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COMPARATIVE STUDY OF PHARMACEUTICAL COMPANIES (ALTMAN'S Z- SCORE TEST)

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ABSTRACT:

It is major concern for all companies to predict financial health. If it will results into financially weak position then it will become harmful to stakeholders who all are connected with companies' every moves. By using Z-score model given by Altman, we can find out the financial health of the particular company or whole industry. This model gives the satisfactory results about study of financial distress. Here, the study covers a period of 5 years from 2014-15 to 2018-19 for investigation about financial health of top 2 Pharmaceutical company of India on the basis of market capitalization. The Altman Z-score test technique has been applied to analyze the data.

KEYWORDS: Measure Financial Health, Liquidity, Profitability, Leverage, Solvency And Activity-Altman's Z-Score Test.

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REVIEW OF LITERATURE:

M.S.Prathibha Raj & Dr G Dinakar (2017): In the research paper titled "ANALYSIS OF SELECTED AUTOMOBILES COMPANIES IN INDIA BY USING ALTMAN Z SCORE" the researcher has made a technical analysis as well as fundamental analysis on the financial health of nine BSE & NSE listed automobile companies for the year 2014 to 2015. He utilized Altman's Z

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score for better future investment in automobile sector in India which is play well because India is huge market.

RESEARCH OBJECTIVE:

- To examine financial health by using ALTMAN'S Z-scoretest.

SAMPLE DESIGN:

This study is based on secondary data collected from annual reports of the SUN PHARMA and DR. REDDY'S company and from the website www.moneycontrol.com for the period of five years from 2014-15 to 2018-19.

ALTMAN'S Z-SCORE TEST:

To test financial health, Z-score test was first published in 1968 by Edward Altman. In his studies, he had taken initially 66 corporations with 33 companies in each group in the period from 1946 to 1965. Firstly Altman used 22 different financial ratios but to eliminate size effects, he had considered only 5 ratios from them which are divided into 5 categories: liquidity, profitability, leverage, solvency and activity.

To evaluate financial health, formula used by ALTMAN is as follows:

$$Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.999X5$$

Here, X1, X2, X3, and X4 are computed as absolute percentage and X5 is in number of times

X1= Ratio of WORKING CAPITAL to TOTAL ASSETS to measure liquid assets to total assets.

X2= Ratio of NET OPERATING PROFIT to SALES to measure efficiency of management.

X3 = Ratio of Earning Before Interest and Tax(EBIT) to TOTAL ASSETS to measure productivity of assets employed in company.

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X4 = Ratio of Market Value of Equity to Book Value of Debts which is reciprocal of the familiar DEBT-EQUITY RATIO.

X5 = Ratio of SALES to TOTAL ASSETS to measure the sales generating capacity of the asset

ALTMAN'S GUIDELINE FOR FINANCIAL HEALTH:

SITUATION	Z-score	ZONE	RESULTS
1	Below 1.8	Bankruptcy zone	Financially weak
2	1.8 to 2.99	Grey zone	May or may not fail
3	Above 2.99	Healthy zone	Financially healthy

Researcher Used Above Guideline For To Measure Financial Health Of Two Pharmaceutical Companies And Compare Each Other Financial Health With Data Based

SUN PHARMA industries ltd.

year	WC	RE	EBIT	MV of eq	TL	SALES	TA
2014-15	1465.97	3139.19	2782.71	119042.22	6429.12	2724.31	13837
2015-16	-5601.8	2196.08	1007.72	212070.16	14659.28	7730.92	37445.55
2016-17	-3495.08	1314.04	537.27	197341.2	12706.17	7132.03	34189.93
2017-18	-4574.46	1229.14	206.77	164957.52	12856.8	7400.43	33869.27
2018-19	-2983.21	1203.07	668.56	118908.55	14469.2	8774.41	36791.81

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YEAR	WC/TS	RE/TA	EBIT/TA	MV of EQ/TL	SALES/TA
2014-15	0.1059	0.2269	0.2011	18.516	0.1969
2015-16	-0.1496	0.0586	0.0269	14.47	0.2065
2016-17	-0.1022	0.0384	0.0157	15.53	0.2086
2017-18	-0.1351	0.0363	0.0061	12.83	0.2185
2018-19	-0.0811	0.0327	0.0182	8.218	0.2385

Above table of SUN PHARMA industries ltd's data Indicate company financial situation period of 2014-15 to 2018-19 to compared with the data of Dr. Reddy's Laboratories Co Ltd same periodic time 2014 -15 to 2018-19.

DR. REDDY'S LABORATORIES CO LTD

Year	WC	RE	EBIT	MV of eq	TL	SALES	TA
2014-15	4793.6	1621.6	2532.7	218187.89	5179.1	9646.80	14508.10
2015-16	5724.7	1338.2	2123.7	297241.5	5822	9927.50	16456.00
2016-17	5296.2	1014	1643.8	258902.5	5952.2	10150.60	17557.60
2017-18	4335.8	907.40	1601.7	217729.8	4846.6	9628.10	16447.20
2018-19	4318.6	995.11	759.80	173843.5	5292.5	9302.60	17100.30

YEAR	WC/TA	RE/TA	EBIT/TA	MV of EQ /TL	SALES/TA
2014-15	0.3304	0.1118	0.1746	42.13	0.6649
2015-16	0.3479	0.0813	0.1291	51.05	0.6033
2016-17	0.3016	0.0578	0.0936	43.497	0.5781
2017-18	0.2636	0.0552	0.0974	44.92	0.5854
2018-19	0.2525	0.0582	0.0444	32.85	0.5440

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Z- SCORE TABLE

YEAR	SUN PHARMA	DR. REDDY'S
2014-15	12.42	27.07
2015-16	8.88	32.19
2016-17	9.51	27.43
2017-18	7.82	28.25
2018-19	5.18	20.79
MEAN	8.746	27.146

Here both the companies are financially healthy according to Altman's z-score model in all the 5 years. We can see that dr. reddy's company's z-score is higher than Sun Pharma Company. According to calculations of z-score, sun pharma is going continuously downward but in the current market it is the highest market capitalized pharmaceutical company of India. Here we can analyze that sales of sun Pharma Company having increases in 5 years while sales of DR. REDDY'S is decreasing in 5 years. In the year 2018-19, assets of sun Pharma Company is more than dr. reddy's company but in case of working capital it is less than dr. reddy's company. It may be concluded that sun pharma utilized its assets more effectively.

Here z-score is the only tool of analysis which becomes limitation and data used in research are secondary data which also have its own limitations.

CONCLUSION:

Here it is clearly indicates healthy financial position of both the companies having z-score more than 2.99 and there is no scope of bankruptcy. DR. REDDY'S z-score is on an average 3 times more than SUN PHARMA. Sometimes having low or negative working capital policy leads to the default

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and bankruptcy. SUN PHARMA is using same policy which will create risk or financial trouble in longer period of time.

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