

Working Capital Management of FMCG Sector of India for the Period from 2004-05 to 2013-14

Hiral Desai

(Assistant Professor, Dolat-Usha Institute of Applied Sciences and Dhiru-Sarla Institute of Management & Commerce, Valsad, India)

Abstract: In this research paper attempt have been made to analyse the liquidity facet of FMCG Sector of India for the period of 10 years by taking a sample of 16 companies listed on BSE or NSE. The financial data have been collected for the period of 10 years from 2004-05 to 2013-14 of 16 companies and found out 2 liquidity ratios- current ratio & Quick ratio. From all these ratios researcher have worked out composite ratios by using 'paid-up share capital' as weight and found out weighted mean of these ratios for 10 years. The researcher has used ratio analysis and various statistical techniques such as Average (Mean \bar{X}), Coefficient of correlation (r), Coefficient of Determination (R^2), Trend Analysis and Mann Kendall Test. The study concluded that there is no trend in current ratio and quick ratio of sectors. The study revealed that during the period from 2004-2005 to 2009-2010, the current ratio and quick ratio had upward rising trend which means that working capital management of the FMCG sector of India has improved up to 2009-2010. However, from 2010-2011 onward, current ratio and quick ratio had fluctuating trend. It means that from 2010-2011 to 2013-2014, sector is facing scarcity of cash and so that we can say that liquidity position of the sector is not comfortable during such period.

Keywords: FMCG Sector, Liquidity facet, Working Capital Management, Trend Analysis, Mann Kendall

I. INTRODUCTION

Fast-moving consumer goods (FMCG) or consumer packaged goods (CPG) are products that are sold quickly and at relatively low cost. Examples include non-durable goods such as soft drinks, toiletries, over-the-counter drugs, processed foods and many other consumables. In contrast, durable goods or major appliances such as kitchen appliances are generally replaced over a period of several years.

FMCG have a short shelf life, either as a result of high consumer demand or because the product deteriorates rapidly. Some FMCGs, such as meat, fruits and vegetables, dairy products, and baked goods, are highly perishable. Other goods, such as alcohol, toiletries, pre-packaged foods, soft drinks, chocolate, candies, and cleaning products, have high turnover rates. The sales are sometimes influenced by some holidays and season.

Growth of FMCG Sector

Indian Scenario of FMCG Sector

The fast moving consumer goods (FMCG) segment is the fourth largest sector in the Indian economy. The market size of FMCG in India is estimated to grow from US\$ 30 billion in 2011 to US\$ 74 billion in 2018. Fast Moving Consumer Goods (FMCG) Sector in India is one of the fastest developing sectors in the Indian economy. At present the FMCG Sector is worth US\$ 13.1 billion. These products have very fast turnaround rate, i.e. the time from production to the revenue from the sale of the product is very less. In the present economic scenario, time is regarded as money, so the FMCG companies have to be very fast in manufacturing and supplying these goods.

The Fast Moving Consumer Goods (FMCG) Sector in India include segments like cosmetics, toiletries, glassware, batteries, bulbs, pharmaceuticals, packaged food products, white goods, house care products, plastic goods, consumer non durables, etc. The FMCG market is highly concentrated in the urban areas as the rise in the income of the middle-income group is one of the major factors for the growth of the Indian FMCG market. The penetration in the rural areas in India is not high as yet and the opportunity of growth in these areas is huge by means of enhanced penetration in to the rural market and conducting awareness programs in these areas. The scopes for the growth of the FMCG industry are high as the per capita consumption of the FMCG products in India is low in comparison to the other developed countries. The manufacturing of the FMCG goods is concentrated in the western and southern belt of the country. There are other pockets of FMCG manufacturing hubs.

Global Scenario

In comparison with other industries such as automobiles, computers, and airlines, FMCG business has a steady rate of growth, for it does not suffer from huge recession and layoffs every time the economy starts to

dip. In FMCG business absolute profit made on the products is relatively small. Since they generally sell in large numbers, the overall profit on such products can be huge.

The only threats to this strong growth trajectory remain the high portion of unorganized trade, the limited distribution network of new entrants and the pressure on profit margins due to increasing competition.

II. LITERATURE REVIEW

Wang (2002) has made a study for the firms in Japan and Taiwan to find a relationship between liquidity management and operating performance. He also investigated the relationship between liquidity management and corporate value of firms. The empirical findings for both countries show a negative relationship between CCC and ROA and CCC and ROE.

Lazaridis I (2006) examined relationship between working capital management and corporate profitability for the firms listed on Athens Stock Exchange for a sample of 131 listed companies. Researchers used the company financials from 2001-2004 for the study. The results of the study of regression analysis showed that there were statistically significant relationship between gross operating profit, a measure of profitability and the cash conversion cycle. He suggested that by optimizing the cash conversion cycle, the managers could create value for the shareholders.

Demirgunes (2008) has investigated the effect of working capital management and profitability on Turkey's firms. For this purpose they used the data of manufacturing firms listed on Istanbul's stock exchange from the period of 1998-2007. The study revealed that there is a significant relationship between working capital indicators and profitability. Further their study showed that account receivable period, account payable period and leverage significantly and negatively affect profitability. Their study revealed that profit can be increased by shorting the account receivable and account payable period.

M.A.Zariyawati (2009) has examined the relationship between working capital management and profitability of the firm. Researchers have used CCC as a measure of working capital management. This study has used a panel data of 1628 firm year for a period from 1996- 2006. The co-efficient results of pooled OLS regression analysis provide a strong negative significant relationship between CCC and profitability of the firms. It is revealed that by reducing CCC firms' profitability can be increased.

Bhaskar Bagchie, J. C. (2012) has conducted the study of 10 FMCG companies. They have investigated the effect of working capital management on firms profitability as measured by return on total assets and return on investment. The study concluded that DTAit, ADit, ACit and AIt are negatively associate with firm's profitability as quantified by ROAit. The study also revealed that when they have assets the impact of all explanatory variables on ROIit, CCCit, DTAit and ACit are negatively associated with ROIit.

Goel (2012) has selected 5 FMCG companies namely HUL, Dabur India, Godrej Consumer, Marico and Colgate Palmolive for a period from 2006 to 2011 to measure the relative liquidity and solvency level in selected companies. The relationship between liquidity and solvency, their influence has been measured, using Correlation and Regression Analysis and then tested using ANOVA. The study found that there is no relationship between liquidity and solvency. He also found that the relatively low liquidity observed in firms was important to increasing profitability. It is also found that increased profitability from decreased solvency can be offset by increased solvency.

Tandel (2013) has conducted the study on Financial Analysis of Selected Plastics Manufacturing Industrial Units of Gujarat for the period 2000-01 to 2009-2010. The study concentrates on various composite ratios relating to profitability, liquidity, solvency and activity. The researcher has used various statistical tools such as Trend Analysis, Average, Weighted Average, ANOVA, etc. The study reveals that performance of Plastics Manufacturing Unit of Gujarat is not satisfactory in terms of profitability and liquidity but it is satisfactory in terms of activity and solvency.

III. RESEARCH METHODOLOGY

Research Statement

Working Capital Management of FMCG Sector of India for the period from 2004-2005 to 2013-2014

About the Research Problem

The present study emphasis on the Liquidity aspect of FMCG Sector of the India for a period from 2004-2005 to 2013-2014. The financial data have been taken from Ace Equity software and from such data; various ratios have been calculated for the selected companies as well as the FMCG Sector of India. One of the key factors affecting the functioning of an industrial unit is the size of that unit. So far as financial analysis is concerned, one of the most important parameters of judging the size of a industrial unit is the paid –up share capital of that unit. The paid-up share capital may vary from year to year. Therefore it is lead to difference in the functioning, including the financial performance of that unit. Therefore, when certain ratios are considered for judging the financial performance of the unit such ratios must be used along with the paid-up share capital of that unit at that given point of time, particularly when the financial performance is to be studied over the years together. So by taking into consideration this aspect, researcher have tried to innovate in analyzing the ratios by

combining them with the paid-up capital, at respective point of time and working out composite ratios for ten years duration for the companies. Then such composite ratios have been used in carrying out trend analysis and comparative analysis through various tests of hypothesis.

Research Design

The present study entitled “Working Capital Management of FMCG Sector of India for the period from 2004-05 to 2013-14” is an analytical, conclusion oriented and hypothesis testing type of research study.

Objectives of the Study

- To analyze and evaluate the financial performance of selected companies in terms of working capital management of FMCG Sector of India.
- To find out the liquidity and short term financial strength of selected FMCG companies and FMCG Sector of India.
- To study the pattern of working capital management of FMCG Sector of India.
- To make suggestions/comments about the functioning and development of FMCG Sector of India.

Nature and Sources of Data

The present study is mainly based on secondary data that have already been published in annual reports of companies. These data has been collected from annual reports of the selected companies and has been collected from ACE Equity software. Further, other information related to the sector and company has been collected from research publications, consultants’ reports, other periodicals, journals, and websites of respective companies and other various documents of the companies.

Period of Study

The present study covers the period of ten (10) years spanning from the year 2004-05 to 2013-14.

Sample Design

The sample has been selected by two stage sampling method. For selecting the first stage sample, convenient sampling method is used, where as for selecting the second stage sample proportional stratified sampling is used.

Population

The population consists of all the FMCG companies in India.

Sampling Units and Sample Size

FMCG companies working in India are the sampling units for drawing the first stage sample, where as the companies listed on BSE or NSE or both are considered as the sampling units for drawing the second stage sample.

For convenience, the size of the first stage sample is fixed at 76. Out of 76 total numbers of companies, researcher has selected 16 companies in a sample on the basis of average paid up share capital, classified all the units of population on the basis of size of the company.

Sampling Procedure

As per the list of companies shown by Info shine, there are 211 companies. However, as per the list shown on HDFC securities, there are 76 companies which are also part of the list on Info line. Therefore, these 76 companies have been considered as first stage sampling units of the two stage convenient sample intended to be drawn from the population. Then to select the second stage sample of size 16, the companies were arranged in descending order of average paid up capital in the duration of study i.e. 2004-05 to 2013-14, and were classified in to three strata, viz Large cap companies, Mid cap companies and Small cap companies. For that a company with average paid up share capital of 30 Crore or more is classified as Large cap company, a company with average paid up share capital of 5 Crore or more but less than 30 Crore is classified as Mid- cap company and a company having average paid up share capital of less than 5 Crore is classified as small-cap company. In this way, as stratum in the following table, 13 companies have been found to be Large-cap, 39 have been found to be Mid-cap and 24 have been found to be Small-cap. To draw the second stage sample of size 16 from this stratified first stage sample, proportion stratified sampling method is used, which yield the sample size 3 for Large-cap companies, 8 for Mid-cap companies and 5 for Small-cap companies.

Table 4.10.1: Classification of Companies Based on Different Sizes

Size of the company (On the basis of Average Paid up capital) Indian Rupees in Crores (Stratum)	No. of companies (Size of Strata)	No. of units to be selected from the Stratum
Small-cap (Less than 5 Crores)	24	5
Mid-cap (5 Crores or more but less than 30 Crores)	39	8
Large-cap (30 Crores or more)	13	3
Total	76	16

Table4.10.2: List of Selected Companies

Sr. no	Name of the company	Average Paid Up Share Capital (Indian Rupees in Crores)
1	Hindustan Unilever Ltd.	217.95
2	Colgate Palmolive (India) Ltd	50.32
3	Himalya International Ltd.	36.35
4	Godrej Consumer Products Ltd.	28.14
5	Britannia Industries Ltd.	23.90
6	Lotus Chocolate Company Ltd.	20.24
7	Modern Dairies	18.41
8	MFL India Ltd.	15.49
9	Emami Ltd.	14.48
10	Hind Industries Ltd.	8.96
11	Vadilal Industries	7.19
12	Milk Food Ltd.	4.89
13	Paramount Cosmetics (India) Ltd.	4.86
14	Madhur Industries Ltd.	4.09
15	Hipolin Ltd.	3.13
16	Pee Cee Cosma Sope Ltd.	2.63

Tools and Techniques

For the purpose of financial performance analysis of selected Indian companies of FMCG sector, following accounting and statistical tools and techniques are used.

Accounting Technique

Ratio analysis

Statistical Technique

1. Average (Mean \bar{X})
2. Coefficient of correlation (r)
3. Coefficient of Determination (R^2)
4. Trend Analysis
5. Mann Kendall Test

Scope of the Study

This study will serve the following objectives.

- It will throw light on an overview of FMCG Sector of India.
- It will help in studying liquidity aspects of the FMCG Sector of India.
- It will help in judging the overall liquid assets of selected FMCG companies and FMCG Sector.
- It will help in studying the growth and development of FMCG Sector of India.
- It studies the trend of liquidity in the FMCG Sector of India.

IV. TREND ANALYSIS OF LIQUIDITY RATIOS OF FMCG SECTOR OF INDIA

In order to understand the overall trend of working capital management of the FMCG Sector of India during the period of study, it is important to study the trends of various ratios of the sector. Since the data is sample data, in order to find a ratio for sector, it is necessary to calculate a composite ratio based on the ratios of the companies selected in the sample. Such a composite ratio can be worked out using mean or weighted mean. Since the companies included in the sample have variable size in terms of its paid-up capital, it is very important to use 'paid-up' capital of that company as weight and find weighted mean of the ratios to arrive at composite ratio for the sector because in such cases weighted mean provides more efficient estimate than the mean does.

Suppose R_i ($i = 1, 2, \dots, n$) liquidity ratio for the i^{th} company and w_i ($i = 1, 2, \dots, n$) is the weight (paid-up capital) for the i^{th} company.

Then the composite ratio R_c can be obtained as follows.

$$R_c = \frac{\sum W_i R_i}{\sum W_i}$$

In the following section using the above formula composite liquidity ratios are obtained for the FMCG Sector of India for 10 years and then on the basis of the 10 years ratios, trend is studied for each of the ratios. The trend curves / lines for each of the composite ratios are obtained and the Mann-Kendall trend detection test is applied to test the goodness of fit of respective curve/line.

Liquidity Ratios

1. Current ratios

2. Quick ratios

Current Ratio

In this section composite current ratios of the sector are obtained for the ten years period under study. These ratios are presented in the following table:

Table 5.1.1.1

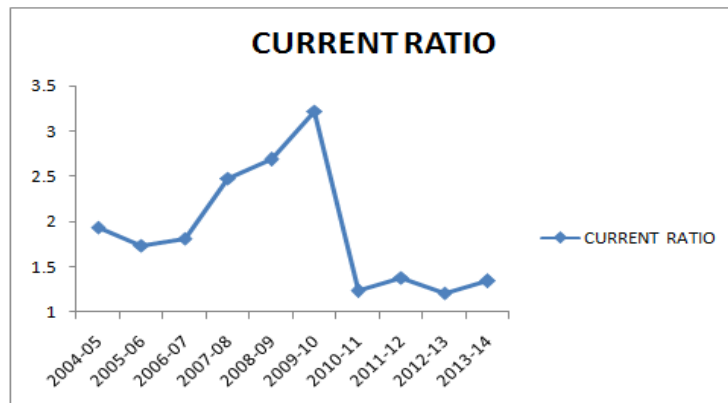
Name of the Companies	Year										Sum Wi	Sum WiRi	R bar	W bar
	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014				
Hindustan Unilever Ltd.	294.966	224.53	247.16	180.729	211.45	211.62	226.748	261.542	214.09	222.76	2179.45	2295.59098	1.0533	217.945
Colgate Palmolive (India) Ltd.	108.794	116.95	114.23	10.1993	13.327	14.143	14.6869	14.279	13.735	12.103	503.172	432.4557	0.8595	50.3172
Himalya International Ltd.	108.717	172.29	152.9	360.731	424.42	517.83	67.0746	57.0584	75.564	69.036	363.477	2005.61752	5.5179	36.3477
Godrej Consumer Products Ltd.	16.5287	16.938	19.648	21.4548	58.071	51.16	23.9464	40.836	38.794	24.509	281.368	311.88518	1.1085	28.1368
Britannia Industries Ltd.	30.8181	34.879	42.285	50.4079	48.258	37.746	36.7906	21.0232	16.976	21.591	239.02	340.7756	1.4257	23.902
Lotus Chocolate Company Ltd.	35.4113	45.731	51.802	48.7664	71.025	64.55	37.8395	40.47	32.376	39.458	202.35	467.4285	2.31	20.235
Modern Dairies Ltd.	23.9142	9.4954	22.683	51.4069	50.222	49.521	16.3513	21.7239	24.527	26.863	184.075	296.70771	1.6119	18.4075
MFL India Ltd.	29.7584	25.401	44.106	58.7728	61.27	272.98	37.285	108.808	53.683	78.183	154.885	770.24768	4.973	15.4885
Emami Ltd.	90.3797	62.495	39.136	34.6769	20.508	37.525	23.4531	22.8478	32.986	66.275	144.769	430.28232	2.9722	14.4769
Hind Industries Ltd.	136.177	53.933	80.631	101.237	36.732	37.986	11.0196	16.1262	14.155	12.991	89.59	500.98728	5.592	8.959
Vadilal Industries Milk Food	19.4795	21.276	16.389	16.4605	18.904	14.52	5.89416	6.54108	5.3191	5.5348	71.88	130.31844	1.813	7.188
Paramount Cosmetics (India) Ltd.	9.13495	7.816	6.2528	5.9597	5.0804	6.8879	4.885	5.2323	5.2323	4.7433	48.865	61.2246	1.2529	4.8865
Madhur Industries Ltd.	8.88465	8.8847	8.6419	11.2151	8.9332	8.8847	6.6999	6.36005	6.5543	7.3796	48.55	82.4379	1.698	4.855
Hipoline Ltd.	42.7814	57.669	55.869	16.3191	49.898	30.92	29.3253	16.0328	22.004	38.569	40.9	359.3883	8.787	4.09
Pee Cee Cosma Sopa Ltd.	10.301	13.463	10.959	7.98405	7.5144	8.1406	5.10353	5.22877	6.0428	7.3265	31.31	82.06351	2.621	3.131
Sum Wi	3.492	5.544	3.504	3.18	3.156	5.016	1.32	3.33396	13.434	8.8216	26.303	50.8016	1.9314	2.6303
Sum WiRi	500.515	505.5	506.06	395.082	405.69	425.41	444.178	469.586	476.94	481.01	4610			
Rbar	969.538	877.3	916.2	979.5	1088.8	1369.4	548.422	647.443	575.47	646.14		8618.213		
W bar	1.93708	1.7355	1.8105	2.47923	2.6837	3.2191	1.23469	1.37875	1.2066	1.3433			1.869	
	31.2822	31.594	31.629	24.6926	25.356	26.588	27.7611	29.3491	29.809	30.063				

Table 5.1.1.2

Year	Composite Current Ratio
2004-2005	1.93708
2005-2006	1.73550
2006-2007	1.81048
2007-2008	2.47923
2008-2009	2.68374
2009-2010	3.21911
2010-2011	1.23469
2011-2012	1.37875
2012-2013	1.20659
2013-2014	1.34330

The chart showing trend in Current Ratios for the sector is presented below.

Chart 5.1.1.3: The trend curve/line for the Current ratios for the sector



To test the following H0 related to goodness of fit, the Mann-Kendall test is applied to test the following hypothesis.

H0: There is no trend in the series of Composite Current Ratio of the sector.

H1: There is some trend in the series of Composite Current Ratio of the sector.

Here, from the above chart we can clearly say that there is no trend in Current Ratio. We checked significance of Current Ratio using Mann-Kendall test and found that Mann Kendall Statistic is -13 with p-value

0.134, which is greater than pre defined significant level $\alpha=0.05$. So we can say that there is no significance trend in Current Ratio. And we cannot fit any model on it.

Conclusion

It can be observed from the table no. 5.1.1.2 and chart no. 5.1.1.3, we can conclude that there is no trend in current ratio of FMCG Sector of India. The Current Ratio for the sector for 10 years period, 2004-05 to 2013-14, is 1.869. During the period from 2007-2008 to 2009-2010, liquidity position of sector is more comfortable. However, in the rest of the year it is around 1.20 to 1.93 which is generally below the desired level which means sector is facing problem of scarcity of cash.

Quick Ratio

In this section composite quick ratios of the sector are obtained for the ten years period under study. These ratios are presented in the following tables:

Table 5.1.2.1

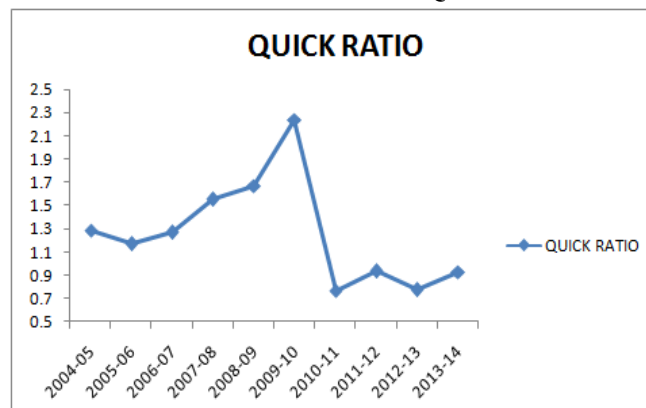
Name of the Companies	Year										Sum Wi	Sum WiRi	R bar	w bar
	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014				
Hindustan Unilever Ltd.	206.917	154.09	172.13	97.9857	115.53	141.81	136.049	177.243	142.73	153.55	2,179.45	1498.0313	0.6873	217.945
Colgate Palmolive (India) Ltd.	76.1561	88.395	88.395	8.29539	11.287	12.511	12.6471	11.8311	11.967	10.335	503.17	331.82118	0.6595	50.3172
Himalya International Ltd.	50.961	98.263	83.501	221.376	251.19	307.61	40.8499	17.4774	31.356	33.472	363.48	1136.05492	3.1255	36.3477
Godrej Consumer Products Ltd.	4.75482	4.7426	7.9044	7.9044	45.994	36.058	11.0024	22.1195	21.439	12.935	281.37	174.85454	0.6214	28.1368
Britannia Industries Ltd.	21.7399	21.023	27.235	29.8625	33.924	25.323	21.9788	11.7061	9.8031	12.475	239.02	215.0702	0.8998	23.902
Lotus Chocolate Company Ltd.	18.2115	30.555	35.209	29.3408	45.933	35.209	13.5575	26.9126	22.866	28.531	202.35	286.32525	1.415	20.235
Modern Dairies Ltd.	12.133	5.1873	12.397	23.5103	26.629	21.257	7.47488	6.77411	9.11	9.3436	184.08	133.81581	0.727	18.4075
MFL India Ltd.	16.314	18.333	44.106	57.9226	60.58	272.98	37.285	108.808	53.683	78.183	154.89	748.19458	4.8306	15.4885
Emami Ltd.	68.488	50.999	32.287	30.5753	14.418	31.926	18.7624	19.519	27.69	55.381	144.77	350.04553	2.418	14.4769
Hind Industries Ltd.	101.058	34.313	55.456	74.0013	26.787	21.233	6.45048	9.49654	7.8839	7.436	89.59	344.11519	3.841	8.959
Vadilal Industries	12.8665	14.592	9.7038	9.3444	10.135	6.7567	2.1564	2.65956	1.1501	1.1501	71.88	70.51428	0.981	7.188
Milk Food	4.4942	3.0287	2.3937	2.58905	1.319	2.4425	2.00285	1.1247	1.4181	1.3203	48.87	22.133	0.4529	4.8865
Paramount Cosmetics (India) Ltd.	5.19485	5.4862	4.9521	5.48615	5.0492	5.5833	4.6608	4.41805	4.1753	4.5152	48.55	49.521	1.02	4.855
Madhur Industries Ltd.	36.0738	47.73	55.869	6.3804	21.227	20.695	19.7547	11.861	14.724	27.158	40.90	261.4737	6.393	4.09
Hipoline Ltd.	7.57702	10.739	8.9547	6.79427	6.669	6.8882	4.41471	4.66519	5.2601	6.3872	31.31	68.34973	2.183	3.131
Pee Cee Cosma Sopa Ltd.	2.28	3.756	1.512	0.9	1.44	3.864	0.336	0.74088	4.05	2.3668	26.30	21.24562	0.8077	2.6303
SumWi	500.52	505.50	506.06	395.08	405.69	425.41	444.18	469.59	476.94	481.01	4,609.97			
Sum WiRi	645.219	591.23	642.01	612.269	678.11	952.15	339.382	437.356	369.3	444.54		5711.566		
Rbar	1.28911	1.1696	1.2686	1.54973	1.6715	2.2382	0.76407	0.93137	0.7743	0.9242			1.239	
W bar	31.2822	31.594	31.629	24.6926	25.356	26.588	27.7611	29.3491	29.809	30.063				

Table 5.1.2.2

Year	Composite Quick Ratio
2004-2005	1.28911
2005-2006	1.16959
2006-2007	1.26864
2007-2008	1.54973
2008-2009	1.67150
2009-2010	2.23821
2010-2011	0.76407
2011-2012	0.93137
2012-2013	0.77432
2013-2014	0.92418

The chart showing trend in Quick Ratios for the sector is presented below.

Chart 5.1.2.3: The trend curve/line for the Quick Ratios for the sector



To test the following H₀ related to goodness of fit, the Mann-Kendall test is applied to test the following hypothesis.

H₀: There is no trend in the series of Composite Quick Ratio of the sector.

H₁: There is some trend in the series of Composite Quick Ratio of the sector

Here, from the above chart we can clearly say that there is no trend in Quick Ratio. We checked significance of Quick Ratio using Mann-Kendall test and found that Mann Kendall Statistic is -11 with p-value 0.177, which is greater than pre defined significant level $\alpha=0.05$. So we can say that there is no significance trend in Quick Ratio. And we cannot fit any model on it.

Conclusion

From the table no.5.1.2.2 and chart no.5.1.2.3, we can say that there is no trend in Quick ratio of FMCG Sector of India. Quick Ratio for the sector for 10 years period, 2004-05 to 2013-14, is 1.238. From the 2004-2005 to 2009-2010 it has upward rising trend from 1.29 to 2.23 and then after it has declining trend during the decade of the study period. Further, it may be noted that during the period from 2010-11 to 2013-14, sector's liquidity position is not comfortable.

V. FINDINGS OF THE STUDY

So far as working capital management of FMCG sector of India is concerned, it may be noted that during the period from 2004-2005 to 2009-2010, the current ratio and quick ratio had upward rising trend which means that working capital management of the FMCG sector of India has improved up to 2009-2010. However, from 2010-2011 onward, current ratio and quick ratio had fluctuating trend. It means that from 2010-2011 to 2013-2014, sector is facing scarcity of cash and so that we can say that liquidity position of the sector is not comfortable during such period.

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