Our Heritage

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

A Study on Relationship of Financial Health & Corporate Performance of Selected Indian Listed IT Companies

Prof. Amrita Tatia Karnawat

Research Scholar

Indira School of Business Studies, Tathawade

amrita.karnawat@indiraisbs.ac.in

Dr. Ashutosh Gadekar

Professor & Research Scholar

Sai Balaji International Institute of Management Sciences

ashutoshgadekar1@gmail.com

Abstract: India is a key leading economy in the Asia Pacific region. This study examines the relationship between the financial health, as measured by the Altman Z-Score, and corporate performance, as measured by the Return on Equity (ROE), of listed IT companies in Indian market. A linear regression has been conducted between these variables to determine the magnitude and direction of their relationships. The trends of Z-Scores over a five-year period have also been analysed. The analysis covers the period from 2015 to 2019 (inclusive) and had yield positive relationship between ROE and the Z-Score but not statistically significant for the industry.

Keywords: financial health, corporate performance, Return on Equity, Z score

Introduction:

The IT industry in India is a key part in country's economy. It is fastest growing industry and considered as a pioneer in software development. They have originated in very unfavourable conditions when there was import tariff of 135% on hardware and 100% on software, the Exporters were ineligible for bank loans, absent of Government policies and so on. The conditions became favourable gradually by liberalising Govt. policies, reducing taxes and now IT-BPM industry is the largest contributor to the total exports of the country, One of the biggest benefits that the computer and IT industry provides in India is the employment,

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

exports and attracts Foreign Direct Investments. It industry has contributed around 7.7 percent to the country's GDP[i]and it employs almost 5 million people in India. In India IT company has a rapidly growing demand for exports and from new verticals. Government of India is also supporting this sector by giving tax exemption for the period of 3 years in a block of 7 years to start ups. The motive behind this study was to determine whether the Indian IT companies are really performing well and financially healthy when the markets are so volatile.

Review of Literature:

(Altman, 1968) The purpose of this paper is to attempt an assessment of the issue-the quality of ratio analysis as an analytical technique. The prediction of corporate bankruptcy is used as an illustrative case. In this study, a set of financial and economic ratios are investigated in bankruptcy prediction context wherein a multiple discriminant statistical methodology is employed. The data used in the study are limited to manufacturing corporations.

(Pathak, 2019)In their research paper entitled An Analysis of Z-Scores & Performance: Manufacturing Companies in Hong Kong examined the relationship between the financial health, as measured by the Altman Z-Score, and corporate performance, as measured by the Return on Equity (ROE), of listed manufacturing companies in this market. A linear regression has been conducted between these variables to determine the magnitude and direction of their relationships. The trends of Z-Scores over a five-year period have also been analysed. The analysis covers the period from 2013 to 2017 (inclusive) and yields a statistically positive correlation between ROE and the Z-Score for the market. Hong Kong registered relatively healthy mean and median Z-Scores. The findings had support the strong economic position of this market as an Asian giant.

(RAMESH, 2019)In this research paper the performance of Oil companies namely Indian Oil Corporation, Hindustan Petroleum Corporation Limited, Bharat Petroleum is studied because market is highly volatile, through A predictive model created by Edward Altman Z score in the 1960's.This model consists of different financial ratios to ascertain the likelihood of financial health. It was found that the financial health of the selected companies under study is Bharat Petroleum Corporation is relatively better than Indian Oil Corporation and Hindustan petroleum.

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

(Pathak L. &., 2018)This Study examines the relationship between the financial health, as measured by the Altman Z-Score, and corporate performance, as measured by the Return on Equity (ROE), of listed manufacturing companies in this market. A linear regression has been conducted between these variables to determine the magnitude and direction of their relationships. The trends of Z scores over a five year period have also been analyzed. The analysis covers the period from 2013-2017 and yields a statistically positive correlation between ROE and the Z score for the market.

(Md Shamimul Hasan, 2018)The purpose of this study was to examine the relationship between financial strength or condition and managerial practices in preparing financial statements of public limited companies. The objectives of this study are threefold – to measure the financial strength, to measure integrity index and to examine the relationship between management practices and financial strength

(Batchelor, 2018)The purpose of this research is to evaluate modifications of the Altman Z-Score model. The Z-Score is used in this study to assess multiple companies in different industry sectors, while altering the variable components. Consideration of interchanging financial ratios in the model aims to provide a more beneficial use of the model. Finally, in manipulating the variables of the Altman Z-Score, indication of other applications for the model are expected.

Motivation & Contribution: Corporate performance of the company is equally important as its financial health to ensure sustainability. The motive behind this study was to determine whether the Indian IT companies are really performing well and financially healthy when the markets are so volatile. Does these two variables have any relationship in them?

It may be considered as an important contribution to provide empirical insights about the listed five Indian IT companies in relation to its Z score and Return on Equity for over a period of five financial years from 2015-2019

Objectives:

1. To study the financial health of Indian listed IT companies with respect to Z score model.
2. To study the firms performance with respect to its return on equity.
3. To identify whether there is any significant relationship between firm performance and financial health of Indian listed ITcompanies.

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

Research Question: Do higher performing(based on market capitalisation) listed IT companies in India (measured by ROE which is dependant variable) exhibits higher financial health (measured by Z score)

Hypothesis: Ho: Null hypothesis: there is no significant relationship between the firm performance and financial health of the firm.(Beta = 0)

Alternate hypothesis: there is a significant relationship between firm performance and financial health(beta ≠ 0)

Research Methodology:

Research Type and Research Approach: The study is Descriptive and Analytical.

Selected Companies for the Study: Top 5 IT companies were selected based on market capitalization data available on ET markets. Tata Consultancy Services, Infosys, Wipro, HCL & Tech Mahindra

Data Collection: Secondary data was used to study the financial health which was extracted from their audited annual reports available on their websites

Time Frame: The data for last 5financial year was studied

Analytical Tool: This study adopts the widely used Altman (1968) Z-Score model) for non-manufacturing firms to determine financial health.

Equation for Altman Z Score Model

Z Score = 6.56X1 + 3.26 X2 +6.72 X3 + 1.05X4

Where X1 = Working Capital/total assets

X2 = retained earnings/ total assets

X3 = Earnings before interest & taxes/ total assets

X4 = Book value of Equity/ total liability

Figure 1: Z Score Model

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

Z score below 1.1 is distress zone, 1.1 – 2.6 is Gray zone and above 2.6 is safe zone.

Regression equation:The regression equation y = bx + a was used and run on SPSS,

Where y = Return on Equity;

x = Z score;

a = constant

b = regression coefficient

Research Gap: Researcher has not found any study which has been carried out for evaluating the performance of Indian listed IT companies

Limitation of the study:

A limitation of this study is that it focuses on listed IT companies, and not on any other industries. This is because we would like to align our approach with the original Altman (1968) Z-Score Model and explore the relationships of financial health and financial performance in the specific companies.

Future Scope of Research: For future research, this study can extensively studied to analyse the relationship between financial health and financial performance in other industries & also in different markets. Furthermore, other variables for financial performance can also be examined, and their relationships analysed.

Data Analysis & Interpretation:

Table 1: Z Score, Mean, Median, Std deviation

Name of the company	2015	2016	2017	2018	2019
TCS	10.53	11.24	11.78	12.84	12.63
INFOSYS	11.92	11.52	11.84	13.22	11.98
WIPRO	7.91	7.38	7.42	7.09	7.84
HCL	6.50	7.75	8.24	8.96	8.13
TECH MAHINDRA	12.56	7.54	7.07	6.79	6.78
Mean	9.88	9.09	9.27	9.78	9.47
Median	10.53	7.75	8.24	8.96	8.13

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

Standard Deviation	2.60	2.10	2.36	3.08	2.64

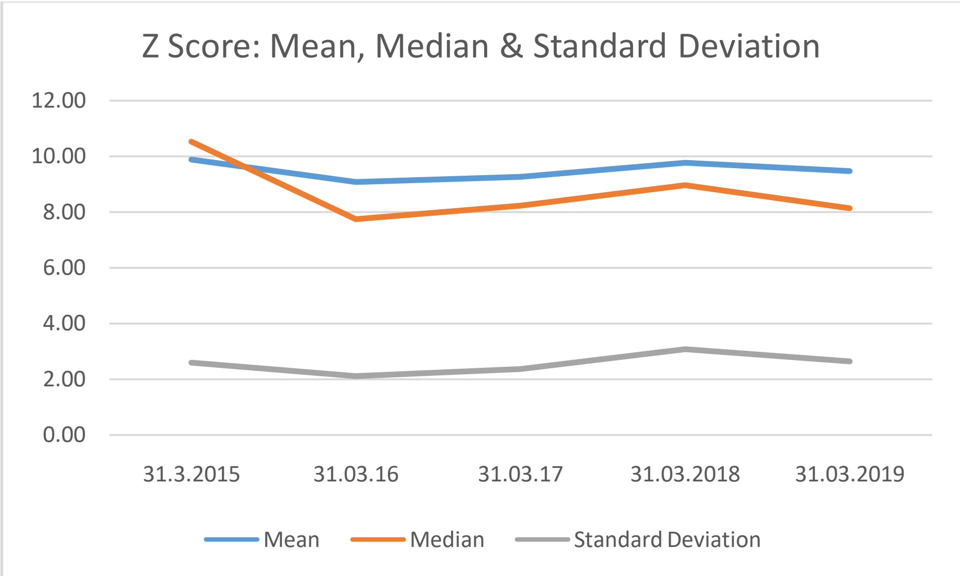

Figure 2: Z Score Mean, Median, Std deviation trend

Interpretation& Findings : Table 1 represents mean, median and standard deviation for financial health i.e. Z Score and figure 2 represents the respective trends for the period of last 5 years.

As per Altman a Z score above 2.6 for non-manufacturing firm represents the firm is in safe zone. The overall mean and median Z score represents that all 5 companies from IT sector are healthy throughout the period.

The average Z score have remained within the range of 9.09 to 9.88. This represents strong financial health of IT sector.

It has been observed that Working capital to total Assets ratio for TCS was ranging between 0.39 to 0.61 from 2015 to 2019 and was showing increasing trend; for Infosys it ranged between 0.48 to 0.53; for Wipro it was quite stable and ranged between 0.41 to 0.43; for HCL it has shown a decreasing trend it ranged between 0.30 to 0.37; for Tech Mahindra it has ranged between 0.34 to 0.42 and it has ups & downs.

It has been observed that Earnings before interest and taxes to Total Assets for TCS has ranged between 0.32 to 0.36, for Infosys it has ranged between 0.24 to 0.32, for Wipro it has

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

ranged between 0.14 to 0.20, for HCL it has ranged between 0.18 to 0.26 and for Tech Mahindra it has ranged between 0.15 to 1.02. Tech Mahindra was having highest earnings among all companies in the year 2015.

Table 2: Return on Equity: Mean, Median & Std deviation

Name of the company	**2015**	**2016**	**2017**	**2018**	**2019**
TCS	0.36	0.34	0.46	0.30	0.35
INFOSYS	0.23	0.22	0.21	0.25	0.24
WIPRO	0.23	0.20	0.17	0.16	0.16
HCL	0.30	0.21	0.25	0.25	0.25
TECH MAHINDRA	0.22	0.22	0.17	0.18	0.22
Mean	0.27	0.24	0.25	0.23	0.24
Median	0.23	0.22	0.21	0.25	0.24
Standard Deviation	0.06	0.06	0.12	0.06	0.07

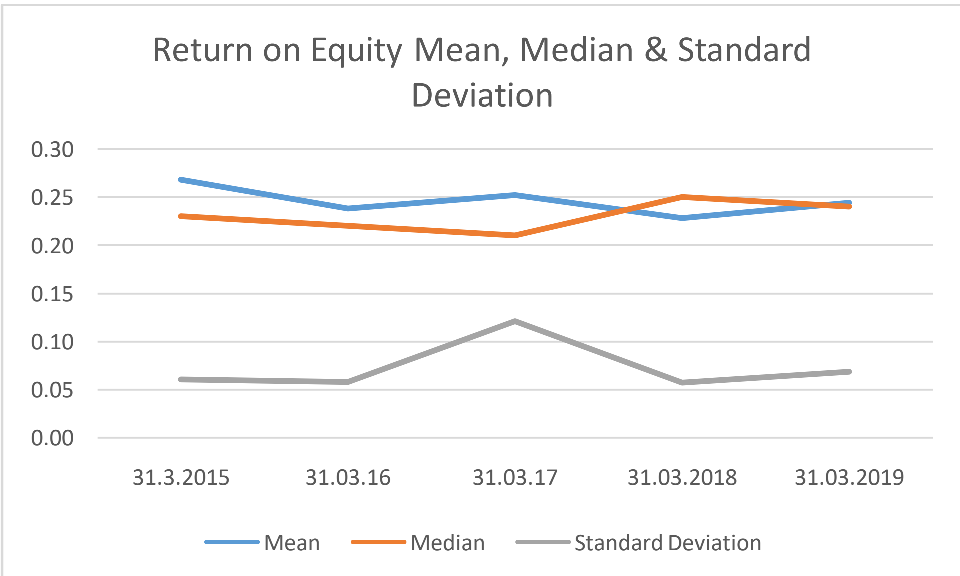

Figure 3: Return on Equity: Mean, Median, Std deviation Trend

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

Interpretation& Findings: Table 2 representsmean, median and standard deviation for financial Performance i.e. Return on Equity and figure 3 represents the respective trends for the period of last 5 years.

The average return on equity have remained within the range of 23% to 27%. This represents healthy performance of overall IT sector.

TCS is having the highest ROE for all 5 years and it has generated 46% of ROE in the year 2017.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.133	.240		.556	.617
	ZScore	.012	.025	.262	.471	.670

a. Dependent Variable: ROE

Table 3: Regression output from SPSS

Interpretation & Findings: A total of 10 observations have been used for regression analysis Beta value of Z score is 0.012 which is positive but not appearing statistically significant as p> 0.05. Hence Z score is not influencing return on equity.

Conclusion: We set out to explore and analyse the relationship between financial health, as measured by the Altman (1968) ZScore, and firm performance, as measured by Return on Equity (ROE) ratios, of Indian listed IT companies. We found that there was apositive relationship but has not appeared to be statistically significant between Return on Equity (ROE) and Altman Z-Scores in the market. Furthermore, in our descriptive analysis, we observed that Indian IT companies are having strong financial health and generating attractive returns.

From an academic contribution standpoint, this study provides an updated empirical insight into the relationship between financial health and financial performance of listed IT companies in using recent data from 2015 to 2019

ISSN: 0474-9030

Vol-68-Issue-1-January-2020

Bibliography

Altman. (1968). FINANCIAL RATIOS, DISCRIMINANT ANALYSIS AND THE PREDICTION OF CORPORATE BANKRUPTCY. *THE JOURNAL OF FINANCE*, 589-609.

Batchelor, T. (2018). Corporate Bankruptcy: Testing the Efficacy of the Altman Z-Score. *International Research Journal of Applied Finance*, 404-414.

Md Shamimul Hasan, N. O. (2018). Financial health and management practices : A mult year cross country analysis . *Journal of Finance Crime* , 646-657.

Pathak, F. S. (2019). An Analysis of Z-Scores & Performance: Manufacturing Companies in Hong Kong . *Asian Journal of Business and Management*, 28-34.

Pathak, L. &. (2018). Studying the relationship between performance & Z score for manufacturing firms in Singapore. *Archives of Business Research* , 41-47.

RAMESH, C. (2019). AN ANALYSIS OF FINANCIAL PERFORMANCE OF PETROLEUM COMPANIES USING ALTMAN Z SCORE ANALYSIS. *INDIAN JOURNAL OF ACCOUNTING*, 43-50.

Websites used for retrieving Annual Reports:

1. https://www.tcs.com/content/dam/tcs/investor-relations/financial-statements/2018-19/ar/annual-report-2018-2019.pdf
2. https://www.infosys.com/investors/reports-filings/annual-report/annual/Documents/infosys-ar-19.pdf
3. https://www.wipro.com/annual-reports/
4. https://www.hcltech.com/investors/results-reports
5. https://www.techmahindra.com/investors/annual_reports.aspx

---

[i] Figures extracted from IBEF Report.