An Analysis of Financial Health of Select Indian Bulk Drugs and Formulations Companies

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Abstract

Solvency or Financial ratio includes all ratios which express financial position of the concern. Financial Ratio is calculated on the basis of items of the Balance Sheet. The term financial position generally refers to short-term and long-term solvency of the business concern. The researcher has applied the Z score analysis on the sample selected among Indian bulk drugs and formulation pharmaceuticals companies. It is concluded that Financial Health in Cipla is good among the other pharmaceutical companies in India followed by Aurobindo Pharma, Cadila Healthcare, Ipca, Dr.Reddy's, Ranbaxy and Sunpharma

Keywords: Multiple Discriminant Analysis (MDA), 'Z' Score Analysis, Indian Bulk Drugs and Formulations Companies (IBD&FC), financial health and bankruptcy.

Introduction

The financial health plays a significant role in the successful functioning of a firm. Poor financial health threatens the very survival of the firm and leads to business failures. The recent financial crisis and the ensuing economic downturn have had a significant impact on the corporate sector. Corporate profitability has eroded sharply while debt burden has increased. Corporate failures are a common problem of developing and developed economies. Failure is not an impulsive outcome and it grows constantly in stages. There are unique characteristics of failure in firm's financial levels prior to reaching the levels of total failures. A protective effort could be made effectively if the company is foreseen to be proceeding in the direction of potential bankruptcy and this can help the company and the stakeholders from facing the painful consequences of a complete failure. In what way can financial data add depth to our understanding of why some firms cease growing, discontinue, fail, or go into bankruptcy? Signs of potential corporate failure are evident months before the actual bankruptcy materializes. But accurate prediction of declining business activity that leads to bankruptcy allows time for managers and creditors to take corrective action. The turbulent and the competitive scenario in the corporate sector have made it imperative for the stakeholders to assess the financial health of the companies. With the recent global financial crisis and the failure of many organizations in the U.S and the European countries it has become all the more necessary that the stakeholders study the financial health of their organization. For companies, being able to meet their financial obligations is an integral part of maintaining operations and growing in the future. If the company is not in a good financial health it may not be able to survive in the future. That's why it's essential for investors to know how to evaluate the short-term as well as long term financial health of the organization.

Here an attempt has been made to examine the financial health in Select Pharmaceutical Companies in India.

Meaning of Solvency ratio

Solvency is one of the various ratios used to measure the ability of a company to meet its long term debts. Moreover, the solvency ratio quantifies the size of a company's after tax income, not counting non-cash depreciation expenses, as contrasted to the total debt obligations of the firm. Also, it provides an assessment of the likelihood of a company to continue congregating its debt obligations.

Literature Review

A lot of research has gone into studying and analyzing the financial health of companies by accountants and researches all over the world. Accounting ratios have been widely used in development of models for the prediction of financial health and financial distress of companies. Researchers have been trying to find a ratio that would serve as the sole predictor of corporate health and bankruptcy for a long time. They have also tried to build up models that would help in predicting the financial health of companies.

William (1966) Beaver conducted a comprehensive study using a variety of financial ratios. His study was based on univariate analysis of the data under study. He made use of 30 financial ratios of 79 failed and non failed companies and came to the conclusion that the cash flow to debt ratio was the single best predictor (Chuvakhin & Gertmenian, 2003) that gave statistically significant signals well before actual business failure.

Edward Altman (1968) used multiple discriminant analysis (MDA) to built a bankruptcy prediction model. Altman made use of five ratios to develop a Z Score which helped in the prediction of the financial health of a company. Altman found that his five ratios outperformed Beaver's (1966) cash flow to total debt ratio. His study was based on 60 firms in general.

Gordon (1978) Springate developed the Springate model selecting four out of nineteen ratios that best distinguished between sound business and unhealthy business. These four ratios are working capital/total assets, net profit before interest and taxes/total assets, net profit before taxes/current liabilities and sales /total assets.

Olhson (1980) he is not satisfied by the MDA model, particularly regarding the restrictive statistical requirements imposed by the model, used logistic regression to predict company failure. He used the logit model using nine ratios to develop an estimate of the probability of failure for each firm.

Fulmer (1984) developed a model using multi discriminate analysis to evaluate forty financial ratios applied to a sample of sixty companies of which thirty were successful while thirty failed.

Gupta (1999) attempted to refine Beaver's method with objective of predicting the business failure.

Mansur at al (2002) made a study in textile mills with the help of Z score model for evaluating the financial health with five weighted financial ratios.

This was followed by a study by Selvam M, and others (2004) which revealed the Cement industry's financial health with special reference to India Cements Limited.

Bagchi (2004) analysed the practical implications of accounting ratios in risk evaluation and came to the conclusion that accounting ratios are still dominant factors in the matter of credit risk evaluation.

Krishna Chaitanya (2005) used Z model to measure the financial distress of IDBI and concluded that IDBI is likely to become insolvent in the years to come.

Steyn-Bruwer and Hamman (2009) Using data on South African companies listed on the Johannesburg Stock Exchange, he tested the effectiveness of four different techniques used to predict financial distress. They found that multiple discriminant analysis and recursive partitioning have the highest prediction accuracy for predicting "failed" companies.

Objective

The main objective of the research study to find out the health of the sample units through Altman Z score analysis

Research Methodology

Sources of Data

This paper has been done on select pharmaceutical companies in India. This paper is based on secondary data, which have been obtained from published sources i.e. Annual report for the period of twelve years, Capitaline, Journals and related websites (from 2000-2001 to 2011-2012).

Period of the Study

The study period is twelve years from 2000-01 to 2011-12 have been used for the purpose of present research work. A study of twelve years seems to be appropriate for establishing a trend.

Sample Design

The sample size of the present paper is '07' Indian BD& F Pharmaceuticals Companies. There are 70 Pharmaceutical companies in India as on 2009 out of these 14 are Indian Bulk Drugs companies, 21 are Indian Formulations companies, 10 are MNC and 26 are Indian BD & F companies, out of these companies the researcher has selected Top 10 Indian Pharmaceutical companies on the basis of Turnover and chosen only Indian BD & F companies as a the sample companies for the study.

The samples for the study are as under:

1. Aurobindo Pharma, 2. Cadila Health Care, 3.Cipla, 4. Dr.Reddys Laboratories, 5. Ipca,

6. Ranbaxy and 7. Sunpharma

A sample of above seven companies engaged in pharmaceutical sector was selected for the purpose of this paper.

Hypothesis

All the sample units of the pharmaceutical industry are equally sound with respect to financial health.

Statistical Techniques used

The statistical techniques used to conduct this study are Ratio Analysis, Multi Discriminate Analysis, Mean, Standard Deviation, Coefficient of Variation and Compound Annual Growth Rate.

'Z' Score Analysis

Leonard N. Stern School of Business of New York University Professor Edward I Altman published a formula to assess the probability that a firm will go bankrupt within two years. The objective was to measure financial distress along a number of objective metrics, standardizing the assessment of credit risk. He called this the Z-Score and it includes five easily derived business ratios, weighted by coefficients. Given its simplicity and accuracy, it is a common calculation used by investors and plays a relatively easy addition to an investment checklist.

The present study will make the analysis on the basis of data collected. It can be done with the help of five accounting ratios. These different ratios are combined into a single measure-Z Score Analysis with the help of Multi Discriminant Analysis (MDA). The formula used to evaluate the "Z" score analysis as established by Altman is as follows.

$Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 0.99X5$

Variables (Ratios) Used in Z Score Analysis

The below enumerated accounting ratios has been taken as variables to combine them into a single measure (index), which can be used to measure the efficiency in predicting bankruptcy.

X1 –It indicate the relationship of working capital to total assets (WC/TA). It is the measure of the net liquid assets of a concern to the total capitalization.

X2 -The ratio of Retained Earnings to Total Assets (RE/TA). It indicates cumulative profitability relative to firm size.

X3 –It is the proportion of earnings before interest and taxes to total assets (EBIT/ TA). It is a measure of productivity of assets employed in an enterprise. The ultimate existence of an enterprise is based on the earning power (profitability).

X4 -The ratio of market value of equity to book value of total liabilities (MVE/BVTL). It gives consideration for the market's view of the company relative to its liabilities. This measure shows how much assets of an enterprise can decline in value before the liabilities exceed the assets and the concern becomes insolvent.

X5 –It show the relationship of sales to total assets (S/TA). The assets turnover ratio is a standard financial measure for illustrating the sales generating capacity of the assets.

Measurement of Financial Health

Altman coined the following guidelines to be used to classify firms as either financially sound or bankrupt.

Table: 1

Standard Z-Score Parameters

Situation	**Z-Score Value**	**Zones**	
I	Below 1.8	Bankruptcy Zone	Failure is certain
II	1.8 - 2.99	Healthy Zone	Uncertain to predict
III	Above 2.99	Too Healthy Zone	Not to fall

To interpret the resultant Z-Score, we place it in one of three categories:

1. Firms with a Z-Score greater than 2.99 are considered to be safe and thus have a relatively remote risk of bankruptcy.

2. Firms with a Z-Score between 1.81 and 2.99 are less clear, existing in a grey area where a clear statement cannot be made.

3. Firms with a Z-Score less than 1.81 are considered to be in distress and thus at higher risk of bankruptcy.

Data Analysis and Interpretation

Multiple Discriminant Analysis

Studies refereed above provide for looking at a number of separate clues (ratios to predict sickness or failure). It would be more useful to combine the different ratios into a single

measure of the probability of sickness or failure (bankruptcy). The technique of multiple discriminant analysis (MDA) helps to do so. MDA can be used to classify companies, on the basis of their characteristics as measured by financial ratios, into two groups: those which are likely to fail (and go bankrupt) and those not likely to fail. In the literature, the likelihood of bankruptcy is associated with financial ratio, high debt ratio and low rate of return. The empirical studies of Beaver (in the USA) and Gupta (in India) identified ratios which have discriminating power. What is however, required from practical point of view is the understanding of seriousness posed by a low performing ratio and the combined effect of favourable and unfavorable ratio. The use of MDA helps to consolidate the effects of all ratios. MDA constructs a boundary line- a discriminant function- using historical data of the bankrupt and non-bankrupt firms. Edward Altman was the first person to apply discriminant analysis in finance for studying bankruptcy. His study helped in identifying five ratios that were efficient in predicting bankruptcy. Each ratio is assigned a weight and summed together to produce the Z-Score. The model was developed from a sample of 66 firms – half of which went bankrupt. He derived the following discriminant function:

Z (Discriminant function score of a firm**) = $0.012X_1+0.014X_2+0.033X_3+0.006X_4+0.0999X_5$**

The five ratios used in the model are as follows.

Working Capital to Total Assets (X_1)

This is a measure of the net liquid assets of the firm in relation to total assets. This liquidity ratio, which records net liquid assets relative to total capitalization, is the most valuable indicator of a looming business disaster. Consistent operating losses will cause current assets to shrink relative to total assets. A negative ratio, resulting from negative networking capital, is a serious problem. This ratio is computed with the help of the following formula.

Working Capital to Total Assets = Working Capital / Total Assets * 100

Retained Earnings to Total Assets (X_2)

This is a more significant factor. The age of a firm is implicitly considered in this ratio. New firms are likely to have low figures for this ratio, because they have not had time to build up their cumulative profits. A negative ratio is a warning sign of cloudy skies. However, results can be distorted by manipulated retaining earnings data. To calculate this ratio the following formula was applied

Retained Earnings to Total Assets = Retained Earnings / Total Assets * 100

EBIT to Total Assets (X_3)

This ratio is a measure of the true productivity of the firm's assets.[1] To calculate this ratio the following formula was applied

EBIT to Total Assets = EBIT / Total Assets * 100

Market Value of Equity to Book value of Debt (X_4)

This ratio measures the market perception of the firm's performance which is reflected in market value. This ratio is computed with the help of the following formula.

Equity to Debt = Market value of Equity / Book value of Debt * 100

Sales to Total Assets (X_5)

The sales turnover ratio measures the firm's ability in utilizing its assets. Higher ratio is an indicator of better performance and poor ratio indicates underutilization of assets. This ratio is computed with the help of the following formula.

Sales to Total Assets = Sales / Total Assets * 100

The financial health of sample units has been judged through Altman score. The details regarding Altman model have been given at the end of the article in form of end notes. The ratio used in calculating Z – Score in Altman model have been discussed in the following paragraph.

Table 2: Ratio Used in Altman Model for Aurobindo Pharma

Year	X1(WC/TA)	X2(RE/TA)	X3(EBIT/TA)	X4(MVE/BVTD)	X5 (S/TA)
2001	0.66	0.06	0.03	0.22	0.2
2002	0.51	0.42	0.16	0.14	1.2
2003	0.44	0.42	0.15	0.18	0.92
2004	0.48	0.48	0.14	0.6	0.82
2005	0.45	0.44	0.05	0.4	0.62
2006	0.49	0.38	0.06	0.54	0.6
2007	0.6	0.29	0.1	0.35	0.6
2008	0.54	0.35	0.12	0.17	0.66
2009	0.56	0.34	0.06	0.25	0.74
2010	0.5	0.46	0.19	0.58	0.79
2011	0.49	0.48	0.16	2.08	0.79
2012	0.07	0.47	0.03	1.53	0.81
Mean	0.48	0.38	0.1	0.59	0.73
S.D	0.14	0.12	0.06	0.6	0.23
C.V	30	31.2	53.8	103	32.1
C.A.G.R	-17	19.4	2.09	17.3	12.2
Maximum	0.66	0.48	0.19	2.08	1.2
Minimum	0.07	0.06	0.03	0.14	0.2

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

An analysis of average of the working capital to total assets of Aurobindo pharma is 0.48, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.38% of its total assets, the ratio of earnings before interest and tax (EBIT) to total assets is 0.1%, the market value of equity compared to book value of total debt is 0.59 times and the average sales compared to total assets is 0.73

Table 3: Ratio Used in Altman Model for Cadila Healthcare					
Year	**X1(WC/TA)**	**X2(RE/TA)**	**X3(EBIT/TA)**	**X4(MVE/BVTD)**	**X5(S/TA)**
2001	0.14	0.9	0.15	4.42	0.84
2002	0.17	0.67	0.12	0.94	0.68
2003	0.24	0.5	0.18	0.97	1.1
2004	0.23	0.57	0.21	2.49	1.23
2005	0.24	0.62	0.18	2.83	1.16
2006	0.31	0.63	0.19	2.97	1.15
2007	0.28	0.64	0.2	6.11	1.13
2008	0.35	0.58	0.19	3.51	0.99
2009	0.31	0.61	0.19	4.5	0.92
2010	0.31	0.75	0.27	14.2	0.91
2011	0.33	0.82	0.28	29.4	0.9
2012	0.07	0.74	0.22	14.7	0.95
Mean	0.25	0.67	0.2	7.25	1
S.D	0.09	0.11	0.05	8.35	0.16
C.V	34.4	16.7	23	115	16.1
C.A.G.R	-5.78	-1.6	3.46	10.5	1.06
Maximum	0.35	0.9	0.28	29.4	1.23
Minimum	0.07	0.5	0.12	0.94	0.68
Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies					

An analysis of average for the working capital to total assets of Cadila Healthcare is 0.25, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.67% of its total assets, the average of earnings before interest and tax (EBIT) to total assets ratio is 0.2%, the average of market value of equity compared to book value of total debt is 7.25 times and the average of sales compared to total assets is 1

Table 4: Ratio Used in Altman Model for Cipla					
Year	**X1(WC/TA)**	**X2(RE/TA)**	**X3(EBIT/TA)**	**X4(MVE/BVTD)**	**X5(S/TA)**
2001	0.45	0.89	0.32	22	1.32
2002	0.54	0.86	0.33	14	1.34
2003	0.58	0.85	0.27	4.55	1.22
2004	0.51	0.81	0.27	2.91	1.29
2005	0.56	0.86	0.3	19.9	1.30
2006	0.56	0.78	0.29	15.2	1.21
2007	0.56	0.91	0.24	132	1.05
2008	0.59	0.85	0.2	27.8	0.99
2009	0.59	0.82	0.19	21	1.03
2010	0.58	1.07	0.25	5250	1.04
2011	0.52	0.93	0.17	56.8	0.92
2012	0.49	0.99	0.19	2269	0.94
Mean	0.54	0.89	0.25	653	1.14
S.D	0.04	0.08	0.05	1585	0.16
C.V	8.05	9.08	21.7	243	14.03
C.A.G.R	0.58	0.91	-4.2	47.2	-2.79
Maximum	0.59	1.07	0.33	5250	1.34
Minimum	0.45	0.78	0.17	2.91	0.92
Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies					

An analysis of average for the working capital to total assets of Cipla is 0.54, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.89% of its total assets, the average of earnings before interest and tax (EBIT) to total assets ratio is 0.25%, the average of market value of equity compared to book value of total debt is 653 times and the average of sales compared to total assets is 1.14

Table 5: Ratio Used in Altman Model for Ipca					
Year	**X1(WC/TA)**	**X2(RE/TA)**	**X3(EBIT/TA)**	**X4(MVE/BVTD)**	**X5(S/TA)**
2001	0.41	0.48	0.12	0.06	1.14
2002	0.25	0.48	0.2	0.1	1.44
2003	0.31	0.6	0.26	0.33	1.47
2004	0.27	0.63	0.28	0.53	1.53
2005	0.18	0.59	0.22	0.91	1.34
2006	0.07	0.65	0.17	0.94	1.41
2007	0.48	0.69	0.26	1.36	1.42
2008	0.53	0.7	0.24	0.78	1.35
2009	0.48	0.57	0.15	0.65	1.23
2010	0.53	0.66	0.24	7.74	1.25
2011	0.55	0.7	0.25	7.04	1.33
2012	0.33	0.73	0.24	9.04	1.38
Mean	0.37	0.62	0.22	2.46	1.36
S.D	0.16	0.08	0.05	3.36	0.11
C.V	42.3	13.2	22.8	137	8.18
C.A.G.R	-1.7	3.57	6.17	51.7	1.63
Maximum	0.55	0.73	0.28	9.04	1.53
Minimum	0.07	0.48	0.12	0.06	1.14

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

An analysis of average for the working capital to total assets of Ipca is 0.37, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.62% of its total assets, the average of earnings before interest and tax (EBIT) to total assets ratio is 0.22%, the average of market value of equity compared to book value of total debt is 2.46 times and the average of sales compared to total assets is 1.36

Table 6: Ratio Used in Altman Model for Dr.Reddy's					
Year	**X1(WC/TA)**	**X2(RE/TA)**	**X3(EBIT/TA)**	**X4(MVE/BVTD)**	**X5(S/TA)**
2001	0.45	0.56	0.23	3.277	0.98
2002	0.63	0.85	0.35	254	0.9
2003	0.61	0.84	0.21	140.4	0.73
2004	0.41	0.84	0.13	58.96	0.69
2005	0.5	0.74	0.02	11.04	0.56
2006	0.48	0.61	0.08	5.781	0.55
2007	0.57	0.82	0.27	34.26	0.73
2008	0.37	0.8	0.01	20.79	0.57
2009	0.39	0.77	0.11	19.46	0.59
2010	0.34	1.03	0.2	42.05	0.78
2011	0.41	0.86	0.16	18.36	0.75
2012	0.24	0.87	0.18	18.69	0.88
Mean	0.45	0.8	0.16	52.26	0.73
S.D	0.11	0.12	0.1	73.58	0.14
C.V	25.2	15.5	60.6	140.8	19.6
C.A.G.R	-5	3.81	-2	15.62	-0.9
Maximum	0.63	1.03	0.35	254	0.98
Minimum	0.24	0.56	0.01	3.277	0.55
Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies					

An analysis of average for the working capital to total assets of Dr. Reddy's is 0.45, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.8% of its total assets, the average of earnings before interest and tax (EBIT) to total assets ratio is 0.16%, the average of market value of equity compared to book value of total debt is 52.26 times and the average of sales compared to total assets is 0.73.

Table 7: Ratio Used in Altman Model for Ranbaxy					
Year	**X1(WC/TA)**	**X2(RE/TA)**	**X3(EBIT/TA)**	**X4(MVE/BVTD)**	**X5(S/TA)**
2001	0.33	0.65	0.15	17.23	0.85
2002	0.35	0.61	0.27	71.51	1
2003	0.38	0.61	0.28	21.9	0.97
2004	0.24	0.6	0.16	70.48	0.9
2005	0.27	0.52	0.05	17.65	0.81
2006	0.19	0.33	0.08	4.77	0.6
2007	0.17	0.36	0.12	3.47	0.56
2008	0.09	0.33	-0.01	4.53	0.42
2009	0.12	0.37	0.1	3.67	0.45
2010	0.28	0.39	0.13	4.88	0.42
2011	0.05	0.12	-0.17	4.8	0.54
2012	-0.1	0.15	0.01	4.38	0.54
Mean	0.2	0.42	0.1	19.11	0.67
S.D	0.14	0.18	0.12	25.09	0.22
C.V	70.3	43	127	131.3	32.7
C.A.G.R	-9.76	-11.8	-19.5	-10.79	-3.81
Maximum	0.38	0.65	0.28	71.51	1
Minimum	-0.1	0.12	-0.17	3.473	0.42
Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies					

An analysis of average for the working capital to total assets of Ranbaxy is 0.2, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.42% of its total assets, the average of earnings before interest and tax (EBIT) to total assets ratio is 0.1%, the average of market value of equity compared to book value of total debt is 19.11 times and the average of sales compared to total assets is 0.67.

Table 8: Ratio Used in Altman Model for Sunpharma					
Year	**X1(WC/TA)**	**X2(RE/TA)**	**X3(EBIT/TA)**	**X4(MVE/BVTD)**	**X5(S/TA)**
2001	0.53	0.78	0.31	1.84	1.14
2002	0.47	0.96	0.37	5.66	1.36
2003	0.54	1.01	0.4	15.6	1.26
2004	0.26	0.7	0.26	1.15	0.74
2005	0.53	0.35	0.11	5.44	0.35
2006	0.7	0.43	0.16	0.9	0.41
2007	0.56	0.67	0.19	1.86	0.48
2008	0.45	0.96	0.25	26	0.55
2009	0.36	0.99	0.25	109	0.54
2010	0.51	2.68	0.45	128	0.88
2011	0.34	1.01	0.22	485	0.3
2012	0.37	1.01	0.26	800	0.43
Mean	0.47	0.96	0.27	132	0.7
S.D	0.12	0.59	0.1	252	0.37
C.V	25.7	61	37.3	191	52.8
C.A.G.R	-2.9	2.16	-1.5	65.9	-7.7
Maximum	0.7	2.68	0.45	800	1.36
Minimum	0.26	0.35	0.11	0.9	0.3

Source: Compiled and Calculated from Annual Reports of Respective Pharmaceutical Companies

An analysis of average for the working capital to total assets of Sunpharma is 0.47, the retained earnings to total assets ratio indicates the proportion of retained earnings to the total assets, the average of retaining is 0.96% of its total assets, the average of earnings before interest and tax (EBIT) to total assets ratio is 0.27%, the average of market value of equity compared to book value of total debt is 132 times and the average of sales compared to total assets is 0.7.

Table 9: Z Score							
Year	**Aurobindo**	**Cadila**	**Cipla**	**Ipca**	**Dr.Reddy's**	**Ranbaxy**	**Sunpharma**
2001	1.3	5.4	17.4	2.71	5.02	13	4.99
2002	2.99	2.76	12.6	3.11	156	46.1	7.87
2003	2.64	3.24	6.71	3.74	87.6	16.3	14
2004	2.87	4.46	5.68	3.96	38.1	44.8	3.55
2005	2.17	4.61	16.1	3.63	8.9	12.6	5.11
2006	2.24	4.81	13.1	3.53	5.72	4.41	2.9
2007	2.24	6.7	82.7	4.64	24	3.73	3.82
2008	2.29	4.94	20.2	4.22	14.6	3.66	18.8
2009	2.25	5.48	16.1	3.49	14.2	3.64	68.5
2010	3	11.7	3154	8.22	28.5	4.66	83.3
2011	3.83	21	37.5	8	14	3.08	294
2012	2.57	11.6	1365	9.01	14.2	3.28	483
Mean	2.53	7.23	396	4.85	34.3	13.3	82.5
S.D	0.62	5.21	951	2.21	44.5	15.7	151
C.V	24.4	72	240	45.6	130	118	183
C.A.G.R	5.84	6.59	43.9	10.5	9.05	-10.8	46.4
Maximum	3.83	21	3154	9.01	156	46.1	483
Minimum	1.3	2.76	5.68	2.71	5.02	3.08	2.9
Source: Computed by the researcher using table No. 2 to 8							

It was found from the table that, the IBD&F companies in India are all in Healthy Zone. Hence the solvency position of the sample unit under the study is too healthy.

Conclusion

The Z score of the Cipla showed a rising trends throughout the study period and it ranging from 17.4 in 2000-2001 to 1365 in 2011-2012, during the study period the Z score of the Cipla showed above 2.99 (the judging criteria) in all years and also it showed a tremendous change in the liquidity and solvency of Cipla therefore it can be concluded that financial health of the Cipla was good among the sample units.

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