

Working Capital Management Efficiency: A Study on Selected Pharmaceutical Companies in India

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Abstract— The present study made with an attempt to evaluate the efficiency of working capital in the selected companies in pharmaceutical industry in India. The secondary data was collected from annual reports of selected 15 companies in pharmaceutical sector. These fifteen companies was selected randomly and classified into three groups, i.e. large size, medium size and small size. To analyse the efficiency of the working capital management in these companies' three indices were used namely performance index of working capital management, utilization index of working capital management and efficiency index of working capital management. The study reveals that overall performance of selected pharmaceutical companies was average, but the individual performance of these companies varied during the study period of 2006 – 2016.

Keywords— working capital management, performance index, utilization index, efficiency index

I. INTRODUCTION

The efficient and effective working capital management is one of the most important decisions in the financial management and an important tool to enhance the firm's performance and profitability situation. The efficient management of working capital is one of the key segments in firm's corporate strategy. Thus efficient management of working capital is inevitable at the best level to remain the firm's growth in terms of profitability and risk management. The traditional financial management is focused on long term financial decisions, namely capital budgeting decisions, capital structure decisions and dividends decisions, but now in the modern times short term financial decisions like working capital management is one of the key areas to be concentrate. In the light of the above, an attempt is made in this study to look into the efficiency of the working capital management of pharmaceutical firms.

Though accounting ratios has played a key role in most of earlier empirical studies, but a choice of ratios or group of ratios is often a difficult task due to the absence of a proper theory of ratio analysis (Bhattacharya, 1997). To overcome this problem, Bhattacharya (1997) has developed an alternative ratio model for the measurement and to evaluate the efficiency of working capital management. He decomposed the total efficiency index of the working capital management into working capital management performance index and working capital management utilization index. The present study adopts the efficiency index developed by Bhattacharya in order to measure the working capital performance and utilization as well as total efficiency in the case of pharmaceutical firms.

The Indian pharmaceutical industry ranks 14th in the world by value of pharmaceutical products. With a well-established domestic manufacturing base and low-cost skilled manpower, India is emerging as a global hub for pharma products and the industry continues to be on a growth trajectory. Moreover, India is significantly ahead in providing chemistry services such as analogue preparation, analytical chemistry and structural drug design, which will provide it ample scope in contract research and other emerging segments in the pharmaceutical industry.

The Indian Pharmaceutical Industry currently heads the list among India's science based industries with wide ranging capabilities in the complex field of drug manufacture and technology. It holds the distinction of being a highly organized sector, and is estimated to be worth 36.7 billion (dollars). In terms of technology, quality and the range of medicines that are manufactured, it ranks very high among all the third world countries.

II. REVIEW OF LITERATURE

Jayarathne (2014) studied on the impact of the efficient working capital management on profitability and summarized on the study results that the liberal credit policy will influence the profitability of the firm and suggests that manufacturing companies can make more profit if they can manage the efficient working capital management.

Madhavi K. (2015) makes an empirical study of the co-relation between liquidity position and profitability of the paper mills in Andhra Pradesh. It has been observed that inefficient working capital management makes a negative impact on profitability and liquidity position of the paper mills.

Joseph Jisha (2014) closely examines the study of working capital management in Ashok Leyland and points out that the liquidity and profitability position of the company is not satisfactory, and needed to be strengthened in order to be able to meet its obligations in time.

Akoto Richard K., Vitor Dadson A. and Angmor Peter L. (2013) closely study the relationship between working capital management policies and profitability of the thirteen listed manufacturing firms in Ghana. At the end of the study, a significantly negative relationship between profitability and accounts receivable days is found to exist. Profitability is significantly positively influenced by the firms cash conversion cycle (CCC), current assets ratio and current asset turnover. It is also suggested that managers can create value for the shareholders by creating incentives to reduce their accounts receivable to 30 days.

Singh Moirangthem B. and Singh Tejmani N. (2013) emphasize on the efficient management of working capital. According to them it means proper management of various components of working capital due to which adequate amount of working capital and liquidity is maintained in the larger interest of successful running of an enterprise.

III. OBJECTIVES OF THE STUDY

The main objective of the study is to know the management of working capital in the selected pharmaceutical companies. However, the study will specifically look into the following objectives:

- To examine the efficiency of working capital management of selected pharmaceutical companies

IV. METHODOLOGY OF THE STUDY

The study analyses the efficiency of the selected pharmaceutical companies in India. A sample of 15 companies was selected for the period from 2006 to 2016. The data extracted from the annual reports of the respective companies. For the measurement of WCM Efficiency, this study adopted the index developed by Bhattacharya (1997).

Bhattacharya developed another tools for the measurement and examining the efficiency of the working capital management due to obstacles during implementation of the accounting ratios, such as lack of data and difficult task due to the missing theory (Bhattacharya, 1997).

Traditionally, based on the previous studies it shows that accounting ratios are the most important tools to measure the efficiency. Nonetheless, Bhattacharya (1997) has composed an index, known as total efficiency index of the working capital management that was developed from the performance index, and utilization index. This study differentiated from the previous study by using the Index based on sample that was never been tested previously.

Bhattacharya (1997) suggest that to measure the whole efficiency of the working capital management, the first analysis was to calculate the Performance Index of Working Capital Management (PIWCM) using the following mode

PI	$\frac{I_s \sum_{i=1}^n \frac{W_{i(t-1)}}{W_{it}}}{N}$
I_s	$\frac{\text{Sales in current period}}{\text{Sales in previous period}}$
W_{it}	Different components of current assets of 'i' firm in year 't'
N	Number of current assets
UI	$A_{(t-1)} / A_t$
A_t	$\frac{\text{Current assets}}{\text{Sales}}$
EI	$PI \times UI$

Table 1 report the descriptive analysis of selected pharmaceutical companies for Performance Index (PIWCM), Utilization Index (UIWCM) and Efficiency Index (EIWCM) of working capital management. PIWCM shows the average performance index of the various items in current asset, UIWCM defines as the ability of company to generate sales by utilize the current asset and EIWCM is a calculation of performance that consists of PIWCM and UIWCM.

Performance Index (PIWCM)

Generally, performance index > 1 show the working capital management is properly managed. The results for PIWCM on the table 1 depicted that the selected sample less efficient in managing the working capital. For a sample if performance index is less than 1 (< 1) indicating that the sales generated by the companies was less than the amount of Working Capital used.

Utilization Index, UIWCM

The UIWCM indicates the degree of utilization of current assets of a company. Any increase in current assets that was substantiate with an increase in the sales representing an effective utilization of currents assets.

Efficiency Index, EIWCM

Efficiency index is a measurement of ultimate efficiency level since this index is multiplication of performance and utilization index.

V. DATA ANALYSIS AND INTERPRETATION

TABLE NO 1: CALCULATED VALUES OF PI, UI AND EI

S No	COMPANY NAME	PI			UI			EI		
		Avg	Max	Min	Avg	Max	Min	Avg	Max	Min
LARGE GROUP COMPANIES										
1	Aurobindo Pharma Ltd	1.18	1.67	0.63	1.04	1.19	0.92	1.24	1.91	0.63
2	Cadila Healthcare Ltd	1.03	1.41	0.80	1.01	1.11	0.88	1.04	1.47	0.74
3	Cipla Ltd	1.52	4.78	0.73	1.04	1.49	0.84	1.62	4.94	0.78
4	Dr Reddy's Laboratories Ltd	1.12	2.18	0.33	0.97	1.08	0.85	1.08	1.86	0.30
5	Piramal Enterprises Ltd	1.68	17.30	-7.23	1.32	4.58	0.12	-1.20	17.36	-33.09
MEDIUM GROUP COMPANIES										
6	Granules India Ltd	2.63	0.47	1.02	1.44	0.79	1.01	2.82	0.37	1.04
7	Unichem Laboratories Ltd	1.02	1.36	0.68	1.01	1.16	0.86	1.04	1.57	0.59
8	Sequent Scientific	1.03	3.92	-0.72	1.01	1.43	0.82	1.16	5.62	-0.68
9	FDC Ltd	1.18	2.33	0.14	1.01	1.22	0.39	1.30	2.85	0.05
10	Suven Life Sciences Ltd	1.93	11.00	0.18	0.98	1.55	0.60	2.23	13.46	0.16
SMALL GROUP COMPANIES										
11	Hikal Ltd.	0.40	7.18	-4.22	1.04	1.28	0.82	0.32	6.56	-4.39
12	Neuland Laboratories Ltd	0.61	2.38	-2.07	1.01	1.29	0.83	0.70	2.82	-1.72
13	Novartis India Ltd	0.94	1.01	0.78	0.94	1.04	0.78	0.88	1.05	0.61
14	Aarti Drugs Ltd	-1.83	1.29	-19.32	1.03	1.23	0.85	-1.47	1.58	-16.42
15	Anuh Pharma Ltd	1.13	3.33	0.43	1.05	1.55	0.76	1.21	3.41	0.44

Source: Calculated from annual reports of the companies

Interpretation for Performance Index:

➤ For large size companies

The Performance Index of all the companies in large group is greater than (>1). It implies that the firms were good at maintaining working capital very effectively. The sales generated by the companies were greater than the amount of working capital.

➤ For medium size companies

The Performance Index of all the companies in medium group is greater than (>1). It implies that the firms were good at maintaining working capital very effectively. The sales generated by the companies were greater than the amount of working capital.

➤ For small size companies

The performance Index of small group is less than 1 (<1) except Anuh Pharma ltd. It indicates that the firms were not maintaining the working capital efficiently.

Interpretation for Utilization Index:

➤ For large size companies

The Utilization Index of the companies in large group is greater than (>1) except Dr Reddy Laboratories Ltd. It implies that the remaining firms were utilizing its current assets efficiently.

➤ For medium size companies

The Utilization Index of the companies in medium group is greater than (>1) except Suven Life Sciences Ltd. It implies that the remaining firms were utilizing its current assets efficiently.

➤ For small size companies

The Utilization Index of the companies in small group is greater than (>1) except Novartis India Ltd. It implies that the remaining firms were utilizing its current assets efficiently.

Interpretation for Efficiency Index:

➤ For large size companies

The Efficiency Index of the companies in large group is greater than (>1) except Piramal Enterprises Ltd. It implies that the remaining firms were maintaining working capital efficiently.

➤ For medium size companies

The Efficiency Index of all the companies in medium group is greater than (>1). It indicates that all the firms were good at maintain working capital very effectively.

➤ For small size companies

The Efficiency Index of the companies in small group is greater than (>1) for only Anuh Pharma ltd., remaining firms reported below one it indicates that the firms were not maintain the working capital efficiently, rather than these firms were doing in a riskier situation.

VI. CONCLUSIONS

The efficiency Index is an indicator for how the firms were maintain its working capital. During the study period the researcher found that majority of the firms were good at maintain the working capital. Primal enterprises ltd, Hikal Ltd, Neuland Laboratories Ltd, Novartis India Ltd, Aarti Drugs Ltd reported less than one which indicates the efficiency of the working capital is not optimal. From the sample of 15 companies 10 companies were good at maintaining the working capital while the remaining 5 companies need to improve the working capital management.

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