

# A STUDY ON CORPORATE FINANCIAL DISTRESS AND BANKRUPTCY REFERENCE TO ITC LIMITED

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## Abstract

*Financial distress is a condition of financial position of a corporate. If high debt burden is the cause of financial distress, the company can undergo a debt restructuring. The purpose of study examines the relation between financial distress and financial position of ITC limited. Most of the business failure are made on the unfair liquidation analysis, which leads to bankruptcy and distress. Distress prediction are made using Edward Altman's Z score financial analysis. The research work is based on the secondary data collection from last five year financial reports of Indian Tobacco Company. This research analysis carries following measures like liquidity, profitability, return on asset (ROA), solvency and capital turnover. The statistical tools are included for a consideration of bankruptcy prediction for future pre-emptive. The study is useful for maintaining constant relationship with current asset and revenue management. This research is mainly focused on the continuous flow of monetary requirement through liquidity acquisition.*

**Index terms** - Altman's Z score, bankruptcy prediction, liquidity acquisition

## I. INTRODUCTION

Financial distress refers to a condition in which a company cannot meet, or has difficulty paying off, its financial obligations to its creditors, typically due to high fixed costs, illiquid assets, or revenues sensitive to economic downturns. A company under financial distress can incur costs related to the situation, such as more expensive financing, opportunity costs of projects, and less productive employees. Employees of a distressed firm usually have lower morale and higher stress caused by the increased chance of bankruptcy, which could force them out of their jobs.

Financial distress is a term in corporate finance used to indicate a condition when promises to creditors of a company are broken or honored with difficulty. If financial distress cannot be relieved, it can lead to bankruptcy. Financial distress is usually associated with some costs to the company; these are known as cost financial distress.

A common example of a cost of financial distress are bankruptcy costs. These direct costs include auditors' fees, legal fees, management fees and other payments. Cost of financial distress can occur even if bankruptcy is avoided (indirect costs).

Financial distress in companies requires management attention and might lead to reduced attention on the operations of the company. Another source of indirect costs of financial distress are higher costs of capital as usually banks increase the interest rates if a state of financial distress occurs. Branch of financial management focused on the elements of risk, time, operating expenses and other variable related to financial decisions.

## II. REVIEW OF LITERATURE

Accordingly, (Opler & Titman, 1994) develops a theory of Corporate Risk Management theory in the presence of dead weight losses caused by financially distress. As per their study, Financially Distressed firm may lose valuable customers, suppliers & key employees. (Opler & Titman, 1994). It can be cited here a real world incident which was stated in Opler & Titman' study, "There was a drop in sales faced by Apple computers and

Chrysler during periods of financial difficulties provide further anecdotal evidence for deadweight losses.”  
Financial Performa.

Kakani and Reddy (1998) attempted to find out the determinants of the capital structure for 400 firms for a period of 11 years from 1985 to 1995 by using correlation and multiple regression. The study has analysed measure of short-term and long-term debt rather than an aggregate measure of total debt. And he also analysed the empirical implications of liberalizations of the Indian economy on the determinants of capital structure of the firms. Firms’ diversification strategy and size were found to be of no significance in deciding the leverage level of firm. Profitability and capital intensity were found to be negatively related with leverage and considered most significant factor in deciding the capital structure of the firm. In addition, earnings volatility and non-debt tax shield were significantly negatively related to short-term and total debt of the firm. Uniqueness of the firm has become a (positively related) significant factor in the determination of the short-term and total leverage of the firm. The study also demonstrated that liberalization of the Indian economy appears to have affected the determinants of capital structure.

Huang and Song (2002) used the market and accounting data from more than 1000 Chinese listed companies up to the year 2000 to document the characteristics of these firms in terms of capital structure. As in other countries, leverage in Chinese firms increases with firm size, non-debt tax shields and fixed assets whereas decreases with profitability and correlates with industries. The study has also found that ownership structure affects leverage. The results of study are different from research outcome of other countries as leverage in Chinese firms’ increases with volatility and firms tend to have much lower long-term debt.

Chen and Hammes (2007) analyzed the factors influencing firm leverage. The study has used market capital ratio, book capital ratio and book debt ratio as measures of leverage. They had used an unbalanced panel of seven countries, Canada, Denmark, Germany, Italy, Sweden, the UK and the US. The study has found that firm size, profitability, tangibility and market-to-book ratio have significant impact on the capital structure choices of firms. Tangibility is positively related to leverage while profitability shows a negative significant relation to leverage. Size of the firm is found to be positively and significantly related to leverage. The impact of the market-to-book ratio varies in the book debt ratio model but shows a negative and significant relation in the market leverage model for all countries except Denmark which shows an insignificant parameter value.

According to (Shaukat & Affandi, 2015), conducted a research to investigate the association between financial distress and financial performance. As per the study findings, there is a significant association between finance distress and financial performance. Simply put, upsurge in the Altman’s Z score values, which, means lessening the financial distress and thereby it caused to upsurge in the financial performance.

Zehri & Mbarek 2016, compared the relative performance of Islamic and conventional banks, during the last financial crisis in Saudi Arabia. They had used to evaluate the Bank’s performance by categorizing accounting ratios with respect to profitability, risk and efficiency. As risk ratio they have used cash to average total assets that can be used as an independent variable even for the current study.

### **III. RESEARCH METHODOLOGY**

#### **3.1 Conceptual Framework**

This conceptual framework model represents the relationship between financial distress and the Financial Institutions’ Financial performance. To examine the impact of financial distress on the financial performance of the ITC Limited. The study was assessed and defined on the basis of the Original Altman Z- score. According to the Altman Z-score model, public limited companies are more likely to be classified as “distressed firms” when their Z-scores are less than 1.8 and in between the 1.8 and 3.0 are in “Grey area” which means there is a likelihood of being distressed in near future. Respectively, the companies of which z score is a more than 3.0 are safe according to this classification. As a result, our data set could be split into three categories: distressed, grey, safe firms. This research, study the impact of financial distress on financial performance in ITC Limited, considering sector. The study focused on secondary data as this is a longitudinal research. The yearly annual reports of last five years.

#### **3.2 Data Analysis and Interpretation**

Data analysis is a systematic process which applies statistic techniques to evaluate data through inspecting,

transforming and modeling data to draw useful information for decision making. The period of analysis covered five financial years from 2013 to 2018. Financial distress was calculated using Altman Z score model as shown below.

$$\text{Altman Z Score} = X1 + X2 + X3 + X4 + X5$$

Where,

FACTOR	WEIGHT	PROCESS OF DETERMINATION
X1	LIQUIDITY	WORKING CAPITAL / TOTAL ASSET
X2	PROFITABILITY	RETAINED EARNING/ TOTAL ASSET
X3	RETURN ON ASSET	EBIT / TOTAL ASSET
X4	SOLVENCY	BOOK VALUE / TOTAL LIABILITIES
X5	CAPITAL TURNOVER	NETSALES / TOTAL ASSET

**Liquidity-** Liquidity ratio is an indicator of whether a company's current asset will be sufficient to company's obligation when they become due

**Profitability-** Profitability is a measure of profitability, which is a way to measure a company's financial performance.

**Return on asset-** ROA are helps to generating revenue, it's a ratio how company is able to generate from its asset.

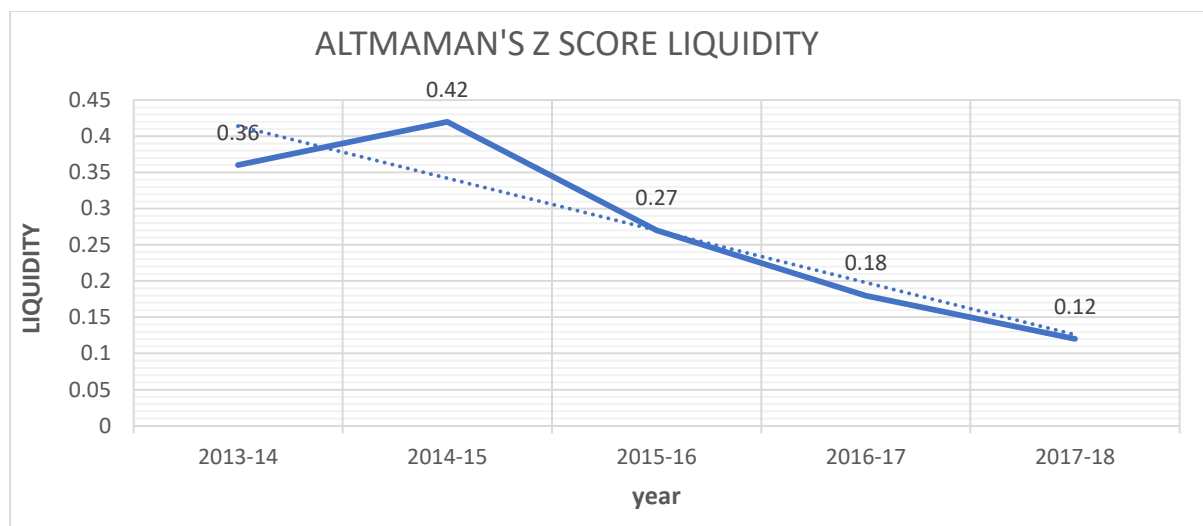
**Solvency** – Solvency ratio is used to measure the ability of a company to meet its long term debts.

**Capital turnover** - The ratio which indicating the efficiency of sales of business to the total amount of its stockholders.

#### ALTMAN'S Z SCORE -LIQUIDITY

X1 factor of z score calculation, liquidity

YEAR	WORKING CAPITAL (CA-CL)	TOTAL ASSET	LIQUIDITY
2013-14	9012.77	24963.63	0.361036
2014-15	12429.72	29390.12	0.422922
2015-16	10510.77	38312.02	0.274347
2016-17	7758.3	42746.24	0.181497
2017-18	5789.05	47820.66	0.121058
		TOTAL	1.360858



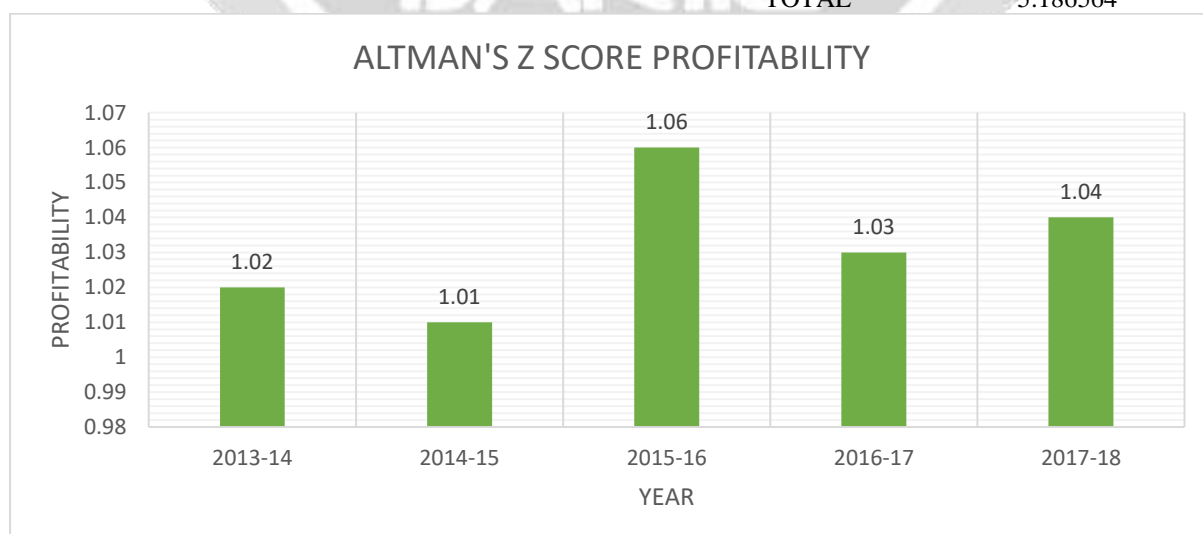
**Interpretation**

From the above table and chart indicating that liquidity of firm are higher in the financial year of 2014-15 as 0.422 and later years from 2016-18 the firms liquidity formation are downsizing. The firm proceeding with the lower liquidity acquisition for facing the bankruptcy payoff.

**ALTMAN'S Z SCORE - PROFITABILITY**

X2 factor of z score calculation, profitability

YEAR	RETAINED EARNINGS	TOTAL ASSET	PROFITABILITY
2013-14	25466.7	24963.63	1.020152
2014-15	29934.14	29390.12	1.01851
2015-16	40851.71	38312.02	1.06629
2016-17	44126.22	42746.24	1.032283
2017-18	50179.64	47820.66	1.04933
<b>TOTAL</b>			<b>5.186564</b>



**Interpretation**

From the above chart and table showing that profitability are maintained at constant rate of determination. The profitability ratio of financial year 2015-16 shows a greater accumulation of reserves and surplus, but there is an

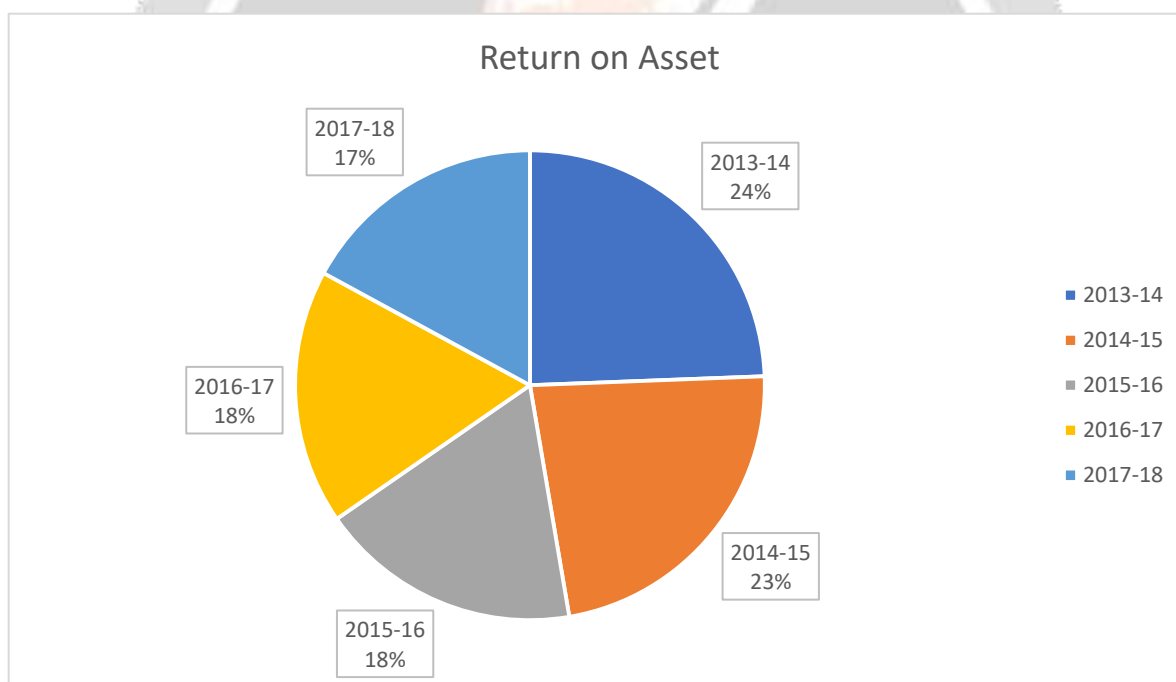
unfortunate lessen of retained earnings in the financial year of 2016-17. The firm had a improvement on reserves on next year ending.

ALTMAN’S Z SCORE - RETURN ON ASSET

X3 factor of z score calculation, return on asset

RETURN ON ASSETS CALCULATED AS ON FINANCIAL YEARS FROM 2013-18:

Year	EBIT	TOTAL ASSET	RETURN ON ASSET
2013-14	12682.74	24963.63	0.5080
2014-15	14075.97	29390.12	0.4789
2015-16	14506	38312.02	0.3786
2016-17	15548.29	42746.24	0.3637
2017-18	16961.3	47820.66	0.3546
TOTAL			2.0840



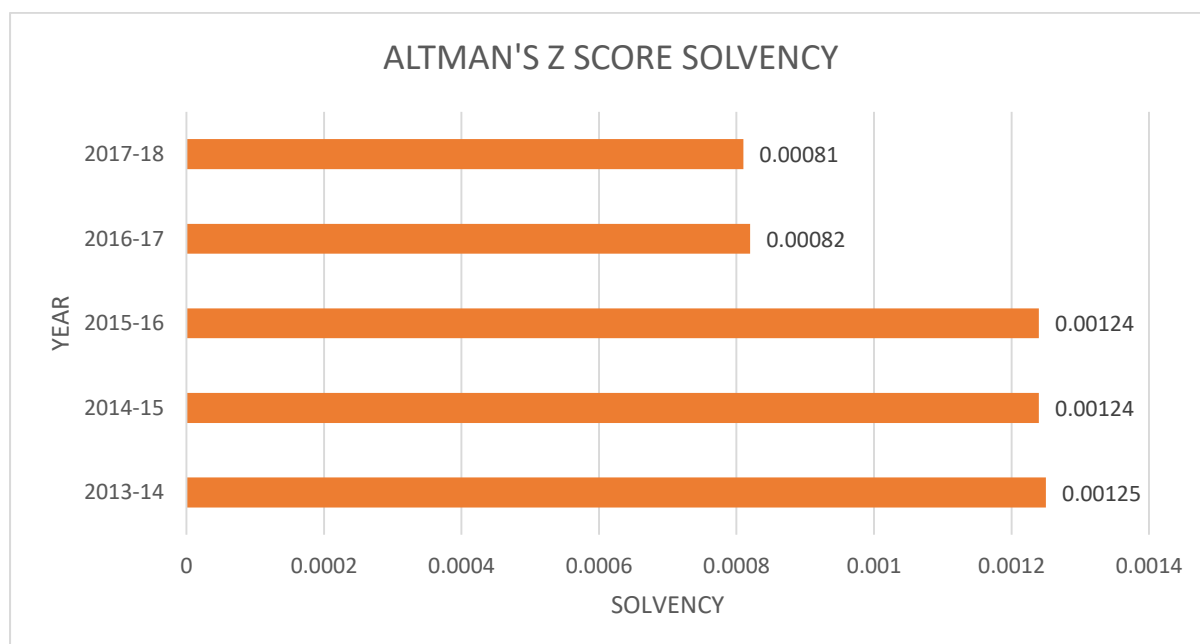
**Interpretation**

From above table and chart showing that return on asset are decreases on alternative comparatives. The firm has a higher asset revenue in the financial year of 2014-15. The ROA is a hoping factor of generating revenue through asset. But the consecutive year has a drastic loss.

ALTMAN’S Z SCORE - SOLVENCY

X4 factor of z score calculation, solvency

YEAR	BOOK VALUE OF EQUITY	TOTAL LIABILITIES	SOLVENCY
2013-14	32.95	26328.56	0.00125
2014-15	38.28	30788.71	0.00124
2015-16	51.77	41698.72	0.00124
2016-17	37.33	45366.80	0.00082
2017-18	42.12	51418.06	0.00081
TOTAL			0.00536



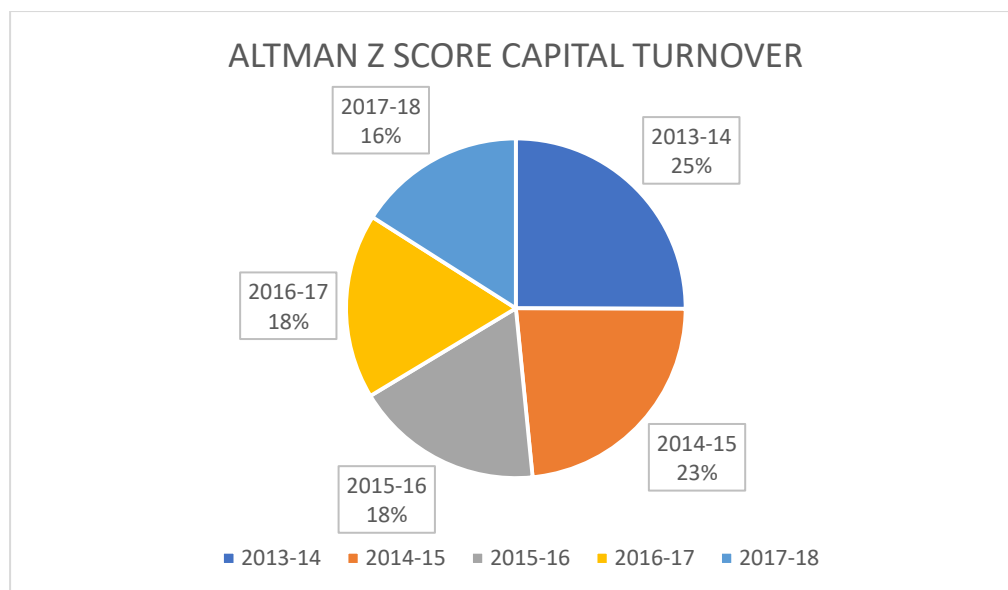
**Interpretation**

From above table and chart indicating that solvency are higher in the financial year of 2013-14 as 0.00125 and later periods the solvency ratio are decreases certain book value. The liability are not able to meet the long term debts it were leads to the insolvency and bankruptcy.

ALTMAN'S Z SCORE - CAPITAL TURNOVER

X4 factor of z score calculation, Capital turnover

YEAR	NET SALES	TOTAL ASSET	CAPITAL TURNOVER
2013-14	33238.6	24963.63	1.33148
2014-15	36507.4	29390.12	1.24216
2015-16	36548.67	38312.02	0.95397
2016-17	40088.68	42746.24	0.93782
2017-18	40627.54	47820.66	0.84958
TOTAL			5.31501



### Interpretation

From the above table and chart showing that capital turnover are low progress from the financial year 2014-15, it indicates that stockholders level of business sales are decreases on sales turnover unfortunately.

### ALTMAN'S Z SCORE CALCULATION

The Z-score uses multiple corporate income and balance sheet values to measure the financial health of a company. The Altman Z-score is based on five financial ratios that can calculate from data found on an ITC limited annual reports

The original Z-score formula was as follows

$$Z = 1.2X1 + 1.4 X2 + 3.3 X3 + 0.6 X4 + 1.0 X5$$

Liquidity X1 = 1.360858

Profitability X2 = 5.186564

Return on asset = 2.0840

Solvency = 0.00536

Capital turnover = 5.31501

$$Z=1.2(1.30858) + 1.4(5.186564) + 3.3(2.0840) + 0.6(0.00536) + 1.0(5.31501)$$

$$Z= 1.5 + 7.2 + 6.8 + 0.003 + 5.3$$

$$Z=20.83$$

The firm working on safe zone, the zone of discrimination is  $z > 2.9$

Altman found that the ratio profile for the bankrupt group fell at -0.25 average, and for the non-bankrupt group at +4.48 average.

### 3.3 Regression Analysis

The relationship between financial distress and financial performance was shown using a simple linear regression analysis as shown below.



$$Y=A +B X$$

Where Y will be the dependent variable (Financial performance)

X will be the independent variable (Financial distress)

a= Intercept constant      b=X coefficient

The researcher has done the Univariate analysis, Test of normality of the data set, bivariate analysis, Multivariate analysis, Panel regression, T test for the analysis purpose.

H0 – There is not any impact of the financial distress on the Firm's financial Performance

H1-There is an impact of the financial distress on the Firm's financial Performance

Variable Means and Test Significance			
	Bankrupt	Nonbankrupt	
Variable	Group Mean <sup>n</sup>	Group Mean <sup>n</sup>	F Ratio <sup>n</sup>
X <sub>1</sub>	-6.1%	41.4%	32.50*
X <sub>2</sub>	-62.6%	35.5%	58.86*
X <sub>3</sub>	-31.8%	15.4%	26.56*
X <sub>4</sub>	40.1%	247.7%	33.26*
X <sub>5</sub>	1.5X	1.9X	2.84

N = 33.

F<sub>1,60</sub> (0.001) = 12.00; F<sub>1,60</sub> (0.01) = 7.00; F<sub>1,60</sub> (0.05) = 4.00

\*Significant at the 0.001 level.

Z'Score Model: Classification Results, Group Means, and Cut-off Boundaries

	Bankrupt	Nonbankrupt	Total
Bankrupt	30 (90.9%)	3 (9.1%)	33
Nonbankrupt	1 (3.0%)	32 (97.0%)	33

Note: Bankrupt group mean = 0.15; nonbankrupt group mean = 4.14.

Z' < 1.21 = Zone I (no errors in bankruptcy classification):

Z' > 2.90 = Zone II (no errors in nonbankruptcy classification): gray area = 1.23 to 2.90.

Here the Z score and regression at the individual level.

#### IV. FINDINGS

1.The liquidity of firm are not constant, it were increase and decreases according to their net working capital and total asset meeting.

2.In the profitability of z score shows that financial year ending of 2015-16 had a higher growth on profit maximization, so the firm has good profit improvement on future.



3. Return on Asset ratio are declined constantly from the year 2015-18
4. In the solvency ratio the firms are maintained good debit paying from 2013-16, sudden decline on the solvency rate from 2016-18
5. Capital turnover ratio are reduced due to uncertain sales on low stockholders business sales.
6. The overall prediction on the Zscore prediction the firm working on the good level of revenue management. The will not meet any distress or bankruptcy case for future meetings.
7. The regression analysis are indicating that firm works on the grey zone, it were safe and good standard on debit payments.

## V. CONCLUSION

This study investigates the impact of financial distress on financial performances, Therefore I concluding my study by apprising the following, If the company can earn more profits then they can also have the capacity to increase their sales and liquidity for avoiding the firm into bankruptcy and distress cases. The overall prediction states that the ITC had good revenue workings on the future competition wining. Totally the financial distress analysis brings the knowledge on the firm financial position and status. It eliminates the fear on liquidation absences, the firm gains understanding on expenses on unwanted components. Later it helps to measure and develop macroeconomic determination. The research takes the following concern factors like fighting deflation, profitability challenges, strengthening debit markets, saving credit for new plans and projects and monetary control for revenue consideration. Finally, it advance on professional finance management.

**“EITHER WE BECOME WORLD-CLASS OR WE LEAVE THE BUSINESS”**

- YC DEVESHWAR, CHAIRMAN, ITC Ltd.

## VI. REFERENCES

- Corporate Financial Distress and Bankruptcy Edward L. Altman Edith Hotchkiss.
- William R. Lasher, Financial Management 7<sup>TH</sup> Edition, Cengage 2014
- M.Y. Khan and P.K. Jain Financial Management
- www.investopedia.com
- www.moneycontrol.com
- https://bschool.howard.edu
- Elloumi , F., & Gueyie, J. -P. (2001). FINANCIAL DISTRESS AND CORPORATE GOVERNANCE: ANEMPIRICAL ANALYSIS, Corporate Governance. *The international journal of business in society*.
- Mohamed Abdullah , M. (2013). A Study on Financial Leverage and Financial Distress in the Listed Banks on Colombo Stock Exchange in Sri Lanka.
- Nanayakkara, K., & Azeez, A. (n.d.). Predicting Corporate Financial Distress in Sri Lanka With Reference to Z-Score Model.
- Outecheva , N. (2007). *Corporate Financial Distress: An Empirical Analysis of Distress Risk*. St. Gallen. Purnanandam, A. (2004). Financial Distress and Corporate Risk Management: Theory & Evidence.