

## Asset Utilisation Efficiency of Selected Companies in Indian Paint Industry

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### Abstract

It is the prime concern of business practitioners (managers and entrepreneurs) in all types of organisations since corporate performance has implications for organisation's health and ultimately its survival. High performance reflects the management's effectiveness and efficiency in making use of the company's resources and this in turn contributes to the company's economy at large. There is a need to study the industries' internal efficiency which ultimately shall determine the overall industrial development in future. In this paper, an attempt has been made to analyse the asset utilisation efficiency of selected companies in Indian Paint Industry.

**KEYWORDS:** Asset Utilisation, Turnover Ratio and Indian Paint Industry

### INTRODUCTION

Management of enterprises has a dual interest in the analysis of financial performance: To assess the asset utilization and profitability of operations, and to judge how effectively the resources of the business were used. Judging operations is largely done with an analysis of the operating statement, while resource effectiveness is usually measured by reviewing both asset management and profitability. In order to make judgments, however, it is often necessary to modify the financial data to reflect the current values and conditions. Hence, an attempt has been made to analyse asset utilization of selected companies in India paint industry during the study period.

Asset management is the coordinated activity of an organization to realize value from assets. In turn, assets are defined as an item, thing or entity that has potential or actual value to an organization. It involves the balancing of costs, opportunities and risks against the desired performance of assets, to achieve the organizational objectives and it enables the application of analytical approaches towards managing an asset over the different stages of its life cycle. Asset Management is the art and science of making the right decisions and optimising the delivery of value. A common objective is to minimise the whole life cost of assets but there may be other critical factors such as risk or business continuity to be considered objectively in this decision making.

The assets turnover ratio measures the efficiency of a firm in managing and utilizing its assets. This ratio is also known as the investment turnover ratio. It is based on the relationship between the cost of goods sold and assets of a firm. The overall profitability of any business largely depends on two factors viz. profit margin and turnover. The turnover refers to the number of times an asset flows through a business firm's operations and into sales. The triangular relationship among the sales, profits and assets greatly affects the profitability of a business. Any change in asset turnover would affect the profitability of the business. Profitability is the end product of profit margin and assets turnover. The higher the turnover ratio, the more efficient

is the management in utilization of assets while low turnover ratios are indicative of underutilization of available resources and presence of idle capacity. Hence, a detailed analysis of assets turnover ratio has been made to study and trace the factors responsible for the changes in profitability.

### **OBJECTIVES OF THE STUDY**

The primary purpose of the present study is to obtain a true insight into the asset utilisation of selected companies in Indian paint industry. The study covers a period of 13 years covering a period from 2000-01 to 2012-13. It is also decided by taking into consideration of the availability of data.

### **SELECTION OF THE STUDY**

The convenient sampling technique is used for the study. The selection of sample companies is on the basis of consumer preference and their position in the market. Following is the list of 6 paint companies which are chosen from top ten paint companies in India as sample size for the study.

1. Akzo Nobel India Ltd
2. Asian Paints Ltd
3. Berger Paints India Ltd
4. Jenson & Nicholson (India) Ltd
5. Kansai Nerolac Paints Ltd
6. Shalimar Paints Ltd

### **SOURCES OF DATA**

The study is mainly based on secondary data. The major source of data analyzed and interpreted in this study related to all those companies selected is collected from "PROWESS" database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). The database provides financial statements, ratio analysis, funds flow, cash flow, product profiles, returns and risks on the stock market etc. Besides prowess database, relevant secondary data have also been collected from BSE Stock Exchange Official Directory, CMIE Publications, Annual Survey of Industry, Business Newspapers, Reports on Currency and Finance, Libraries of various Research Institutions, through Internet etc.

### **ASSET UTILISATION EFFICIENCY**

The assets turnover ratio measures the efficiency of a firm in managing and utilizing its assets. This ratio is also known as the investment turnover ratio. It is based on the relationship between the cost of goods sold and assets of a firm. The overall profitability of any business largely depends on two factors viz. profit margin and turnover. The turnover refers to the number of times an asset flows through a business firm's operations and into sales. The triangular relationship among the sales, profits and assets greatly affects the profitability of a business. The relationship between sales and profits is known as asset turnover. Any change in asset turnover would affect the profitability of the business. Profitability is the end product of profit margin and assets turnover. The higher the turnover ratio, the more efficient is the management in utilization of assets while low turnover ratios are indicative of underutilization of available resources and presence of idle capacity. To determine the efficiency of the ratio, it should be compared across time as well as with the industry

average. Hence, a detailed analysis of assets turnover ratio has been made of better study and tracing out the factors responsible of the changes in profitability.

### **TOTAL ASSETS TURNOVER RATIO**

Total assets turnover ratio is the relationship between total assets and sales. This ratio indicates the efficiency or inefficiency in the use of assets of a concern. In other word, it is a measure of the overall performance of the business. The standard total assets turnover ratio is that the sales should be atleast two times the value of the assets. A total assets turnover ratio of 2 times or more indicates that the assets of the concern have been utilized effectively. On the other hand, a total assets turnover ratio of less than 2 times indicates that the assets of the concern have been underutilized. It may also be noted that a very high total assets turnover ratio indicates over-trading. The total asset turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 1. Table 1 and Appendix show the fluctuating trend of total assets turnover ratio of the selected companies in Indian paint industry. The average total assets turnover varies from one company to another. The average total asset turnover ratio of Indian paint industry works out to 1.67 times during the study period. The highest average was 2.19 times for Berger Paints India Ltd, it is followed by Asian Paint Ltd (1.95 times), Shalimar Paints Ltd (1.87 times), Kansai Nerolac Paints Ltd (1.84 times), Akzo Nobel India Ltd (1.15 times) and Jenson & Nicholson (India) Ltd (0.67 times). The analysis of CV value indicates that total asset turnover ratio is consistent in Berger Paints India Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd, fluctuated in Akzo Nobel India Ltd and Asian Paints Ltd and erratically fluctuated in Jenson & Nichol (India) Ltd during the study period. The compound annual growth rate of total asset turnover ratio were positive in the case of Jenson & Nicholson (India) Ltd, Berger Paints India Ltd and Asian Paints Ltd and it was negative for the remaining companies. Further analysis of t value shows that the total assets turnovers of all the selected companies in Indian paint industry were significantly different from the industry.

In order to test the hypothesis, analysis of variance has been applied between the companies and between the years. The calculated value of F (72.11) is more than the table value of F (2.53) between the companies. Thus, the null hypothesis is rejected as there are significant differences between the total assets turnover ratio among the selected companies. There are no significant differences between the years during the study period as the calculated value of F (0.67) is less than the table value of F (1.92) at 5 per cent level of significance. Thus, the null hypothesis is accepted. Comparatively, the analysis of total asset turnover ratio shows that Berger Paints India Ltd, Asian Paints Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd utilized their total asset effectively in profit earning process during the study period.

### **FIXED ASSETS TURNOVER RATIO**

Fixed assets turnover ratio is the ratio between fixed assets and turnover. The ratio indicates to what extent the fixed assets of a concern have contributed to sales. In other words, it indicates to what extent the fixed assets have been utilized. The standard fixed assets turnover ratio is 5 times. So a fixed assets turnover ratio of 5 times or more indicates better utilization of fixed assets. On the other hand, a fixed assets turnover ratio of less than 5 times is an indication of under-utilization of fixed assets. In this context, it may be noted that a very high fixed assets turnover ratio means over-trading which is not good for the business. The fixed asset turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 1. Fixed assets turnover ratios of the selected companies are depicted in Table

1 and Appendix. The highest mean of 15.38 times was found in Shalimar Paints Ltd and Berger Paints India Ltd with 10.85 times which shows better utilization of fixed assets, it is followed by Kansai Nerolac Paints Ltd with 8.38 times, Asian Paints Ltd with 7.61 times, Akzo Nobel India Ltd and the least mean of 2.52 times was found in Jenson & Nicholson (India) Ltd and this was due to the fluctuation in its fixed assets. The average fixed assets turnover ratio of the whole paint industry was 7.45 times. The CV value of this ratio shows that Jenson & Nicholson (India) Ltd suffered from the largest variation, fluctuating in Berger Paints India Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd and for the remaining companies were highly fluctuating during the study period. The compound annual growth rate was negative only in the case of Kansai Nerolac Paints Ltd. The analysis of t values reveals that the fixed assets turnover ratios of all the selected companies were significantly different from the industry except for Asian Paints Ltd and Kansai Nerolac Paints Ltd during the study period.

From the Analysis of variance, the calculated value of F (69.40 and 2.02) is more than the table value of F (2.53 and 1.92) at 5 per cent level between the years and between the companies. It is concluded that the null hypothesis is rejected and there are no significant differences in fixed assets turnover ratio between companies and between the years. Comparatively, the analysis of fixed assets turnover ratio shows that Shalimar Paints Ltd, Berger Paints India Ltd, Kansai Nerolac Paints Ltd, Asian Paints Ltd and Akzo Nobel India Ltd utilised their fixed assets effectively in profit earning process during the study period.

#### **WORKING CAPITAL TURNOVER RATIO**

Working capital turnover ratio measures the effective utilization of the working capital of an enterprise. The ratio establishes the relationship between working capital and turnover. There is no standard for working capital turnover ratio. But one can say that a higher working capital turnover ratio indicates the efficiency and a lower working capital turnover ratio indicates the inefficiency of the management in the utilization of working capital. However, it should be noted that a very high working capital turnover ratio means over-trading and a very low working capital turnover ratio means under-trading, none of which is good for the concern. So, the working capital turnover ratio should be neither very high nor very low. The working capital turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 1. Table 1 and Appendix revealed that the highest mean value working capital turnover of ratio 69.99 times for Asian Paints Ltd, followed by Shalimar Paints Ltd with (27.97 times), Kansai Nerolac Paints Ltd (23.62 times) and Berger Paints India Ltd (11.26 times). The mean value was negative for Akzo Nobel India Ltd (-14.36 times) and Jenson & Nicholson (India) Ltd (-0.59 times) as an indication of higher investment of working capital and less profit. The CV value of this ratio showed that all the selected companies suffered erratically fluctuating trend except for Akzo Nobel India Ltd, Berger Paints India Ltd and Shalimar Paints Ltd during the study period. The compound annual growth rates were negative in all the selected companies whereas it was positive in Shalimar Paints Ltd during the study period. The analysis of t values reveals that the working capital turnover ratio in the case of Akzo Nobel India Ltd and Asian Paints Ltd was significantly different from the industry during the study period.

To test the hypothesis, analysis of variance has been applied between the companies and between the years. The calculated value of F (5.10) is more than the table value of F (2.53) between the companies. Thus, the null hypothesis was rejected

as there were significant differences between the working capital turnover ratios among the selected companies. There were no significant differences between the years during the study period as the calculated value of F (0.93) is less than the table value of F (1.92) at 5 per cent level of significance. Thus, the null hypothesis is accepted. Comparatively, the analysis of working capital turnover ratio showed that Asian Paints Ltd, Shalimar Paints Ltd and Kansai Nerolac Paints Ltd were over trading during the study period.

### **INVENTORY TURNOVER RATIO**

Inventory turnover ratio is the ratio which indicates the number of times the stock is turned over (i.e. sold) during a year. A stock turnover of 8 times a year is considered ideal. A stock turnover of 8 times and more than 8 times indicates that more sales are effected i.e. the business is expanding and as such, there is effective inventory management. On the other hand, a stock turnover of less than 8 times means that the concern has accumulated unsaleable goods i.e. the business is not prosperous<sup>3</sup>. It may be noted that a high stock turnover ratio may also be taken to mean that the concern buys and sells in small lots and a low stock turnover may be taken to mean that the concern buys in bulk and sold out only a few itmes during the year. But generally, a high stock turnover ratio means that the concern is efficient. Hence, an attempt has been made to analyse the inventory of selected companies in Indian paint industry during the study period.

### **RAW MATERIAL TURNOVER RATIO**

Businesses acquire or manufacture inventory to make a profit. Companies accomplish these profits through the process of turnover, wherein they distribute or sell inventory to other parties. An inventory turnover ratio establishes the relationship between the products sold and inventory. Likewise, raw material inventory turnover provides a measurement between the amounts of raw materials turned over versus the average amount of raw material in the inventory at any given time. In particular, it measures a company's ability to convert raw materials into finished goods. The raw material turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 2. It is observed from Table 2 and Appendix that among the selected companies in Indian paint industry Akzo Nobel India Ltd has the highest mean raw material turnover ratio of 12.13 times, followed by Kansai Nerolac Paints Ltd (11.35 times), Jenson & Nicholson (India) Ltd (10.61 times), Asian Paints Ltd (9.86 times), Berger Paints India Ltd (9.05 times) and Shalimar Paints Ltd (7.49 times). The average of Indian paint industry during the study period was 9.13 times. The analysis of co-efficient of variations reveals that raw material turnover ratio were consistent in the case of Asian Paints Ltd and Berger Paints India Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd registered fluctuating trend and Akzo Nobel India Ltd registered fluctuating trend and Jenson & Nicholson (India) Ltd was erratically fluctuating trend. From the analysis of compound annual growth rate of raw material turnover ratio, it is observed that Asian Paints Ltd and Shalimar Paints Ltd had negative growth rate whereas the remaining selected companies registered positive growth rate during the study period. The analysis of t values describes that the raw material turnover ratio of Akzo Nobel India Ltd, Asian Paints Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd are significantly different from the industry.

It is evident from Table 3 that there were significant differences in raw material turnover ratio among the companies as the calculated value of F (4.27) is

more than the table value of F (2.53). Thus, the null hypothesis is rejected. However, there are no significant differences in raw material turnover ratio between the years as the calculated value of F (1.33) is less than the table value of F (1.92) at 5 per cent level. Thus, the null hypothesis is accepted. Comparatively, the analysis of raw material turnover ratio showed that Akzo Nobel India Ltd, Kansai Nerolac Paints Ltd and Jenson & Nicholson (India) Ltd utilised their raw material effectively in profit earning process during the study period.

### **WORK-IN-PROGRESS TURNOVER RATIO**

Work in progress is a stage between the raw material and finished goods. It is no longer raw material because it has undergone some processing in the production process. It is also not yet finished goods because more processing has to be done to put it into its saleable condition. Work in progress includes the items that are being fabricated or waiting in a queue for further processing or in buffer storage. Material that has entered the production process but is not yet a finished product. Work in progress therefore refers to all materials and partly finished products that are at various stages of the production process. Work in progress excludes inventory of raw materials at the start of the production cycle and finished products inventory at the end of the production cycle. The work-in-progress turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 3. Table 3 and Appendix show the position of work-in-progress turnover ratio selected companies during the study period. The average of ratio of work-in-progress turnover ratio varied from one company to another company. The mean work-in-progress of Indian paint industry turnover ratio was 6.19 times. The highest average was 7.12 times for Kansai Nerolac Paints Ltd followed by 6.73 times for Asian Paints Ltd, 5.80 times for Jenson & Nicholson (India) Ltd, 5.48 times for Akzo Nobel India Ltd, 5.23 times for Berger Paints India Ltd and 4.69 times for Shalimar Paints Ltd. The company with the lowest average ratio enjoys higher profitability. Co-efficient of variation of work-in-progress turnover ratio was consistent in the case of Akzo Nobel India Ltd, Asian Paints Ltd, Berger Paints (India) Ltd and Kansai Nerolac Paints Ltd. Jenson & Nicholson (India) Ltd and Shalimar Paints Ltd registered fluctuating trend during the study period. The compound annual growth rate of work-in-progress turnover ratio of Jenson & Nicholson (India) Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd was negative while it was positive in other companies under study. The analysis of t values explains that the ratio of all the selected companies was found to be significantly different from the industry except for Jenson & Nicholson (India) Ltd.

It is evident from the results of ANOVA that the differences in the work-in-progress turnover ratio among the companies was significant as the calculated value of F (26.49) is greater than the table value of F (2.53) at 5 per cent level of significance. So, the null hypothesis is rejected. However, these were insignificant between the years as the calculated value of F (1.40) is lower than the table value of F (1.92). Thus, the null hypothesis is accepted.

### **FINISHED GOODS TURNOVER RATIO**

The turnover rate of finished goods is the ratio of the annual sales of business to the average inventory of business. A high turnover rate can mean business is effectively selling the products it has in its inventory or that its inventory levels are too low; a low turnover rate can mean the inventory levels of business are too high or that the products in its inventory are outdated. The finished goods turnover ratio of

selected companies in Indian paint industry during the study period is presented in Table 3. Table 3 and Appendix show the finished goods turnover ratio of selected companies in Indian paint industry during the study period. The highest average of finished goods turnover ratio is 9.27 times for Kansai Nerolac Paints Ltd, followed by Asian Paints Ltd (8.61 times), Jenson & Nicholson (India) Ltd (7.68 times), Akzo Nobel India Ltd (7.08 times), Berger Paints India Ltd (6.82 times) and lowest average is 5.70 times for Shalimar Paints, Ltd. The mean of finished goods turnover ratio is 7.88 times for whole industry during the study period. The CV value of finished goods ratio is consistent in the case of Akzo Nobel India Ltd, Asian Paints Ltd, Berger Paints India Ltd and Kansai Nerolac Paints Ltd. Whereas, Jenson & Nicholson (India) Ltd and Shalimar Paints Ltd fluctuate during the study period. The compound annual growth rate is positive in the case of Asian Paints Ltd and Berger Paints India Ltd, while the other companies have registered negative compound annual growth rate during the study period. The analysis of t values shows that mean finished goods turnover ratio of all the selected companies are significantly different from the industry except Jenson & Nicholson (India) Ltd.

The analysis of variance results presented in Table 4 show that there are significant differences in finished goods turnover ratio among the companies. Because, the calculated value of F (24.46) is more than the table value of F (2.53), the null hypothesis is rejected. However, there are insignificant differences between the years as the calculated value of F (1.19) is less than the table value of F (1.92). Thus, the null hypothesis is accepted.

### **RECEIVABLES TURNOVER RATIO**

Receivables turnover ratio is the ratio between receivables and credit sales which indicates the number of times the debts are collected in a year. Receivables or debtors constitute an important item of current assets. The quality of debtors determines the liquidity of the firm to a great extent. Receivables turnover ratio is helpful to judge the quality of the debtors. The actual collection period of credit is compared with the credit allowed. If the actual period of credit allowed is more than the normal period of credit viz. 30 days, the indication is that credit collection is not efficient. On the other hand, if the actual period of credit allowed is less than the normal period of credit, the indication is that the credit collection is efficient. The receivables turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 5. The receivables turnover ratio of the selected companies in Indian paint industry is noticed from Table 5 and Appendix. The highest average is 16.48 times for Asian Paints Ltd followed by Berger Paints India Ltd with 10.68 times which means its credit collection is not efficient, Kansai Nerolac Paints Ltd is found to be good in their credit collection, whereas, Shalimar Paints Ltd and Jenson & Nicholson (India) Ltd are found to be very good in their trade credit management and better in the liquidity of debtors. The CV value of this ratio shows moderate fluctuations among the selected companies in Indian paint industry except Jenson & Nicholson Ltd with erratically fluctuation. The compound annual growth rate of this ratio is negative in the case of Jenson & Nicholson (India) Ltd and Shalimar Paints Ltd, whereas, for the remaining companies positive and very high in most of the companies under study. The analysis of t values exhibit that the mean receivable turnover ratio of all the selected companies except Berger Paints India Ltd is significantly different from the industry.

Table 6 shows that the differences in receivables turnover ratio are significant between the companies and null hypothesis is rejected because, calculated value of F (203.38) is greater than the table value of F (2.53) at 5 per cent level of significance. However, this ratio is insignificant between the years and the null hypothesis is accepted as the calculated value of F (0.87) is lower than the table value of F (1.92) at 5 per cent level of significance. The analysis of receivables turnover ratio shows that Shalimar Paints Ltd and Jenson & Nicholson (India) Ltd are found to be very good in their trade credit management and better in the liquidity of debtors.

### **PAYABLES TURNOVER RATIO**

The accounts payable turnover ratio is a liquidity ratio that shows a company's ability to pay off its accounts payable by comparing net credit purchases to the average accounts payable during a period. In other words, the accounts payable turnover ratio shows how many times a company can pay off its average accounts payable balance during the course of a year. This ratio helps the creditors to analyze the liquidity of a company by gauging how easily a company can pay off its current suppliers and vendors. Companies that can pay off supplies frequently throughout the year indicate to creditor that they will be able to make regular interest and principle payments as well. Vendors also use this ratio when they consider establishing a new line of credit or floor plan for a new customer. The payables turnover ratio of selected companies in Indian paint industry during the study period is presented in Table 5. The payables turnover ratio of the selected companies in Indian paint industry is presented in Table 5 and Appendix. The highest average is 9.02 times for Berger Paints India Ltd followed by Asian Paints Ltd with 8.06 times, Kansai Nerolac Paints Ltd with 5.12 times, Shalimar Paints Ltd with 3.78 times, Akzo Nobel India Ltd with 3.65 times and Jenson & Nicholson India Ltd with 1.56 times. The mean of payables turnover ratio of Indian paint industry is 5.63 times. The analysis of CV value shows that Akzo Nobel India Ltd, Asian Paints Ltd, Berger Paints India Ltd and Kansai Nerolac Paints Ltd have fluctuating trend, Shalimar Paints Ltd has a highly fluctuating trend of payables turnover ratio during the study period. However, payables turnover ratio of Jenson & Nicholson (India) Ltd has erratically fluctuated during the study period. The compound annual growth of all the selected companies is negative except for Kansai Nerolac Paints Ltd under study. The analysis of t values exhibits that the mean payables turnover ratio of all the selected companies except Kansai Nerolac Paints Ltd are significantly different from the industry.

Table 6 shows that the difference in payables turnover ratio is significant between the companies and null hypothesis is rejected because, the calculated value of F (88.72) is greater than the table value of F (2.53) at 5 per cent level of significance. However, this ratio is insignificant between the years and the null hypothesis is accepted as the calculate value of F (1.58) is lower than the table value of F (1.92) at 5 per cent level of significance. The analysis of creditors turnover ratio shows that Berger Paints India Ltd and Asian Paints Ltd have paid off supplies frequently throughout the study period.

### **CASH CONVERSION CYCLE**

The Cash Conversion Cycle (CCC) measures how long a firm will be deprived of cash if it increases its investment in resources in order to expand customer sales. It is thus a measure of the [liquidity risk](#) entailed by growth. However, shortening the CCC creates its own risks: while a firm could even achieve a negative CCC by collecting from customers before paying suppliers, a policy of strict collections and

lax payments is not always sustainable. The cash conversion cycle of selected companies in Indian paint industry during the study period is presented in Table 5 Table 5 and Appendix depict cash conversion cycle ratio of selected companies in Indian paint industry. The highest mean value is 117.23 for Jenson & Nicholson India Ltd, followed by Shalimar Paints Ltd (111.8) Berger Paints India Ltd (83.32), Kansai Nerolac Paints Ltd (68.47), Akzo Nobel India Ltd Asian Paints Ltd (49.34). The analysis of CV values shows that Berger Paints India Ltd, Kansai Nerolac Paints Ltd and Shalimar Paints Ltd have fluctuating trend of cash conversion cycle, Akzo Nobel India Ltd and Asian Paint Ltd have highly fluctuating trend of cash conversion cycle during the study period. However, cash conversion cycle of Jenson & Nicholson (India) Ltd has erratically fluctuated during the study period. The compound annual growth rates of all the selected companies are negative whereas for Jenson & Nicholson (India) Ltd it is positive during the study period. The analysis of t value describes that the mean cash conversion cycle are significantly different from the industry except for Kansai Nerolac Paints Ltd.

It is evident from Table 6 that the calculated value of F (24.38) is higher than the table value of F (2.53) at 5 per cent level of significance between the companies. Thus, the null hypothesis is rejected, whereas the calculated value of F (1.67) is less than the table value of F (1.92) at 5 per cent level of significance between the years. Hence, there are no significance differences between years. Thus, the null hypothesis is accepted.

## CONCLUSION

The operational efficiency of selected companies Indian paint industry was evaluated by comparing the assets turnover such as total assets, fixed assets, working capital, inventory and receivables. The analysis showed that all the turnover ratios represent a fluctuating trend during the study period. Such fluctuations can be attributed to the difference in the growth rate of sales because of the factors such as market conditions, pricing policy, government policy and competition. There were significant differences observed in all the turnover ratio except working capital turnover ratio between the companies during the study period.

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**Table 1**  
**Statistical values of ratios relating to the assets utilization**  
**(For the period 2000-2001 to 2012-2013)**

Particulars	Statistics	Akzo Nobel India Ltd	Asian Paints Ltd	Berger Paints India Ltd	Jenson & Nicholson (India) Ltd	Kansai Nerolac Paints Ltd	Shalimar Paints Ltd	Whole Industry
Total Assets Turnover Ratio	Mean	1.15	1.95	2.19	0.67	1.84	1.87	1.67
	CV	0.15	0.13	0.07	0.55	0.03	0.09	1.64
	CAGR	-2.21	0.92	0.38	2.35	-0.09	-0.40	1.11
	t value	-9.89*	6.05*	10.73*	-9.12*	5.37*	3.18*	
Fixed Assets Turnover Ratio	Mean	6.87	7.61	10.85	2.52	8.38	15.38	7.45
	CV	0.27	0.29	0.11	1.09	0.13	0.16	0.27
	CAGR	4.09	3.99	1.93	16.91	-3.23	1.48	4.25
	t value	-5.50*	1.03	10.28*	-6.24*	1.34	10.17*	
Working Capital Turnover Ratio	Mean	-14.36	69.99	11.26	-0.59	23.62	27.97	14.42
	CV	0.76	1.14	0.32	2.07	1.66	0.63	1.90
	CAGR	-4.60	-3.69	-4.04	-17.60	-0.34	11.03	33.71
	t value	-3.14*	2.64*	-0.25	-1.97	0.71	1.50	

\* Significant at 0.01 level

Source: Computed from the Annual Reports of the respective companies

**Table 2**  
**ANOVA results – ratio relating to assets utilization – comparison**

S. No.	Assets Utilization	Between the Companies		Between the Years	
		F Ratio	H <sub>0</sub>	F Ratio	H <sub>0</sub>
1	Total Assets Turnover Ratio	72.11	Rejected	0.67	Accepted
2	Fixed Assets Turnover Ratio	69.40	Rejected	2.02	Rejected
3	Working Capital Turnover Ratio	5.10	Rejected	0.93	Accepted

Critical Value 'F' at 0.05 level (between company) = 2.53; (between year) = 1.92

Source: Computed

**Table 3**  
**Statistical values of ratios relating to the Inventory component**  
**(For the period 2000-2001 to 2012-2013)**

Particulars	Statistics	Akzo Nobel India Ltd	Asian Paints Ltd	Berger Paints India Ltd	Jenson & Nicholson (India) Ltd	Kansai Nerolac Paints Ltd	Shalimar Paints Ltd	Whole Industry
Raw Material Turnover Ratio	Mean	12.13	9.86	9.05	10.61	11.35	7.49	9.13
	CV	0.34	0.09	0.10	0.52	0.16	0.19	0.07
	CAGR	0.03	-0.46	1.57	3.68	2.61	-0.12	1.62
	t value	2.84*	2.51*	-0.32	0.98	6.17*	-3.75*	
Work-in-Progress Turnover Ratio	Mean	5.48	6.73	5.23	5.80	7.12	4.69	6.19
	CV	0.09	0.10	0.09	0.16	0.09	0.18	0.08
	CAGR	0.77	1.46	0.78	-3.16	-0.93	-0.53	1.12
	t value	-3.75*	5.32*	-9.65*	-1.05	6.80*	-7.72*	
Finished Goods Turnover Ratio	Mean	7.08	8.61	6.82	7.68	9.27	5.70	7.88
	CV	0.07	0.10	0.08	0.25	0.09	0.19	0.07
	CAGR	-0.41	0.40	0.98	-5.14	-1.40	-0.28	0.51
	t value	-3.21*	4.99*	-9.51*	-0.31	7.04*	-9.58*	

\* Significant at 0.01 level

Source: Computed from the Annual Reports of the respective companies

**Table 4**  
**ANOVA results – ratio relating to Inventory components – comparison**

S. No.	Inventory Components	Between the Companies		Between the Years	
		F Ratio	H <sub>0</sub>	F Ratio	H <sub>0</sub>
1	Raw Material Turnover Ratio	4.27	Rejected	1.33	Accepted
2	Work-in-Progress Turnover Ratio	26.49	Rejected	1.40	Accepted
3	Finished Goods Turnover Ratio	24.46	Rejected	1.19	Accepted

Critical Value 'F' at 0.05 level (between company) = 2.53; (between year) = 1.92

Source: Computed

**Table 5**  
**Statistical values of ratios relating to the working capital component**  
**(For the period from 2000-2001 to 2012-2013)**

Particulars	Statistics	Akzo Nobel India Ltd	Asian Paints Ltd	Berger Paints India Ltd	Jenson & Nicholson (India) Ltd	Kansai Nerolac Paints Ltd	Shalimar Paints Ltd	Whole Industry
Receivables Turnover Ratio	Mean	9.21	16.48	10.68	2.34	8.52	4.83	9.91
	CV	0.24	0.13	0.07	0.69	0.12	0.11	0.15
	CAGR	4.08	2.33	0.74	-4.37	1.10	-2.15	3.53
	t value	-2.51*	26.35*	1.56	-10.20*	-5.05*	9.50*	
Payables Turnover Ratio	Mean	3.65	8.06	9.02	1.56	5.12	3.78	5.63
	CV	0.15	0.26	0.13	0.96	0.18	0.48	0.05
	CAGR	-2.56	-7.24	-2.28	-10.97	3.04	-8.91	-1.29
	t value	11.35*	4.31*	9.89*	-10.01*	-1.80	-3.80*	
Cash Conversion Cycle	Mean	49.34	47.16	83.32	117.23	68.47	111.88	64.53
	CV	0.48	0.37	0.12	-1.38	0.16	0.26	0.25
	CAGR	-7.13	-4.82	-2.11	5.48	-1.75	-4.04	-4.47
	t value	4.56*	14.19*	6.56*	-4.34*	1.43	9.85*	

\* Significant at 0.01 level

Source: Computed from the Annual Reports of the respective companies

**Table 6**  
**ANOVA results – ratio relating to working capital components – comparison**

S. No.	Working Components	Between the Companies		Between the Years	
		F Ratio	H <sub>0</sub>	F Ratio	H <sub>0</sub>
1	Receivables Turnover Ratio	203.38	Rejected	0.87	Accepted
2	Payables Turnover Ratio	88.72	Rejected	1.58	Accepted
3	Cash Conversion Cycle	24.38	Rejected	1.67	Accepted

Critical Value 'F' at 0.05 level (between company) = 2.53; (between year) = 1.92

Source: Computed