A Case Study of Inventory Management in Select Five Pharmaceutical Companies.

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1. Introduction :

Inventory comprises of the sum total of the raw materials, work in progress and finished goods in case of manufacturing companies whereas it comprises of only finished goods in case of trading companies.

Inventory means money. However, it is not the same as money in the bank. It is the money on which we pay interest instead of earning interest as in the case of money with bank. Holding of high levels of Inventories not only block funds but also entitles the cost of carrying the inventories. Therefore, inventory carrying cost is a hidden cost and it comprises of the following main components: capital cost, cost of storage and handling and deterioration and obsolescence cost. The cost of inventories also constitutes an opportunity cost in that it is the cost which is incurred in withdrawing funds from productive activity to invest them in inventories.

Inventory would be unneeded if the production and sales could exactly match at all times. In other words, this would be possible only if, production and sales could occur at the same moment. This preposition is practically difficult in the present circumstances. In case of Pharmaceutical companies, the inventories constitute a major portion of the current assets as well as the total assets. Inventories need to be maintained at appropriate levels so as to minimise the costs of holding and carrying them. A huge amount of funds is blocked in inventories extending to over 6-8 months. A company needs to achieve sufficient sales volume to sustain the maintenance of inventories. Therefore, a study is made to understand the inventories practices followed in a sample of five select pharmaceutical companies.

2. **Objectives of study** :

To understand the inventory holding periods followed by the companies under study over the last five years and to interpret their performance.

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3. Methodology :

(i) A sample of five companies having a sizable turnover in pharmaceutical sector have been randomly picked up for study.

(ii) The figures have been collected from the published annual reports of companies for the last five years.

(iii) The inventory levels maintained by these companies and their profitability have been studied based on ratio analysis technique employing the following well known ratios over five years for the selected companies. (a) Number of days of inventory holdings.
(b) Inventory turnover ratio
(c) Materials Consumption ratio
(d) Net Profit Ratio

4. Companies selected for study.

(i) Cipla
(ii) Dr. Reddy Laboratories
(iii) Sun Pharmaceuticals.
(iv) Glenmark Pharma
(v) Torrent Pharmaceuticals.

5. Discussion and Analysis :

A. **Cipla** (Rs in crores)

Year	Sales Revenue	Materials Cost	Materials Cost to Sales %	Daily Consumption On average	Inventory Value	No. of days of Inventory	Inventory Turnover Ratio	Net Profit	Net Profit (%)
2011	6331	2889	45.63	8	1883	238	3.36	960	15.16
2012	6835	2868	41.96	8	1825	232	3.75	1124	16.44
2013	8042	3063	38.09	8	2343	279	3.43	1507	18.74
2014	9380	3761	40.10	10	2511	244	3.74	1388	14.80
2015	10132	3981	39.29	11	3289	302	3.08	1181	11.66
Total			205.07			1295	17.36		76.80
Mean			41.01			259	3.47		15.36

Inferences:

1. On an average, the number of days of inventory holding for the company is 259 days; which is on a very higher side.
2. The materials cost percentage to sales revenue is also on higher side i.e 41% on an average.
3. The inventory turnover ratio is as low as 3-4 times, on an average, reducing to 3 times during the year 2015.
4. The profitability as indicated by the Net profit ratio is adversely affected standing at 11.66 % which has declined from 18.74 % in 2013.
5. During the year 2015, the number of days of inventory holdings have exceeded 300 days indicating inventory holding for 10 months in the year.
6. Even though the sales turnover has shown an increasing trend over the last five years, the profitability has declined over the last three years.
7. All the above indicate that the Inventory management is not being efficiently managed.
8. The performance pattern over the last three years indicate increasing sales volume, with decreasing profitability and increasing number of days of inventory.
9. The daily consumption of materials on an average shows an increasing trend.
10. The company needs to work on their inventory levels to bring within favorable parameters.

B. Dr. Reddy Laboratories

(Rs in crores)

Year	Sales Revenue	Materials Cost	Materials Cost to Sales %	Daily Cons. on average	Inventory Value	No. of days of Inventory	Inventory Turnover Ratio	Net Profit	Net Profit (%)
2011	5305	1755	33.08	5	1063	221	4.99	893	16.83
2012	6740	2150	31.90	6	1327	225	5.08	912	13.53
2013	8434	2730	32.37	7	1527	204	5.52	1266	15.01
2014	9728	2739	28.16	8	1592	212	6.11	1033	19.87
2015	10011	2867	28.64	8	1723	219	5.81	1679	16.77
Total			154.14			1082	27.51		82.02
Mean			30.83			216	5.50		16.40

Inferences:

1. Material consumption cost to sales revenue is 30.83% on an average during the last five years.
2. The number of days of inventory holding is 216 days on an average.
3. The inventory turnover ratio is 5.5 times on an average.
4. The above ratios indicate that the company has managed its inventory policy with a comparatively low material consumption ratio.
5. Sales volume has shown an increasing trend over the last five years.
6. The net profit shows an increasing trend in the years: 2012, 2013, however, it has declined in 2014, but the profitability on sales has shown a good increase at 19.87% in the same year.
7. In the year 2015, although the sales have increased, but the net profit shows a decrease at 16.77 %. However, the inventory has been reasonably maintained at 219 days.

C. Sun Pharmaceuticals.

(Rs in crores)

Year	Sales Revenue	Materials Cost	Materials Cost to Sales %	Daily Cons. on average	Inventory Value	No. of days of Inventory	Inventory Turnover Ratio	Net Profit	Net Profit (%)
2011	3108	897	28.86	2	618	251	5.03	1384	44.53
2012	4016	1057	26.32	3	640	221	6.28	1697	42.26
2013	2432	896	36.84	2	869	354	2.80	517	21.26
2014	2829	1065	37.65	3	918	315	3.08	-2829	-100
2015	8018	3513	43.81	10	2189	227	3.66	-1474	-18.38
Total			173.48			1368	20.85		-10.34
Mean			34.70			274	4.17		-2.07

Inferences:

1. During the last two years, the company's performance has declined very sharply. During the year 2015, the company has increased the turnover to a significant extent but was not able to improve its profitability.
2. During the five year period, the number of days of inventory holding is 273, which is quite high.
3. The material consumption ratio has increased to 43.81% which is also quite high.
4. The inventory turnover ratio also is at a low rate of 3 times.

5. During the year 2014, the company incurred a heavy loss which has affected its performance during the last two years.
6. The profitability was very good during the initial years of the five year period.
7. For some reasons which have not been analyzed, the results for the year 2014 were at its worst during the five year period.
8. During the year 2015, some improvement is seen with still a negative figure of profits.

D. Glenmark Pharma

(Rs in crores)

Year	Sales Revenue	Materials Cost	Materials Cost to Sales %	Daily Cons. on average	Inventory Value	No. of days of Inventory	Inventory Turnover Ratio	Net Profit	Net Profit (%)
2011	1163	342	29.41	1	157	168	7.41	212	18.23
2012	1565	430	27.48	1	176	149	8.89	265	16.93
2013	1949	553	28.37	2	190	125	10.26	386	19.81
2014	2301	623	27.08	2	210	123	10.96	434	18.86
2015	5086	1668	32.80	5	737	161	6.90	1008	19.82
Total			145.13			726.67	44.42		93.65
Mean			29.03			145.33	8.88		18.73

Inferences:

1. The average inventory holding is 145 days which is much lower as compared to the leaders in the industry. The inventory holding on an average for 5 months.
2. The materials cost to sales revenue is also very low at 29.03 % on an average.
3. The inventory turnover ratio is nearly 9 times on an average.
4. All the above ratios have helped in improving the profitability to 18.73 % on an average.
5. Even the sales volume is almost half of the top leaders in the industry i.e. Cipla and Dr. Reddy Laboratories, the profitability is far better than the two.
6. The inventory management is much better than Cilpa and Dr Reddy, in all respects.
7. The inventory management is well managed with low cost of consumption of materials and low level of inventory holding which have added to the profitability situation with lower sales volume.

E. Torrent Pharmaceuticals

(Rs in crores)

Year	Sales Revenue	Materials Cost	Materials Cost to Sales %	Daily Cons. on average	Inventory Value	No. of days of Inventory	Inventory Turnover Ratio	Net Profit	Net Profit (%)
2011	1752	601	34.30	2	343	208	5.11	291	16.61
2012	2076	806	38.82	2	393	178	5.28	311	14.98
2013	2766	980	35.43	3	697	260	3.97	546	19.74
2014	3365	1000	29.72	3	695	254	4.84	762	22.64
2015	3476	1083	31.16	3	781	263	4.45	623	17.92
Total			169.43			1163	23.65		91.90
Mean			33.89			233	4.73		18.38

Inferences:

1. The company is maintaining an average inventory of 233 days i.e. nearly 8 months.
2. The profitability is good since the average net profit ratio over the last five years is 18.38%.
3. The cost of materials consumed to sales revenue is 33.89% on an average, which has helped in improving the profitability.
4. The sales turnover ratio is 4.73 times which is not very high or very low.
5. The company can improve its profitability by reducing the number days of inventory holdings.
6. The company turnover is one third of the top leading companies; however the profitability and inventory management is better as compared to them.
7. In the year 2014, the net profit ratio was at the highest at 22.64% with inventory of 254 days.
8. In the year 2015, the net profit ratio declined to 17.92% with a increase in inventory period of 263 days.

Mean Chart showing the mean results over the five year period

Companies name	Material cost to Sales Revenue %age	No. of days Inventory	Inventory Turnover Ratio	N.P Ratio
Cipla	41.01	258.92	3.47	15.36
Dr. Reddy Lab.	30.83	216.41	5.5	16.4
Sun Pharma	34.7	273.71	4.17	-2.07
Glenmark Pharma	29.03	145.33	8.88	18.73
Torrent Pharma	33.89	232.55	4.73	18.38
Total	169.46	1126.92	26.75	66.80
Mean	33.89	225.38	5.35	13.36

6. Findings :

(i) Glenmark Pharma has the lowest number of days of inventory holdings with 145 days, whereas Sun Parma has the highest number of inventory holdings with 274 days.

(ii) Glenmark Pharma with a low level of number of day's inventory has helped in maintaining a good net profit ratio of 18.73%, whereas the high level of number of day's inventory holding in case of Sun Pharma has adversely affected its profitability.

(iii) Cipla has a high level of number of days of inventory holdings of 259 days with a high material consumption ratio of 41.01%. These have brought down the Net profit ratio to 15.36%.

(iv) Dr Reddy Laboratories has a low material consumption ratio with a reasonable level of inventory of 216 days. The net profit ratio is also reasonably good.

(v) Torrent Pharma has a good profitability ratio of 18.38% with a inventory level of 233 days. Its material consumption ratio is 33.89%, which is not very high.

(vi) Glenmark Pharma is a better performer as far as profitability and inventory management are concerned as compared to Cipla and Dr. Reddy Laboratories even though its sales turnover is comparatively half of these companies.

(vii) Sun Pharma has a high inventory holding with negative profitability.

7. **Conclusion** :

An inventory holding period of 6-7 months appears to be the norm for the industry, with the highest mean for Sun Pharmaceuticals at 274 days and lowest for Glenmark Pharma at 145 days.

High sales volume does not necessarily mean that the performance in profitability is also good. Cipla and Dr Reddy Laboratories with turnover exceeding 10,000 crores do not reflect well in terms of profitability performance as compared to Glenmak Pharma and Torrent Pharma.

Glenmark with a turnover exceeding 5000 crores is a better performer in inventory management and profitability. Torrent Pharma also scores marks in this regard with good profitability ratio as compared with other companies.

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