggressive financing policy: AFP= (Total current liability/Total asset).
(Where higher ratio means relative aggressive policy)

ROA=$\alpha + \beta 1 \left(\frac{TCA}{TA}\right) + B2\left(\frac{TCL}{TA}\right) + E$

ROE=$\alpha + {}_{\beta}1 \left(\frac{TCA}{TA}\right) + {}_{\beta}2\left(\frac{TCL}{TA}\right) + E$

ROA shows the value of dependent variable (y), what is going to predict or explained.
a is known as the alpha , a constant value. Alpha is equal to the value of y when the value of x is zero.
β or beta is known as the coefficient of x. This shows the slope of regression line. This slope explains the change in y with the unit change in value of X.
TCA/TA is value of independent variable (X), which explain or predict the value of Y. It is total current asset to total asset ratio
TCL/TA is the total current liability to total asset ratio.
E is the error term. This shows the error in explain or predicting the value of Y, given the value of X.

Sample and data
This study use to analyze the approaches of working capital and its impact on profitability and shareholder's worth from 2006 to 2012. Population of this study is 18 cement and 31 sugar companies registered at Karachi stock exchange.

Statistical data
ROA regression analysis for cement industry
Table No.1
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.013	.022		.615	.540
	AIP	.124	.067	.163	1.853	.066
	AFP	-.057	.032	-.157	-1.789	.076

a. Dependent Variable: ROA

TCA/TA for the 18 cement companies registered at Karachi stock exchange for six year is regressed against the value of return on asset. According to the table# 3 positive coefficient between TCA/TA shows the negative relationship between working capital investment policy and degree of aggressiveness. As the TCA/TA increases degree of aggressiveness continue to decrease which ultimately results in increasing return in asset. From the regression result it is clear that there is negative relationship between working capital investment policy and return on asset. This result is calculated with the help of regression analysis through SPSS.

Negative coefficient for the TCL/TA also shows the negative relationship between working capital financing policy and return on asset. Higher the TCL/TA ratio more aggressive the working capital financing policy which results in negative influence on return on asset.(Afza& Nazir,2008) (Dr. Kavitha&Shanmugam)

ROA regression analysis for sugar industry:

Table NO.2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.052	.027		1.957	.052
	AIP	.054	.043	.085	1.251	.212
	AFP	-6.584E-008	.000	-.013	-.189	.851

Dependent Variable: ROA

This table shows the positive coefficients of TCA/TA which indicates the negative relationship between working capital investment policy and degree of aggressiveness. As the TCA/TA increases the extent of aggressiveness decreases that results in increase in return on asset.

In the same way table number two shows the negative coefficient of TCL/TA which means that there is negative relationship between working capital financing policy and degree of aggressiveness. As the TCL/TA increases the more aggressive is the working capital financing policy which yields negative impact on the return on asset.(Wainraub&Visscher. 1998)

ROE sugar regression analysis:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.274	.225		1.214	.226
	x1	-.002	.361	.000	-.006	.995
	x2	-2.475E-007	.000	-.006	-.084	.933

a. Dependent Variable: y

This table represent the values of TCA/TA for 31 sugar companies listed at KSE for the time period of six year that are regressed against return on equity.

This table shows different result from the above three tables depending upon the variables input data due to the negative sign while from above table results is obvious that there is negative relationship between working capital investment policy and degree of aggressiveness.(Pirashanthini at el., 2013)

The lower ratio of TCA/TA shows relatively high aggressive policy but as it is significant at high level (10%) as compare to above table so it can be concluded that AIP is not supporting the above results but its significance level is not as much as above tables so we can say that this result is due to sugar industry internal situation.

Although the negative value of the TCL/TA support the previous results. Negative value of TCL/TA indicates the negative relationship between working capital financing policy and aggressive policy. As the TCL/TA value goes on increase as the as the working capital financing policy yields negative impact on the return on equity. In simple words AIP and AFP do not support the return on equity.(Pirashanthini at el., 2013

Cement ROE regression analysis:

Table NO.4

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.317	.441		-.720	.473
	AIP	.973	1.352	.065	.719	.473
	AFP	-.222	.644	-.031	-.344	.731

Dependent Variable: ROE

TCA/T.A value for the 18 cement companies which are listed at KSE for the period of six year are regressed against the value of return on equity. Table number 3 shows the results of regression analysis for sugar industry. Positive coefficient between TCA/TA represents the negative relationship between working capital investment policy and degree of aggressiveness.

As the TCA/TA goes on increase the degree of aggressiveness decreases which automatically results in increasing return on asset. From the analysis negative relationship between working capital investment policy and return on equity is confirmed. In the same way table #9 shows the negative relationship between working capital financing policy and degree of aggressiveness. The negative coefficient of TCL/TA is evidence of this negative relationship. As the TCL/TA increases the working capital financing policy continues to be more aggressive which result in negative effect on the return on equity. (Afza& Nazir,2009)

Conclusion:

The study inquired the relationship of working capital approaches with the profitability along with shareholders' worth. 19 cement and 31 sugar companies listed at the KSE from 2006 to 2012 investigated in this study. The impact of aggressive investment policy and aggressive financing policy has been examined through regression model between working

The result shows negative relationship between the ROA& ROE of firm and extent of aggressiveness of working capital investment and financing policies. (Talat&Afza, Weinraub&Visscher and Pirashanthini, Raheman at el., Afza&Nazir, Sunday at el.,Deloof, Nazir&Afza). According to the regression analysis firms yields negative return if they follow aggressive policy along with negative relationship of return on equity. From the descriptive analysis it is clear that there is negative relationship of AIP and AFP with ROA and ROE.

Lower value of AIP ratio represent high degree of aggressiveness while the higher value of AFP ratio signals the more aggressive financing policy while the regression analysis shows negative relationship of AIP and AFP. On the basis of regression results alternative hypothesis is rejected and null hypothesis is accepted which is stated that there is negative relationship of working capital investment and financing policy with return on asset and return on equity.

I use the agency theory and packing order theory to support the management of working capital importance and its approaches (aggressive /conservative) practically use in the cement and sugar industry. Although there is no direct theory that influence the working capital management and its approaches but agency theory in terms of owners and managing staff conflicts (as it effects the profitability) and packing order theory in terms of financing choice can be use.

References

Arshad Zubair and GondalYasir (2013), "Impact of working capital management on profitability:A case of the Pakistan cement industry". *Interdisciplinary journal of contemporary research in business" Vol.5*

Nazir M.S and AfzaTalat (2009), "A panel data analysis of working capital management policies". *Journal of business review, Vol.4*

Afzatalat and Nazir, M.S., (2008), "Working capital approaches and firm's return". *Pakistan journal of commerce and social sciences, Vol.1*

Afzatalat and Nazir, M.S., (2007), "Is it better to be aggressive or conservative in managing working capital"? *Journal of quality and technology management, Vol.3*

Binti Mohammad N,E,A., and MohadSaad N,B., (2010). "Working capital management: The effect of market valuation and profitability in Malaysia". *International journal of business and management, Vol.5*

Chowdhury at el.(2007), "Working capital management practiced in pharmaceutical companies listed in Dhaka stock exchange". *BRAC university journal, Vol 4, NO.2*

Dr.Taanikhalaf (2012),"Impact of working capital management policy and financial leverage on financial performance: Empirical evidence from Amman stock exchange-listed companies".

Deloof Marc (2003), "Does working capital management affect profitability of Belgian firms"? *Journal of business finance and accounting, Vol.3*

Lazaridis I and D Tryfonidis (2006), "Relationship between working capital management and profitability of listed companies in the Athens stock exchange." *Journal of financial management and analysis, Vol.1*

ManzoorHasnain (2013), "Working capital management and profitability: Evidenced from cement sector of Pakistan, listed on Karachi stock exchange". *Journal of business administration and management sciences research, Vol.2 (10), pp.215-223*

Otleydavid (1999), "Performance management: A framework for management control systems research". *Management accounting research, Vol. 10*

Pirashanthini at el. (2013), "Working capital approaches and firms profitability of manufacturing companies in Sri Lanka". *Comprihensive research journal of management and business studies, Vol.1*

Qazi at el. (2011), "Impact of working capital on firms' profitability". *African journal of business management*

VishnaniSushma and Shah Kr. Bhupesh (2008),"Impact of working capital management policies on corporate performance-An empirical study". Global business review.

Weinraub, H.J., and S.Visscher (1998). "Industry practices relating to aggressive conservative working capital policies". *Journal of finance and strategic decision, Vol.2*