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## *A Study on Measurement of Financial Health of Pharmaceutical Companies in India*

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**Abstract:** *Financial performance of the companies has a vital role in the growth of the companies. Investors want regular income from the companies and it depends on the earnings capacity of the companies. The present research mainly focuses on the financial health of the pharmaceutical companies. The research is based on 7 pharmaceutical companies and the time period of the research was 15 years from 2006 to 2020. Altman Z score was applied to measure the financial health of the companies. Various descriptive statistics were also applied to measure consistency in the financial health of companies. The research found that overall financial health of the companies was good. Most of the companies were in the safe zone during the study period except in some years. The study concluded that overall financial health of the pharmaceutical industry was excellent and companies performed well in all financial aspects..*

**Keywords:** *Financial Health, Dividend trends, Z score, Dividend payout ratio etc.*

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### I. INTRODUCTION

Health is a significantly essential social and economic resource - a cornerstone for human improvement. Improving worldwide health, especially among poor people, is a global need. Pharmaceutical goods play a crucial role in healthcare. Along with properly-trained and encouraged health professionals, drugs are the most effective way to save you, improve and overcome disease. The important function of the pharmaceutical companies is to create value by way of developing and producing effective new medicines, vaccines and services that enhance patients' health, and can be sold in business sectors at a benefit. Beyond innovation, companies keep a much broader responsibility to 'do no harm,' through performing with integrity, complying with countrywide laws, respecting human rights, making use of honest labor norms, protecting the surroundings, and operating against corruption to prevent harm to human beings, groups and future generations. The pharmaceutical companies play an important role in developing drugs and im

munizations to lessen the incidence of sicknesses, to deal with sicknesses and to enhance value of life. The industry's predominant contribution is carrying out technological improvements via innovative research to fulfill the complicated healthcare needs of populations. The most recent improvement in the pharmaceutical industry is the bio pharmaceuticals. In this, drugs are created by utilizing the new technology called biotechnology. This is a brand new system of utilizing living organisms or biological systems for the manufacturing of drugs. This new technology helps in recognizing the symptoms of new diseases and helps in producing new drug. Well-equipped labs and the today's infrastructure inside the pharmaceutical businesses allows to analyze the different factors like genetics and cellular structure which may cause illnesses and to discover solutions for them.

## II. CURRENT SCENARIO OF PHARMACEUTICAL SECTOR

The financial health assumes an important place in the fruitful working of a firm. Weak financial health of an enterprise threatens the survival and leads enterprise failures. The current financial crises and economic downturn had a considerable impact on corporate area. Failures of corporate are typical issues of growing economies. Perfect forecasting of declining business action leads to liquidation permits time for managers and stakeholders to take corrective steps. It is most important that stakeholders take a look at the monetary health of the business actions. That's why it is critical for investors to realize how to examine the short term as well as long-term financial health of business enterprise. Financial Performance evaluation is the method of measuring the effects of a firm's regulations and operations in financial terms. It is used to study company's overall monetary health over a given period of time. Financial performance analysis can also be used to examine similar firms throughout the similar industry or to compare industries therefore financial performance evaluation consists of analysis and interpretation of economic statements in any such manner that it undertakes complete analysis of the profitability and financial soundness of the firm.

While evaluating different industries, the pharmaceutical industries of India are the world's 1/3 biggest industries in terms of volume and is probably going to lead manufacturing sectors of India in near future. Bengal Chemicals and pharmaceutical work set up at Calcutta in 1903 was first Indian pharmaceutical company, which is working till today as one of the government owned industry. India has turned out to be one of the leading pharmaceutical goods producing country. Indeed, even without solid patent policy, the Indian pharmaceutical industry developed during 1980s. This sector started producing better products for their customers in comparison to foreign manufactures. This reality would end up clear by the present situation of the business, wherein it isn't simply fulfilling the expanding need of the enormous population of the nation, yet in addition sending out the items to other developing and developed nations of the world. Pharmaceutical industry of India are preparing for such development that would place India among the best 10 worldwide pharmaceutical markets in value terms till 2020.

For the last 60 years, large portion of the pharmaceutical product in India were imported either in fully formulated or bulk form. In the year 2013 more than 3405,000 people were employed in near about 4655 pharmaceutical companies set up in India. The Government began to empower the development of this sector in the mid-1960s, and the Patents Act in 1970 empowered the Indian business to turn in current position. More than 20,000 registered pharmaceutical companies exist in the nation. India is among the most important developing markets for the worldwide pharma industry, given that it will highlight among the world's top 10 deals markets by 2020. Moreover economic reforms in 1990s empowered the business to prosper. Indian pharmaceutical industries developed rapidly in Indian and world markets due to their knowhow and mastery in designing new methods of producing pharma products at minimum cost. Recently, it is viewed as one of the quickest developing pharma businesses universally, essentially determined by a huge population, expanding medicinal services, developing urbanization, and active participation of private sector. The Indian drugs industry is relied upon to develop more than 15% for each annum from 2015 to 2020. In 2017, the CAGR of the business is 17.5%. India has likewise kept up its lead over China in pharmaceutical exports with a year-on-year development of 11.44% to US\$ 12.91 billion in 2015-16, as indicated by information from the Ministry of Commerce and Industry (ibef.org).

## III. REVIEW LITERATURE

1. **Shashikala (2011)** carried out a research for the measurement of position of financial distress in Alembic pharma company and research applied Altman Z score and found most of the time during study period company was lied in gray zone which indicated poor financial performance.
2. **Nair (2013)** examine the financial distress position of the pharma industry on the basis of 23 companies and study based on secondary data. Research applied Z score and found overall performance of pharma industry were good during study period.

3. **Sheela & Karihikyan (2012)** examine the health of the 3 pharma companies during 2001-02 to 2010-11. Z score applied and research found sample companies were good financial performance and there were no chance of bankruptcy of sample companies.
4. **Bhanawat & Amita (2014)** carried out a research to measure the financial health of the pharma companies. Research used secondary data and applied Z score. Research found pharma industry was in safe zone and there were no chance of financial distress.

#### IV. RESEARCH METHODOLOGY

##### Objectives of the study

1. To measure the financial health of selected pharmaceutical companies.
2. To analysis the trends of financial health of selected companies in India.

##### Sample of the study

The study based on 7 pharmaceutical companies which were selected through non probability convenience sampling.

##### Time period of the study

The present research based on a time period of 15 years from 2006 to 2020.

##### Data types and collection

The study was based on secondary data collected through annual reports of the companies, PROWESS CMIE etc.

##### Tools and techniques

The study applied Altman Z score model for the purpose of measure financial health of the selected companies. For the analysis of dividend payouts study followed trend analysis and research also applies various descriptive statistics for the analysis of the data.

Altman Z Score Model explanation:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$$

Where

$X_1$  = Working capital/total assets

$X_2$  = Retained earnings /total assets

$X_3$  = Earnings before interest and taxes /total assets

$X_4$  = Market value of equity / book value of total debts

$X_5$  = Net sales /total assets

As per this model financial health of the company divided into 3 zones named safe, gray and distress zone. A company stand in which zone depends on the Z value. The criteria as follows:

1.  $Z > 2.99 \rightarrow$  Safe Zone
2.  $Z = 1.81$  to  $2.99 \rightarrow$  Gray Zone
3.  $Z < 1.81 \rightarrow$  Distress Zone

## V. ANALYSIS AND INTERPRETATION

**TABLE No. 1**  
**Z-Score of selected pharmaceutical companies**

Years	Bliss G V S Pharma Ltd.	Dr. Reddy'S Laboratories Ltd.	Ipca Laboratories Ltd.	Lupin Ltd.	Piramal Enterprises Ltd.	Torrent Pharmaceuticals Ltd.	Unichem Laboratories Ltd.
2006	4.810	10.797	6.168	8.924	11.733	8.423	9.665
2007	2.371	9.322	6.232	8.946	8.923	8.058	7.180
2008	10.510	6.346	5.128	6.518	7.797	3.393	4.188
2009	5.555	4.071	3.183	5.329	4.703	2.800	4.515
2010	15.380	6.443	11.465	10.580	7.786	6.138	7.715
2011	5.710	4.915	4.692	6.330	5.411	4.281	5.852
2012	5.249	4.806	4.458	7.483	0.783	4.192	3.675
2013	2.794	4.323	5.672	9.823	0.548	4.049	4.475
2014	2.331	5.061	7.384	16.145	0.217	4.699	5.814
2015	4.672	5.471	4.475	28.785	1.550	4.427	5.228
2016	6.843	6.982	3.773	18.334	0.602	5.931	4.686
2017	7.785	6.292	4.307	13.998	1.400	5.361	4.762
2018	9.288	4.656	4.622	7.778	1.052	2.219	8.544
2019	10.073	8.670	6.965	8.798	0.878	3.413	2.976
2020	5.105	8.329	8.380	5.873	0.686	3.510	1.905
<b>Mean</b>	<b>6.565</b>	<b>6.432</b>	<b>5.793</b>	<b>10.910</b>	<b>3.605</b>	<b>4.726</b>	<b>5.412</b>
<b>SD</b>	<b>3.551</b>	<b>2.022</b>	<b>2.117</b>	<b>6.230</b>	<b>3.810</b>	<b>1.785</b>	<b>2.106</b>
<b>CV</b>	<b>54.09%</b>	<b>31.44%</b>	<b>36.55%</b>	<b>57.11%</b>	<b>105.70%</b>	<b>37.77%</b>	<b>38.92%</b>

Source: Researcher's Calculation

The table no. 1 shows the Z scores of 7 sample companies to measure the financial health for the period from 2006 to 2020. The Table shows that in year 2006 all the companies were in safe zone. Highest value of Z score is related with Piramal Enterprises ltd. and minimum is related with Bliss GVS ltd. In next year 2007 Bliss G V S ltd. was in gray zone and while all other companies were in safe zone. In 2007 safest company was Dr. Reddy's Laboratories. In 2008 Bliss G V S ltd. Z score was improved significantly and it was the highest among the sample companies. In this year Torrent pharmaceutical ltd health was down but it was in safe zone but minimum in the sample companies. In 2009 Z scores of the all sample companies were down and Torrent pharmaceutical ltd was in gray zone and all other companies were in safe zone. In next year 2010 all companies performed well and the health of the all companies were in safe zone. Bliss G V S ltd Z score was highest in all the companies and score of Torrent pharmaceutical ltd was improved but lower as compare to others. The data of 2011 shows that all companies down in this year but all companies were in safe zone.in next year 2012 all companies down expect Lupin ltd. and Piramal enterprises ltd. was performed very poor and reached under distress zone. In 2013 some companies' health were down and some companies were performed well. Bliss G V S reached in gray zone and Piramal enterprises Z score was down and it was in distress zone. In next year 2014 Lupin ltd. performed well and it was safe zone and highest in all other companies and Piramal enterprises ltd. in distress zone while Bliss G V S ltd. reached in gray zone. In 2015 Piramal enterprises score improved but it was in distress zone and Bliss G V S ltd was in safe zone with improvement. Lupin showed highest Z score in this year. In next year 2016 Lupin ltd. Z score was down but it was in safe zone and Piramal Z score was down and lied in distress zone. In 2017 Piramal enterprises ltd. was in distress zone and remaining all in safe zone. In next year 2018 Torrent pharmaceutical Ltd. performed poorly and reached in gray zone and Piramal enterprises ltd. lied in distress zone. In next year 2019 Unichem Laboratories ltd. Z score down and just below from safe zone criteria and it was in first time in gray zone during study period.

Piramal enterprises ltd. was in distress zone and all other companies were in safe zone. In 2020 Unichem Laboratories Z score was down and lied in gray zone and Piramal enterprises ltd. lied in distress and all other companies in safe zone.

During study period Bliss G V S ltd. Z score were good and only years 2007, 2013 and 2014 the Z score were in gray zone. The mean value of Z score of Bliss G V S ltd. was 6.565 with SD 3.551 and coefficient of variation was 54.09. In 2010 Z score was highest with 15.380 and lowest in 2014 with 2.331.

Dr. Reddy's Laboratories financial health as per Z scores were good during study period and all over study period it was in safe zone. The mean value of Z scores was 6.432 with SD 2.022 and CV was 31.44. In 2006 Z score was highest with 10.797 and lowest in 2009 with 4.071. The CV value was lowest among sample companies and it showed consistency in health and less variability in the health.

Ipca laboratories ltd. health was good and Z scores lied in safe zone during the study period. The mean score of the company was 5.793 with S.D. 2.117 and CV was 36.55. In 2010 Z score was highest with 11.465 and minimum in 2009 with 3.183. The CV value was second lowest in the sample companies and it shows the consistency in Z score.

Lupin Ltd.'s health Z scores were more than 2.99 and it showed the company was in safe zone during the study period. The mean score of Z was 10.910 with SD 6.230 and CV was 57. 11.. In 2015 Z score was highest with 28.785 and minimum in 2009 with 5.329. The CV value was 57.11 and its showed less consistency in the Z scores.

Piramal Enterprises ltd. financial health was not good during the study period except some years. From 2006 to 2011 Z scores were more than 2.99 and company was stand in safe zone but after 2011 Z score was less than 2.99 and in subsequent years financial health was not good. After 2012 Z score of the company was below 1.81 and it showed that company was in distressed zone. The mean value of Z scores was 3.605 with SD 3.810 and CV of the company was 105.7 which was highest among the sample companies. The CV score shows the lowest consistency in the Z score.

Torrent pharmaceutical ltd was in safe zone during study period except in years 2009 and 2018. In these years the Z scores were less than 2.99 but more than 1.81 so in these years company was in gray zone. The mean value of Z scores was 4.726 with SD 1.785 and CV was 37.77. The highest value of Z score was in year 2006 with 8.423 and minimum in year 2018 with 2.219.

Unichem ltd. was also in safe zone during study period except last two years. In 2019 Z score of the company was just below from safe zone which was 2.976 and in was in gray zone and in 2020 the z score was 1.905 and it also showed that company was in gray zone. The mean value of z scores was 5.412 with SD 2.106 and CV value was 39.92. The maximum value of Z score was in year 2006 with 9.665 and minimum in year 2020 which was 1.905.

## VI. CONCLUSION

The research concluded that overall financial performance of the pharmaceutical industry is good and it has positive impact of the financial health of the industry. So financial health of all the companies is good and lies in safe zone except Piramal enterprises ltd. So in brief research concluded that in future there is no chance of bankruptcy of selected companies except Piramal enterprises ltd. The study also suggests that company should focus on the objective of wealth maximization.

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