# A Study On Financial Health Of Textile Industry In India: A 'Z'- Score Approach

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## INTRODUCTION

The Indian industry was exposed to large scale domestic and international competition following her economic liberation in 1992. While few firms were able to take up the challenge, a large number of firms were affected by the competition. The level of non-performing assets of Indian companies has increased several times during this period. The detection of companies operating and financial difficulties is the subject which has been particularly amenable to analysis with financial ratios. Though at one extreme, many learned academicians question the validity of financial distress prediction models using financial ratios. However, there is continuing interest in refining and testing financial distress prediction models. Beaver[1] initiated the interest of academic world to the financial distress prediction models using univariate analysis methodology for classifying bankruptcy and non-bankruptcy firms. The importance of the subject attracted the interest of several authors from countries.

In September 1968, The Journal of Finance published a paper authored by Edward I. Altman that introduced the world to the Altman *Z*-score, a technique designed to predict corporate bankruptcy. Over the past forty years, scores of academics and practitioners have put the *Z*-score to test under a wide range of industries and economic environments. During that same time frame, many new methodologies were put forth that challenged the *Z*-score as the premier indicator of corporate distress .However, few, if any, came close to the accuracy of the *Z*-score as a predictor of corporate default within a two year time horizon. Indeed, the Altman *Z*-score has stood the test of time while undergoing the rigor of academic scrutiny and has secured its place in corporate finance history. Before judging anything, we first define our measurement standards. While there is no universal method of evaluating financial strength, there is General agreement on many of the components. Here, we choose to use Edward Altman's Z score as its focus is on Fundamental financial attributes. It's an internationally recognized method with wide universal acceptance along with frequent use by investors, Lenders and analysts.

First developed in 1968, Altman's primary improvement over prior methods was to apply discriminant analysis which simultaneously took into account multiple variables to ascertain financial strength. As an open system, users enjoy the benefits without the additional cost incurred with the proprietary black box systems. No hidden magic -- only solid financial analysis. The Z score has continued to evolve over time with new versions developed specifically for private companies. Its gained wide acceptance from auditors, management accountants, courts, and database systems used for loan evaluation. The formula's approach has been used in a variety of contexts and countries. Forty years of public scrutiny speaks to its validity. The method examines liquidity, profitability, reinvested earnings and leverage which are integrated into a single composite score. It can be used with past, current or projected data as it requires no external inputs such as GDP or Market Price.In the banking relationship, monitoring a dynamic trend of the *Z*-score arguably aligns the interests of the company's management team and shareholders with those of the lender. Clearly, if the principal concern of the lender is the ongoing viability of the firm, then why not focus managerial activities on measures that support firm survival? Setting minimum performance expectations for the five underlying ratios of the *Z*-score, for example, can only serve to shore up the future outlook of the firm. In contrast, however, lenders often tie covenants to relatively short sighted measures such as interest coverage and fixed charge coverage ratios that have little to do with building a going concern. Moreover, it could be argued that covenants designed to limit management spending and especially those focused on short term earnings hinder rather than support management activities that drive long term firm value. If the purpose of the covenant is to ensure firm viability, monitoring a monthly *Z*-score compared to a minimum planned threshold for the measure would seem to make perfect sense.

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## ABOUT THE TEXTILE INDUSTRY

The initiation and development of globalization and Indian textile industry took place simultaneously in the 1990s.The Indian textile industry, until the economic liberalization of Indian economy, was predominantly an unorganized industry. The economic liberalization of Indian economy in the early 1990s led to stupendous growth of this Indian industry. The Indian textile industry is one of the largest textile industries in the world and India earns around 27% of the foreign exchange from exports of textiles and its related products. Further, globalization of Indian textile industry has been a paradigm increase in the 'total industrial production' factor of this industry, which presently stands at 14%. Furthermore, the contribution of the Indian textile industry towards the gross domestic product (GDP) of the India is around 3% and, the number is steadily increasing. Today, the Indian textile industry employs around 35 million personnel directly and it accounts for 21% of the total employment generated in the economy. 'The national textile policy 2000' was introduced by the Ministry of Textile under the Government of India. This policy aims at increasing the foreign exchange earning to the tune of US $ 50 billion by the end of the year 2010.The textile sector has a prominent place in the national economy.The textile industry has been an important source of foreign exchange resources over a period of time in the country.

## REVIEW OF LITERATURE

Though there are innumerable studies available on the subject, the most appropriate studies have been revived. **Altman**[1] used multiple discriminate analyses (MDS) in his effort to find out a bankruptcy prediction model. He selected 33 publicly traded manufacturing bankrupt companies between 1946 and 1965 and matched them to 33 firms on a random basis. The result of the MDS exercise yielded equations called Z score that correctly classified 94% of the bankrupt companies and 97% of the non-bankrupt companies a year prior to bankruptcy. This percentage dropped when trying to predict bankruptcy two or more years before it occurred. The ratios used in Altman model are working capital over total assets, retained earning over total assets, earnings before interest, taxes over total assets market, value of the equity over book value of total liabilities and sales over total assets.

**Altman**[2] in this paper discussed two of the primary motivating influences on the recent developments of credit scoring models, the important implication of Base, it's proposed capital requirement on credit requirement on credit assets and enormous amount and rate of defaults and bankruptcies in USA in 2001-02.Two of the more prominent credit scoring techniques of "z" score and KMV's EDF models are reviewed. Both models are assessed with respect to default probability in general.

**Aziz**[3] emphasized in his article that accrual accounting ratios were shown to predict bankruptcy accurately for manufacturing industries. Such financial ratios usually lack theoretical justification. Since bankruptcy is a cash oriented phenomenon, the use of variable based on cash flows is theoretically appealing. Statistics shows that more than 300 companies go out of business every week. The high rate of bankruptcy is attributed to the combined effect of fierce competition in the market place and heavier debt burdens carried by the companies. While few firms were affected by the challenges, a large number of firms were affected by the competition. **Gupta**[6] attempted a refinement of **Beavers**[4] method with an objective of building a forewarning system of corporate sickness. A sample non parametric test for measuring the relative differentiating power of various financial ratios was used. The study, among 728 textile and non textile group of industries, revealed that earning before depreciation, interest and taxes to sales and operating cash flows to sales had higher degree of sickness. The analysis is based on logistic regression, where the bankrupt event is explained by accounting and market based variables. In accordance with the literature, the liquidity and profitability ratios turned out to be the most important variable in forecasting default followed by the company size and its activity. **Melody Y. King et al**[17] in their study attempted to provide an empirically support rationale for classifying the firms into two groups, those declaring bankruptcy within 2 years and those remaining solvent. The apparent rationale for engaging in reverse splits differs between two groups. i.e. weak firms attempting to increase their stock price while solid firms seeking to reposition their stocks in the market. This generated an understanding of corporate rationale for engaging in reverse splits and relative success of Z score and artificial neural networks in forecasting the two groups. **Praveen Kataria** in his study attempted to predict corporate sickness of the companies. Financial information about all the sick companies was collected for five years before sickness. Healthy companies were matched with the sick companies on the basis of industry composition size. 54 financial ratios and 8 macro economic variables were taken to study their effect along with financial ratios. Two group linear discriminate analyses

was applied in two parts. In the first part, only financial ratio was taken in discriminate analyses, while the macro economic variable was included along with financial ratios in the second part. The result showed that macro economic variable had very little impact on discriminant function. **Rekha Pai** dealt with the prediction of industrial sickness using multiple discriminant analysis. The data set constitutes 21 financial ratios of 34 Indian sick companies in 2000-01 and 38 contemporary non sick companies, both selected irrespective of size and industry category 3 years prior to sickness. The multiple discriminant analysis (MDS) showed greater accuracy in predicting industrial sickness up to 3 years in advance. The model was validated further using a test model, which exhibited very high predictive accuracy of the proposed model. **Ramakrishna** in his paper examined two well known financial distress model namely multiple discriminate analysis and logistic regression analysis by using a sample of 298 firms. The study found that cash flow and working capital are important predictive variables, irrespective of when compared to any other models. The selected models were also found to be capable of predicting with minimum errors, one year in advance, which is vital for the bankers, restructuring agencies and the management to initiate revival process before the company actually gets into financial distress. **Wayne** in his study took the case of CLECS, telecom department in the US companies. The high rate of bankruptcy was attributed to combined effect of fierce competition in the market places and heavier debt burdens carried by companies. The study revealed that 176 publicly held US companies filed for bankruptcy which has further increased to 279.**John R. Grabski** has written an article on the dynamic Z score in April 2008. In his paper, he suggests that the time tested Altman *Z*-score, originally designed to predict corporate default represents considerable value when used as a corporate performance metric if measured continuously as opposed to one moment in time[1]. Indeed, one could reason that if the measure has merit as a predictor of default, then it only make sense to manage the underlying drivers in order to optimize the ongoing viability of the firm. Used in this manner, this article argues that the *Z*-score should be considered more often in the corporate performance management setting. In addition, the article highlights the significance of the measure when crafting loan covenants to compliment other measures that are perhaps shorter term in nature. A generic framework is provided that illustrates the relationship of underlying drivers that contribute to the score, representing at least one approach to managing firm viability as a component of corporate strategy.

## OBJECTIVE OF THE STUDY

The study attempts to assess the financial Health of the sample companies in terms of retained earning to total assets position, networking capital position, and Equity-debt position, Return on total assets position, and Net sales turnover position of the sample companies.

## METHODOLOGY OF THE STUDY

### ☸SOURCES OF THE DATA

*"A Study on Financial Health of Textile Industry in India: A Z- Score Approach"* has been made by using data from financial statements of all four major players in Textile industry, they are Siyaram Silk Mills Ltd.(SSML), Shri Dinesh Mills Ltd.(SDML), Welspun India Ltd.(WIL), S. Kumars Nationwide Ltd.(SKNL), the period of the study was seven years from 2002-03 to 2008-09. The data have been collected from Accord Fintech Pvt. Ltd. database and the annual reports of the respective companies.

### ☸HYPOTHESIS FOR THE STUDY

1. **Networking capital ratio is uniform in sample units.**
2. **Retained earning to total assets ratio is uniform in sample units.**
3. **EBIT to total assets ratio is equal in selected units.**
4. **Equity debt ratio is uniform in sample units.**
5. **Total assets turnover ratio is equal in selected units.**
6. **No significant difference in Z- scores value of selected units.**

## TECHNIQUES USED FOR THE ANALYSIS

For the purpose of analysis, the researcher has used Altman's 'Z' score to predict, analyze and compare the financial

health of the sample companies. The specific variable used is explained in Table-A and the interpretation of 'Z' score value is presented in Table-B. And to study the financial health of sample units, different ratios are calculated, the simple statistical techniques such as mean and ANOVA test were also applied to analyze the consistency, stability and overall trends in the different ratio used in Altman's 'Z' score approach.

**Table-A**

| Financial Ratio | Co-efficient of the ratio (Recommended by Altman[1,2] ) |
|---|---|
| Networking capital to total assets (X1) | 0.012 |
| Retained Earning to Total assets (X2) | 0.014 |
| EBIT to Total assets (X3) | 0.033 |
| Market value of equity to total liabilities (X4) | 0.006 |
| Net sales to Total assets (X5) | 0.0999 |
| **Z score = (X1*0.012)+ (X2*0.014)+( X3*0.033) + (X4*0.006)+ (X5*0.0999)** | |

**Table-B**

| Score | Interpretation |
|---|---|
| Above 3.00 | The company is financially safe |
| 2.77 - 2.99 | The company is on alert to exercise the caution |
| 1.8 - 2.00 | There are chances that the company could go bankrupt in the next two years. |
| Below 1.8 | The company's financial position is embarrassing |

## EMPIRICAL ANALYSIS

### ❁NET WORKING CAPITAL RATIO

Net working capital to total assets ratio sample companies is presented in Table-1. As it could be observed in Table-1, among all the sample companies, SKNL Ltd. sustained the highest networking ratio followed by SSML Ltd., WIL Ltd., and SDML Ltd. respectively. It indicates that SKNL Ltd. had greater ability to meet its current obligations. However, all selected units have satisfactory level of working capital. On an average basis, SDML Ltd. registered networking capital ratio of 47.19 %, followed by SKNL Ltd., WL Ltd., and SDML Ltd. The one way ANOVA results for the ratio of networking capital to total assets (table -2) shows that F.cal. (29.95) is greater than F.crit. (3.00), which suggested that ratio is significant across the samples.

**Table 1 : Networking Capital Ratio (%) Of The Sample Units**

| Year | SS M L | SDML | WIL | S K N L | Mean | S.D. |
|---|---|---|---|---|---|---|
| 2002-03 | 53.54 | 34.07 | 36.73 | 44.44 | 42.19 | 8.75 |
| 2003-04 | 52.01 | 31.28 | 42.00 | 52.41 | 44.43 | 10.00 |
| 2004-05 | 46.89 | 25.53 | 15.33 | 66.94 | 38.67 | 22.98 |
| 2005-06 | 46.16 | 32.09 | 21.90 | 71.73 | 42.97 | 21.60 |
| 2006-07 | 42.27 | 29.82 | 28.59 | 67.67 | 42.09 | 18.14 |
| 2007-08 | 46.82 | 31.12 | 26.74 | 57.36 | 40.51 | 14.16 |
| 2008-09 | 42.66 | 23.69 | 26.10 | 54.59 | 36.76 | 14.57 |
| **Mean** | **47.19** | **29.66** | **28.20** | **59.31** | **41.09** | **14.90** |
| **S.D.** | **3.96** | **3.44** | **8.24** | **9.08** | **6.18** | **2.89** |

Source: Computed From Annual Reports Of Respective Companies.

**Table 2: One-way ANOVA For Net Working Capital Ratio Of The Sample Companies**

| Source of Variation | SS | df | MS | F | P-value | F crit |
|---|---|---|---|---|---|---|
| Between Groups | 4661.76 | 3 | 1553.92 | 29.95272 | 2.78E-08 | 3.008787 |
| Within Groups | 1245.098 | 24 | 51.87909 | | | |
| **Total** | **5906.858** | **27** | | | | |

Source: One-way ANOVA has been performed in MS Excel.

## ❁RETAINED EARNINGS TO TOTAL ASSETS

The retained earning to total assets ratio of the sample companies is depicted in Table-3. As observed in Table-3, among all the sample companies, all the companies taken as sample sustained good retained earning to total assets ratio from 2002-03 to 2004-05. Whereas Shri Dinesh Mills Ltd. sustained the highest retained earnings to total assets ratio from 2005-06 to 2008-09 and Welspun India Ltd. also sustained its ratio from 2002-03 to 2008-09. S Kumars Nationwide Ltd. showed good performance than SSML, SDML and SKNL. On an aggregate basis, SKNL registered average retained earning to total assets ratio 54.48%, followed by SSML (34.45%), SDML (52.31%) and WL. (28.28%) The retained earning to total assets position of the sample companies are compared and tested using the One-Way ANOVA. As we find in the Table-4, since F cal. ≥ F.crit. at 5% significant level, we reject null hypothesis and conclude that ratio of retained earning to total assets of sample companies differ significantly.

**Table 3: Retained Earning To Total Assets Ratio (%) Of The Sample Companies**

| Year | SS M L | SDML | WIL | S K N L | Mean | S.D. |
|---|---|---|---|---|---|---|
| 2002-03 | 36.67 | 51.56 | 31.71 | 40.17 | 40.03 | 8.44 |
| 2003-04 | 38.83 | 52.55 | 37.62 | 49.01 | 44.51 | 7.41 |
| 2004-05 | 38.70 | 46.95 | 28.05 | 61.82 | 43.88 | 14.24 |
| 2005-06 | 37.39 | 47.89 | 32.12 | 65.89 | 45.82 | 14.90 |
| 2006-07 | 31.79 | 54.43 | 23.84 | 61.93 | 42.99 | 18.09 |
| 2007-08 | 27.30 | 56.35 | 22.88 | 52.84 | 39.84 | 17.19 |
| 2008-09 | 30.46 | 56.44 | 21.73 | 49.67 | 39.58 | 16.21 |
| **Mean** | **34.45** | **52.31** | **28.28** | **54.48** | **42.38** | **13.00** |
| **S.D.** | **4.23** | **3.52** | **5.42** | **8.45** | **5.40** | **2.18** |

Source: Computed From Annual Reports Of Respective Companies

**Table 4: One-way ANOVA For Retained Earnings To Total Assets Ratio Of The Sample Companies**

| Source of Variation | SS | df | MS | F | P-value | F crit |
|---|---|---|---|---|---|---|
| Between Groups | 3546.638 | 3 | 1182.213 | 30.93373 | 2.05E-08 | 3.008787 |
| Within Groups | 917.2221 | 24 | 38.21759 | | | |
| **Total** | **4463.86** | **27** | | | | |

Source: One-way ANOVA has been performed in MS Excel.

## ❁RETURN ON TOTAL ASSETS (EBIT/ TOTAL ASSETS)

The return on total assets of the sample companies is depicted in Table-5. Among all the sample companies, SDML sustained the highest Return on total assets ratio followed by WIL, SSML and SKNL. On an aggregate basis, SDML registered average return on total assets of (10.12%) followed by WIL (8.01%), SSML(6.87%) and SKNL (3.65%).

**Table 5: Return On Total Assets (EBIT/ Total Assets (%)) Of The Sample Companies**

| Year | SS M L | SDML | WIL. | S K N L | Mean | S.D. |
|---|---|---|---|---|---|---|
| 2002-03 | 6.12 | 5.98 | 10.15 | -1.28 | 5.24 | 4.76 |
| 2003-04 | 5.89 | 6.99 | 13.86 | -2.27 | 6.12 | 6.61 |
| 2004-05 | 6.74 | 7.35 | 8.04 | -14.39 | 1.93 | 10.90 |
| 2005-06 | 9.49 | 14.18 | 6.85 | 10.41 | 10.23 | 3.03 |
| 2006-07 | 7.68 | 14.40 | 6.60 | 10.24 | 9.73 | 3.47 |
| 2007-08 | 4.94 | 10.13 | 5.17 | 13.88 | 8.53 | 4.30 |
| 2008-09 | 7.21 | 11.77 | 5.41 | 8.98 | 8.34 | 2.71 |
| **Mean** | **6.87** | **10.12** | **8.01** | **3.65** | **7.16** | **2.70** |
| **S.D.** | **1.36** | **3.21** | **2.85** | **9.31** | **4.18** | **3.51** |

Source: Computed From Annual Reports Of Respective Companies.

This indicates that SDNL recorded the highest operating efficiency compared to SSML and SKNL. The return on total assets position of the sample companies is compared and tested using the following hypothesis. The result of One- way ANOVA is captured in Table-6. The calculated value is less than the table value, hence, Null hypothesis is accepted and alternative hypothesis rejected and its concluded that the ratios of sample companies do not differ significantly.

**Table 6 : One-way ANOVA For Return On Total Assets (EBIT/Total Assets)**

| Source of Variation | SS | df | MS | F | P-value | F crit |
|---|---|---|---|---|---|---|
| Between Groups | 152.83 | 3.00 | 50.94 | 1.63 | 0.21 | 3.01 |
| Within Groups | 749.28 | 24.00 | 31.22 | | | |
| **Total** | **902.11** | **27.00** | | | | |

Source: One-way ANOVA has been performed in MS Excel.

**Table 7 : The Equity-Debt Ratio (%) Of The Sample Companies**

| Year | SS M L | SDML | WIL | S K N L | Mean | S.D. |
|---|---|---|---|---|---|---|
| 2002-03 | 79.62 | 567.31 | 105.58 | 23.39 | 193.98 | 251.24 |
| 2003-04 | 84.70 | 812.38 | 105.66 | 31.85 | 258.65 | 370.46 |
| 2004-05 | 84.69 | 247.75 | 57.33 | 8.63 | 99.60 | 103.66 |
| 2005-06 | 90.96 | 276.49 | 65.04 | 18.49 | 112.75 | 113.21 |
| 2006-07 | 68.57 | 280.74 | 38.93 | 49.08 | 109.33 | 114.93 |
| 2007-08 | 50.42 | 316.14 | 36.24 | 78.12 | 120.23 | 131.76 |
| 2008-09 | 61.16 | 287.83 | 33.77 | 47.10 | 107.46 | 120.76 |
| **Mean** | **74.30** | **398.38** | **63.22** | **36.66** | **143.14** | **170.89** |
| **S.D.** | **13.62** | **196.51** | **28.83** | **21.70** | **65.17** | **87.78** |

Source: Computed From Annual Reports Of Respective Companies

**Table 8: One-Way ANOVA For Equity-Debt Ratio Of The Sample Companies**

| Source of Variation | SS | df | MS | F | P-value | F crit |
|---|---|---|---|---|---|---|
| Between Groups | 613259.3 | 3.0 | 204419.8 | 17.5 | 0.0 | 3.0 |
| Within Groups | 280722.3 | 24.0 | 11696.8 | | | |
| **Total** | **893981.6** | **27.0** | | | | |

Source: One-way ANOVA has been performed in MS Excel.

**Table 9 : The Total Assets Turnover Ratio (%) Of The Sample Companies**

| Year | SS M L | SDML | WIL. | S K N L | Mean | S.D. |
|---|---|---|---|---|---|---|
| 2002-03 | 1.13 | 0.70 | 0.57 | 0.40 | 0.70 | 0.31 |
| 2003-04 | 1.08 | 0.73 | 76.56 | 0.38 | 19.69 | 37.92 |
| 2004-05 | 1.16 | 0.65 | 34.52 | 0.25 | 9.14 | 16.92 |
| 2005-06 | 1.32 | 0.65 | 26.12 | 0.59 | 7.17 | 12.64 |
| 2006-07 | 1.15 | 0.64 | 19.12 | 0.63 | 5.38 | 9.16 |
| 2007-08 | 1.05 | 0.63 | 17.38 | 0.72 | 4.95 | 8.29 |
| 2008-09 | 1.48 | 0.59 | 16.37 | 0.49 | 4.74 | 7.77 |
| **Mean** | **1.19** | **0.66** | **27.24** | **0.49** | **7.40** | **13.23** |
| **S.D.** | **0.14** | **0.04** | **22.29** | **0.15** | **5.66** | **11.09** |

Source: Computed From Annual Reports Of Respective Companies

## ❁EQUITY TO DEBT RATIO (EDR)

The equity-debt ratio of the sample companies is depicted in Table-7. Among all the sample companies, SDML

sustained the highest equity-debt ratio for the most of the study period. On an average basis, SDML registered a highest average (EDR) ratio of 398.38% followed by SSML (74.30%), WIL (63.22%) and SKNL (36.66%). The equity -debt position of the sample companies is compared and tested using following hypothesis. One-Way ANOVA results are depicted in Table-8.As observed in Table-8, The one Way ANOVA results for the ratio Equity-debt ratio shows that F.cal. (17.5) is less than F.crit. (3.00), which suggested that ratio is significant across the samples.

## ❁TOTAL ASSETS TURNOVER POSITION

The total assets turnover of the sample companies is depicted in Table 9. Among all the sample companies, it is depicted in table-9 among all the sample companies. WIL Ltd. sustained the highest total assets turnover ratio followed by SSML Ltd. and SDML Ltd. On an aggregate basis, WIL Ltd. registered a highest average total assets turnover ratio 27.24 times, followed by SSML Ltd.(1.19) and SDML Ltd.(0.66). This implies that WIL. generated sales of 27.24 for every rupee of investment in fixed. The total assets turnover position of sample companies is compared and tested using following hypothesis. One-Way ANOVA results are depicted in Table-10.

**Ho: The one Way ANOVA results for the total assets turnover ratio shows that F.cal. (8.45) is more than F.crit. (3.00) which suggested that the ratio is insignificant difference across the samples.**

**Table 10: One-way ANOVA For Total Assets Turnover Ratio Of The Sample Companies**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Variation** | **SS** | **df** | **MS** | **F** | **P-value** | **F crit** |
| Between Groups | 3675.733 | 3 | 1225.244 | 8.450646 | 0.000523 | 3.008787 |
| Within Groups | 3479.718 | 24 | 144.9883 | | | |
| **Total** | **7155.452** | **27** | | | | |

Source: One-way ANOVA has been performed in MS Excel.

**Table 11: 'Z' Score Values Of Sample Companies**

| Year | SS M L | SDML | WIL | S K N L | Mean | S.D. |
|---|---|---|---|---|---|---|
| 2002-03 | 1.95 | 4.80 | 1.91 | 1.23 | 2.47 | 1.59 |
| 2003-04 | 1.98 | 6.29 | 9.77 | 1.47 | 4.88 | 3.91 |
| 2004-05 | 1.95 | 2.76 | 4.63 | 1.27 | 2.65 | 1.45 |
| 2005-06 | 2.07 | 3.25 | 3.94 | 2.30 | 2.89 | 0.87 |
| 2006-07 | 1.73 | 3.34 | 3.04 | 2.37 | 2.62 | 0.72 |
| 2007-08 | 1.51 | 3.46 | 2.77 | 2.43 | 2.54 | 0.81 |
| 2008-09 | 1.69 | 3.25 | 2.63 | 1.98 | 2.39 | 0.70 |
| **Mean** | **1.84** | **3.88** | **4.10** | **1.86** | **2.92** | **1.24** |
| **S.D.** | **0.18** | **1.15** | **2.46** | **0.49** | **1.07** | **1.01** |

Source: Computed from annual reports of respective companies.

## ❁'Z'-SCORE ANALYSIS

The 'Z' score values of sample companies during the period under review have been depicted in Table-11. SDML Ltd. and WIL. Ltd. registered the score much above the suggested value of financial health in all the years of the study. The financial health of these two sample companies was highly sound during the study period. It is also observed, based on the data , that the financial health of these two companies in future years is expected to be sound enough to maintain liquidity. Table-11 also reveals that in case of SKNL Ltd., the scores were less than 3.00 of three years at a stretch from 2005-06, 2006-07 and 2007-08. In SSML Ltd., the score was less 3.00 in 2005-06. The average scorer of SSML Ltd. and SKNL Ltd. were between 1.8 - 2.00 indicating that financial soundness of the company was not so good, sounding an alert to various stakeholders of the business. The company (SKNL), however, has improved its score during the years from 2005 -06 to 2007-08. However, the score started declining towards the end of the study period. Thus, the

financial health of SDML and WIL companies, in future, is also expected to be sound as revealed by 'Z' score. Nevertheless, WIL was comparatively sound when compared to SDML. The 'Z' scores position of sample companies has been tested through the following hypothesis. The results pertaining to One-way ANOVA are depicted in Table-12.The calculated value is more than table value, hence, Null hypothesis is rejected and alternative hypothesis has been accepted and it can be concluded that the ratios of sample companies differ significantly.

**Table 12: One-Way ANOVA For 'Z' Score Values Of The Sample Companies**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Variation** | **SS** | **df** | **MS** | **F** | **P-value** | **F crit** |
| Between Groups | 32.11 | 3.00 | 10.70 | 4.81 | 0.01 | 3.01 |
| Within Groups | 53.42 | 24.00 | 2.23 | | | |
| **Total** | **85.53** | **27.00** | | | | |

Source: One-way ANOVA has been performed in MS Excel

## FROM THE ANALYSIS AND INTERPRETATIONS, THE MAJOR FINDINGS OF THE STUDY ARE AS FOLLOWS

- On an aggregate basis, it is clear that only two companies -SSML and SKNL were financially healthy during the study period.
- The excess of working capital, which resulted in the companies going in for less debt rising, caused low earning per share for shareholders. Thus, this was unfavorable for profitability of the company.
- The debt position of WIL Ltd. and SKNL Ltd. was lower than market value of equity, which helped the company to maintain a reasonable leverage position.
- The operating efficiency was decreasing during the study period and hence, increase in EBIT did not match with the increase in total assets.
- The retained earning ratio of the sample companies was very satisfactory, especially in SDML and S K N L which strengthens their viability over a period of time.
- The result of the sales volume clearly showed that the sample companies did not succeed in achieving the standard ratio through sales.

## CONCLUSION

Financial health of a company is a matter of concern for every stakeholder of the business. It is, in fact, the financial position of the company that drives the decision making process of any stakeholder. In this context, Altman's Z score plays an important role in judging the financial soundness of the company. The present study was conducted to study, analyze and compare the financial condition of sample companies. The study, on an overall basis, revealed that all the sample companies like SDML Ltd. and WIL Ltd. were financially sound enough during the study period barring SS M L and S K N L which had slightly lower "Z" score on the basis of average scores during the study period.

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