A Comparative Study on Inventory Management of some Selected FMCG Companies of India

Sonal P. Mahida

Assistant Professor

Ambaba Commerce College, MIBM & DICA-Surat

Prin. Dr. Kishorsinh N. Chavda

Principal

Of

J. Z. Shah Arts and H.P. Desai Commerce college Amroli, Surat

Abstract :- In most of the companies Inventory is one of the most important element of Working Capital management. Supervision of non -proliferative assets i.e. Stock items and inventory is the inventory management. This research segment is basically based on secondary data available in various websites, articles , Annual reports of the Company, Financial Statements of the company i.e. Profit and loss account and Balance sheet. The main purpose of this research segment is to determine and evaluate the profitability and liquidity of some Selected FMCG Companies of India. For evaluation, various Accounting and statistical tools has been used in this study.

Index Terms : Inventory Management , Financial Statements , Financial Liquidity , Ratio Analysis , ANOVA – Analysis of Variance , Standard Deviations.

I. INTRODUCTION

One of the most analytical aspects of the management is inventory management. The main aim of inventory management is to reduce the size of order and maintain optimal size of inventory. The cost associated with the inventory includes the following.

A) Ordering Cost
B) Carrying Cost
C) Storage Cost

For determining the optimal level of inventory in the company , control on above three cost is also most important and one of the best reason for the same is like inventory management ensure the inventory or goods at right time , right place , right quality and right quantity etc. The main motive of inventory management in the reference of various business and management activities is to determine and optimise the following three cost...

A) Cost of inventory
B) Cost of Operating business Activities
C) Cost of rendering service to the customer

II. LITERATURE REVIEW

Prof. P. R. Halani had written in his paper in International Multidisciplinary Research Journal (RHIMRJ) on the subject "Inventory Management: A Comparative Study of Selected Paper Companies ". The main objectives of her -study is to evaluate the liquidity position of the paper companies. And for that she used various Accounting tools and statistical tools for getting results like as average, S.D. C.V. Maximum and Minimum and used One way ANOVA test etc. She also explains the relationship between Inventory and working capital by using various Accounting Ratio and finally she recommended that paper companies should try to reduce the volume of inventory and try to increase the Current Assets.

Hong shen ,Qiang Deng ,Rebecca Lao and Simon Wu (2017) had written in his Paper on "A Case Study of Inventory Management in a Manufacturing Company in China". The main aim of this study is to focus on Inventory management in manufacturing company. They discussed the various factors affecting Inventory and conclude the efficient and effective approach regarding Inventory management. Also gives some basic idea for identifying the key factors in inventory Management.

III. TESTING OF HYPOTHESIS

H0 : There is Insignificant Relationship between Inventory and Working Capital of Some Selected FMCG Companies in India.

H1: There is Significant Relationship between Inventory And working Capital of Some Selected FMCG Companies in India.

IV. RESEARCH METHODOLOGY

Being the explanatory research, the Analysis is based on secondary source of data. For Analysis data had been collected from official website of the company, Financial Statements of the company, Accounting reports, various reports, Various blogs , article , website , Various reference books , and newspaper. The accessible secondary data is intensively used for research study.

Sample Size : The following listed FMCG Companies has been selected for the purpose of analysis.

I.   ITC company
II.   Hindustan Unilever Ltd.
III.   Britannia
IV.   Godrej consumer
V.   Colgate Palmolive

V. DATA COLLECTION

For Analysis Purpose, Data and Various Information is collected From the official website of the company, Financial Statements of the various company i.e. profit and loss Account , Balance sheet , Cash flow statement, etc. Last five years data started from the year 2012-13 to 2017-18 is to be taken for the Analysis. Following accounting method and statistical tools were used in this research.

- ➢ Arithmetic Mean
- ➢ Variance
- ➢ Standard Deviation
- ➢ Co- efficient of Variations (**C.V**)
- ➢ Correlation
- ➢ Inventory to Working Capital Ratio (**IWCR**)

VI. DATA ANALYSIS

Inventory to working capital Ratio: -

Inventory to working capital Ratio is most important indicator of Financial Liquidity and it's efficiency. This ratio expresses a relationship between the inventory i.e. stock of the company and Net working Capital i.e Net current assets (Current Assets – Current liability). Higher the inventory to working capital Ratio, lower the Liquidity of the company and vice a versa. The formula of finding Inventory to Working capital Ratio is as under.

$$\textbf{IWCR} = \text{Inventory / Working Capital}$$

This Ratio indicates that , how much portion of cash or working capital is tied up in inventory. Thus, it's gives a very perfect idea about company's liquidity. Financial Liquidity is one of the most important aspect of any corporate company. This ratio indicates the efficiency of the company's operations. If the ratio is one or less than one , indicates that the company has .high Financial Liquidity of Current Assets and higher the inventory to working capital Ratio indicates that the company has Carrying too much inventory in stock. To determine optimal level of operational efficiency, the corporate companies used various methods for holding Inventory. Inventory to working capital Ratio of some selected FMCG Companies from the year 2012-13 to 2016-17 are as under.

Inventory to Working Capital Ratio :- (ICWR)

Year	ITC	Hindustan Unilever	Britannia	Godrej Consumer	Colgate-Palmolive
2012	1.056399	1.871352	-3.15204	0.155586	3.61026
2013	0.909026	-29.4281	-1.13945	3.55801	15.97936
2014	0.780902	8.227862	-3.72939	-1.22377	-0.27632
2015	0.63853	5.41064	1.524024	-2.7948	-1.42603
2016	0.504739	0.871724	5.141384	35.36132	-4.70335c`
2017	0.44411	1.069262	0.657965	8.936387	-2.09466
Sample	6	6	6	6	6
S.D.	0.2373441	13.743957	3.293945	14.350705	7.4363654
Min	0.44411	-29.4281	-3.72939	-2.7948	-4.70335
Max	1.056399	8.227862	5.141384	35.36132	15.97936
Average	0.7222843	-1.99621	-0.11625	7.33212216	1.84821

VII. INTERPRETATION :-

As we seen in the above table, total Five-year data of some selected FMCG` Companies is mentioned. The average or arithmetic mean in this table is lies between -1.99621 to 7.33212216. The highest IWCR is found in the year 2012-13 in **Colgate-Palmolive**. It shows that, the company's liquidity position is not sound in comparison of rest of the year and company in the year 2012-13 in **Colgate-Palmolive** company compare to rest of the company. It indicates that the high amount or proportion of working capital is invested in inventory and it reduces the financial liquidity in operation. So, the company try to reduce the investment in inventory by using various mentors of holding inventory like EOQ method. Variance , Standard Deviations and co efficient of Variations – these all are statistical tools described the variations between sample selected for Analysis. It indicates that how mean value is deviated from average or mean of such distribution. If the variance and standard deviation is less compare to its mean then results by using such data is more authentic and reliable. Standard deviation is lies between 0.2373441 to 14.350705. If the variations between sample is large then it's standard deviation is also high while co efficient of Variations is shows in percentage and it's indicates the variations between sample in percentage. In **Godrej Consumer** company, standard deviation is highest, indicates that there is more variations in sample. Less variations in sample gives the perfect Result regarding its relationship between the two Variable described in this table i.e. Inventory and Working Capital. In **ITC** Company , standard deviation is minimum compare to rest of the companies, shows that , there is a very less variations between sample. If the variations is less, data is more reliable and conclusion is also more reliable and accurate. More variations between two Variable indicates less authenticity of the data and result of by using such data is also not more reliable and authentic.

VIII. ANOVA SINGLE FACTOR ANLYSIS :-

ANOVA Test (Single Factor):

Hypothesis :

H0 : There is Insignificant Relationship between Inventory and working Capital of some selected FMCG Companies in India.

H1: There is Significant Relationship Between Inventory and working capital of some selected FMCG companies in India

SUMMARY

Groups	Count	Sum	Average	Variance
ITC	6	4.333706	0.722284	0.056333
Hindustan Unilever	6	-11.9773	-1.99621	188.8964
Britannia	6	-0.69751	-0.11625	10.85007
Godrej Consumer	6	43.99273	7.332122	205.9428
Colgate-Palmolive	6	11.08926	1.84821	55.29953

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	297.3519	4	74.33798	0.80619	0.532905	2.75871
Within Groups	2305.226	25	92.20902			
Total	2602.578	29				

- Degree of freedom =29
- Table Value of F = **F-tab (0.05)**= 2.75871
- Calculate Value of F = **F-Cal** = 0.80619
- F-Cal   <   F-tab(0.05)

  0.80619   <   2.75871

  Here, the calculate value of **F (F-cal) ,** is less than compare to Table Value of **F (F-Tab(0.05)**), So, here, **NULL HYPOTHESIS** Should be Accepted. Thus, We Can Say that There is No Significant Relationship between Inventory and Working Capital of Some Selected FMCG Companies.

IX. CONCLUSION :-

The inventory to working capital ratio of some selected FMCG companies in India shown an average 1.558031 times. The average Ratio of inventory to working capital management is not adequate in case of **Godrej Consumer** Company. Negative Ratio shows High investment in inventory and excess of current liabilities compare to Current Assets. Thus, it is suggested that , the listed FMCG Companies should try to reduce the investment in inventory and also try to reduce the volume of inventory (Raw materials, WIP , Finished Goods) by using various inventory control model like EOQ ROP , Fixing Stock levels , ABC , FSN ,SDE etc. and also try to increase investment in current assets.

References:-

1. A Research Paper on "INVENTORY MANAGEMENT : A COMPARATIVE STUDY OF SELECTED PAPER COMPANIES" in Research Hub - International Multidisciplinary Research Journal (RHIMRJ).,Volume-2, Issue-7,July -2015 by P.R. Halani and Shri M.P. Shah.
2. https://www.slideshare.net/GauthamKulkarni/36421186-ranjanaprojectreportoninventorymanagement
3. https://strategiccfo.com/inventory-to-working-capital-analysis/
4. Annual report and Financial statements of ITC Company.
5. Annual report and Financial statements of Hindustan Unilever Company.
6. Annual report and Financial statements of Britannia Company.
7. Annual report and Financial statements of Godrej Consumer Company.
8. Annual report and Financial statements of Colgate-Palmolive Company.
9. https://strategiccfo.com/inventory-to-working-capital-analysis/