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Impact of Working Capital Management on Firm's Profitability and its financial health: A case study of Retail Companies in India.

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Abstract

Working capital plays the same role in a business concern as the role of the heart in a human body. If it is carried out effectively, efficiently and consistently, that will assure the financial health of an organization. In this study, the data of five top companies which is taken in Indian Retail Industries between the years 2014-2019, has been used. Return on Assets (ROA) has been used as indicators of company's profitability and account receivable days, account payables days and inventory turnover days have been used as independent variables. Multiple regression, correlation methods, t-test and Altman Z score model have been used in empirical analysis. The result of analysis indicates that the ROA has positive significant relationship with ARD and negative significant with APD while ROA has negative insignificant relationship with ITD. The present study explores the impact of working capital management on the profitability of Indian Retail industry and its analysis the financial health during the study period. The study brings out a meaningful conclusion based on the findings of the study.

Keywords: Retail Industry, ROA, ARD, APD, ITD, Altman Z score model

Introduction:

The Indian retail industry has come out as one of the most productive,dynamic and fast-moving industries due to the entry of many new players. It gives a satisfactory record of 10 % of the country's Gross Domestic Product (GDP) and around eight % of the employment. India is the world's 5th biggest universal destination in the retail space. In FDI Confidence Index, India has ranked Sixteenth (after U.S, Canada, Germany, United Kingdom, China, Japan, France, Australia, Switzerland and Italy)

Retail industry achieved to US$ 950 billion in 2018 at Compound Annual Growth Rate (CAGR) of 13% and anticipated to reach US$ 1.1 trillion by 2020. Online retail sales are predicted to grow at the rate of 31% on-year to reach US$ 32.70 billion in 2018. Revenue generated from online retail is estimated to grow to US$ 60 billion by 2020.Revenue of India's offline retailers, also known as brick and mortar (B&M) retailers, is projected to increase by Rs 10,000-12,000 cores (US$ 1.39-2.77 billion) in FY2020
India is anticipated to become the world's fastest growing e-commerce market, driven by robust investment in the sector and rapid increase in the number of internet users. Different agencies have high expectations about growth of Indian e-commerce markets. Luxury market of India is expected to grow to US$ 30 billion by the end of 2018 from US$ 23.8 billion 2017 supported by growing exposure of international brands amongst Indian youth and higher purchasing power of the upper class in tier 2 and 3 cities, according to Assocham.

Working capital management includes deciding upon the amount and composition of current assets and current liabilities and how to finance these assets. It plays the same role in a business concern as the role of the heart in a body. To run the business efficiently and smoothly, management of working capital is very necessary and it is closely related with profitability.

Review of Literature:

Many researchers have studied on Working capital management from different views and in different environments as given below:

Singh and Pandey (2008) had attempted to study the working capital components and the impact of working capital management on profitability of Hidalgo Industries Limited for period from 1990-91 to 2007-08. Results of the study showed that current ratio, liquid ratio, receivables turnover ratio and working capital to total assets ratio had statistically significant impact on the profitability of Hidalgo Industries Limited

Dr.Khalaf Taani (2012), in their article, "Impact of Working Capital Management Policy and Financial Leverage on Financial Performance: Empirical evidence from Amman Stock Exchange – listed companies". The main objective of this paper was to study the effect of working capital management and financial leverage on the financial performance of the company from 2005 to 2009. In this article, Pearson's rank correlation test, NOVA F-test and multiple regression analysis were used. The findings of the study indicates that there is a significant relation of (working capital management policy, financial leverage, and firm's size) with net income ,but working capital management policy has an insignificant effect on return on equity and return on assets.

Dr.Abbasali Puraghajan1, Ali Akbar Ramzani, Issa Eslami Bin(2014), in this paper' "Effects of Aggressive Working Capital on the Performance of Listed Companies in Tehran Stock Exchange", the results of the study indicate that the aggressive strategy in assets and current liabilities increase return on assets and risk return on assets. The aggressive technique in assets and current liabilities also increase return on equity (ROE) and risk return on equity.

J. Aloy Niresh & T. Velnampy(2014) in their work" Firm Size and Profitability: A Study of Listed Manufacturing Firms in Sri Lanka."In order to achieve the objectives of the study, the researchers have employed the analysis of various ratios. The result of the study indicated that there is no significant relationship between firm size and profitability. Furthermore, the findings of the study revealed that firm size has no effect on profitability of selected manufacturing firms..

Dr. O.P.Jain, Jyoti Swarankar (2020), in their article," Measuring Financial Health of Dairy Co-Operative in Rajasthan: A Case Study of Kota Dairy". This paper aims to determine the financial health of the Kota dairy in Rajasthan for the period of from 2011-12 to 2018-19 by using Altman Z score model and using one sample t-test. But the results of the study indicate that the financial health of the selected company and it revealed that dairy co-operative selected for the study company was in the grey zone in the year 2011-12 and2018-2019 with stability as per financial health.

Objective of the study:

The present study is being conducted with the following objectives:

- To study the impact of working capital management on profitability of selected Retail companies in India.
- To analysis the financial position of the selected Retail companies during the study period.
- To give necessary suggestions and conclusions of this study.

Research Methodology:

The present study is mainly based on secondary data. The selected companies were ranked on the basis of their top five leading Indian Retail Companies for the financial year 2018-2019. The data has been analyzed using various statistical tools like Correlation and Regression, t-test by SPSS, Altman's Z-score Model. The figures for the purpose of the analysis have been collected from various sources like annual reports of the company for a period of five years from 2014-15 to 2018-19. The following top five Industries are selected to carry out the research are given below.

1. Aditya Birla Fashion & Retail Ltd.
2. Avenue Supermarts Ltd.
3. Future Enterprises Ltd.
4. Future Life style Fashions Ltd
5. Future Retail Ltd.

Functions:

Y = f(X)

Dependent Variables

Y = Return on Assets

Independent Variables

X = f(x1, x2, x3,) (Independent variables)

X = Working Capital Management (WCM)

Where:

X = x1 + x2 + x3 + μ (Independent variables)

x1 = Inventory Turnover Days (ITD)

x2 = Account Receivable Days (ARD)

x3 = Account Payable Days (APD)

f = functional dependency of the relationship

u = Random Variable (error term).

Functional Relationships

ROA = f (ITD, ARD, APD) ..….................................F_1

Model specification:

ROA = α0 + b1 ITD + b2 ARD + b3 APD + u

Research Hypotheses:

The following hypotheses have been set for the study, based on the above mentioned objectives.

H_{01}: There is no significant impact of working capital management (ITD, ARD, and APD) on Return on Assets.

H_{01}: There is no significant deference in the Z-score of the selected company during the study period.

Limitation of the study:

1. The study is based on secondary data sources.
2. Five years data for selected Indian Retail Industries has been analyzed but the results may not be proper for long run.

Working Capital Performance of the Selected Company:

To study the working capital performance of the selected Indian company, the technique of ratio analysis has been used. The ratios which are taken into consideration are as follows:

Variables	Abbreviation	Measurement
Independent Variables		
Account Receivable Days	ARD	Account Receivable/Net Sales*365days
Inventory Turnover Days	ITD	Inventory/Net Sales*365 days
Account Payable Days	APD	Account Payable/Cost of Goods sold*365days
Dependent Variables		
Return on Total Assets	ROA	Net Profit(before tax)/Total Assets

Data Analysis and findings:

Table 1 shows the descriptive summery statistics of the dependent and independent variables used in the study.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return on Assets	5	.012	.062	.03540	.020720
Account Receivable Day	5	10.57	12.22	11.3580	.61820
Accounts Payable Day	5	56.09	62.31	58.0360	2.61316
Inventory Turnover Day	5	72.53	91.52	79.5960	7.94660
					.

The table shows that the mean value of Return on Assets (ROA) is .03540 with a maximum of .062 and a minimum of .012. The standard deviation is.020720, listed Indian Retail Companies during the period under study. Account receivable days (ARD) has overall meant of 11.3 days with a maximum of 12.2 days and a minimum of 10.5 days. Also, the average time taken for the firms to pay their suppliers or creditors (APD) is 56.0 days, with a maximum of 62.3 days, minimum of 56.0 days and a standard deviation of 2.6 days**.** Furthermore, it also takes on average inventory turnover 79.5 days with a maximum 91.5 days and a minimum 72.5, while more variation in standard deviation of 7.9, for the listed Retail Companies within the period under investigation to convert their input resources into cash.

Objective No.1: To study the impact of working capital management on profitability of selected Retail companies in India.

H_{01}: There is no significant impact of working capital management (ITD, ARD, and APD) on Return on Assets.

For testing the first hypothesis of the study, the mean and SD (in Table-1) score of (ARD, APD, ITD) were computed and t-test was applied to find out the significance of the difference.

Table 2. The table shows the summary of the coefficients of the regression model during the study period.

Independent variables	Coefficient	Std. error	t-statistics	P-values
ARD	.017	.002	11.241	.056
APD	-.004	.000	-11.716	.054
ITD	-.001	.000	-9.882	.064
F-value	258.425		P-value	.046
R-square	99.9%			
Adjusted R-square	99.5%			

a. Dependent Variable: Return on Assets.

b. Predictors: (Constant), Inventory Turnover Days, Average Payable Days, Average Rec
Days

From the above table, it shows the empirical results of the variables used in the study. Accounts Receivable Days portray positive and statistically significant (i.e. <.056) relationship with Return on Assets (ROA**).** Accounts payable days (APD) show negative and statistically significant (i.e. <.054) relationship with Return on Assets. The regression results also indicate a negative and statistically (i.e. >.064) insignificant association between Inventory Turnover Days (ITD) and Profitability.

Objective No.2.To analysis the financial position of the selected Retail companies during the study period

For testing the financial position, Altman's Z-score Model is propounded by Prof.Edward Atlman in 1968. Z-score is derived from a formula, based on 5 financial ratios to predict the possibility, as to when a company may go into bankruptcy. The discriminate function is as follows:

$Z=1.2x_1+1.4x_2+ 3.3x_3+.6x_4 + .999x_5$

Where,
X_1=Working Capital/Total Assets
X_2=Retained Earnings/Total Assets
X_3=Earnings before Interest and Taxes/Total Assets
X_4=Market Value of Equity/Book value of Total Debt
X_5=Sales/Total Assets

Table-3: Name & formula of Ratio along with data and figures of five selected companies are given bellow:

Year	**WC/TA*1.2**	**RE/TA*1.4**	**EBIT/TA*3.3**	**MV of Equity/B.V of T.Debt*.6**	**Sales/T.A*.999**	**Z-score**
2018-19	1.092	.503	.205	.078	1.393	3.271
2017-18	.161	.536	.013	.108	1.414	2.232
2016-17	.189	.501	.149	.103	1.345	2.287
2015-16	.118	.341	.006	.093	1.218	1.776
2014-15	.122	.348	-.002	.349	1.123	1.940

From the above table, it is clear that the company was in the safe Zone in the year 2018-19 with stable as per financial health (i.e. Critical values of Altman's Model score Z>2.99 that is Safe Zone). The company was Gray Zone in this year i.e 2017-18, 2016-17and1.940 as per Model (i.e. Critical values of Altman's Model score< 1.81<Z<2.99 that is Gray Zone). Out of five years, one year (2015-16) is distress Zone and it is likely to be bankrupt (the critical value is Z < 1.81, likely to bankrupt)

To measure the change in the financial strength of the Indian Retail Companies is concerned with the following the Hypothesis.

H_{01}: There is no significant deference in the Z-score of the selected company during the study period.

Table-4: To measure the above hypothesis the data of Altman's Z score is analysed with the help of one sample t-test and the results are as under.

One-Sample Statistics and its test

	N	Mean	Std. Deviation	Std. Error Mean
Atlman's Z-score	5	2.30120	.581335	.259981

	Test Value = 3.0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Atlman's Z-score	-2.688	4	.055	-.698800	-1.42062	.02302

On observation, it is found that there is a significant difference in the Altman's Z-score of the Indian Retail Companies during the study period, since the p-value<0.05

Findings and Suggestions:

Findings

1. Under table-2, the correlations of Return on Assets are highly positive and have a significant association with ARD, APD and ITD.
2. Regression analysis was to check the significant impact on the profitability. The results show that ROA has positive relationship with ARD and negative relationship with APD.
3. The result in regression indicates insignificant negative relationship between ROA and ITD.
4. In table-3,as per Altman's Z-score , the financial health of the company is indicate as the stable zone (2018-19) and gray zone (2017-18,2016-17, 2014-15) while distress Zone (2015-16).
5. In table-4, one sample t-test portray that there is a significant deference in the Altman's Z-score of the Indian Retail Companies during the study period, since the p-value<0.05

Working Capital is one of the crucial elements in the overall financing of a business. The management of working capital concerns the management of money, inventories, account receivable, accounts payable, sundry debtors and sundry creditors etc. The study has analysed impact of profitability on working capital management and its financial health of some selected Indian Retail Industries. The result of the above study, it is found that ROA has significant positive relationship with ARD and significant negative relationship with APD while insignificant association with ITD. But there is a significant deference in the Altman's Z-score of the companies in financial health during the study period.

Suggestions:

Following points can be suggested for betterment

1. According to the findings to the study it is suggested that particular norms for inventory management should be followed to reduce inventory turnover days in order to increase the profitability
2. If the above industry efficiently handled the inventory turnover can produce the positive significant impact on Return on Assets.
3. From the above analysis, it is suggested that ARD has to measure the effectiveness of the industry in extending the credit as well as collecting debts, it should be highly correlated and maintained the liquidly and profitability during the study period.
4. It is suggested that listed Indian Retail Companies will tremendously increase their profitability if they decrease their average accounts payable period
5. As per one sample t test, it is revealed that the change in the Altman's score is not due the sample but it has shown stable and gray change. Thus, it is suggested that the company needs to improve their financial health for its bright future.

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