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Financial Analysis Of Information Technology Sector In India

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ABSTRACT

This research paper analyses the financial parameters of Information Technology (IT) Companies listed in the National Stock Exchange of India as of 15th August 2023. The initial analysis relates to 240 companies but a deeper analysis has been done for 99 companies that have an annual revenue of INR 100 Crores or more. This research analyses the financial performance of the 99 companies considering their revenue growth, profitability, solvency, market performance and financial strength for the year ended 31st March 2023. Based on the revenue, the 99 companies have been classified into Very Large, Large, Medium and Small Companies. 10 financial ratios have been considered to analyse the performance of each category. Piotrowski's F Score has been used to measure the financial strength of these companies and Altman's Z Score to assess the financial solvency of the IT companies. This analysis reveals four important things about IT companies – (1) The Top 7 companies ("Very Large") contribute more than 80% of the revenue as well as market capitalization, while the Bottom 141 companies (out of 240) contribute just around 0.5% of market capitalization and revenue. 28% of companies under the "small" category have sales growth below 10%. (2) All The companies under the "very large" category have a good price-earnings ratio (20 or more) (3) 34% of the companies have a profit margin of 5% or less. (4) 46% of the companies in the IT Sector have a current ratio below 2 (5) 90% of the companies in the IT Sector have a Z Score above the safe zone (6). Only 2 out of 17 companies (12%) have a Piotroski F score of 8+ in Very Large and Large categories, while 10 out of 82 companies (12%) in Small and Medium companies also have a score of 8+. The study of financial parameters also covers the relationship between the financial parameters of the 99 companies. This analysis reveals that (1) Only the relationship between Profit on Sales and Return on Capital employed (which is, moderate to strong positive) is similar for all four categories of companies in the IT Sector and (2) The correlation between fina[1]ncial parameters at Sector level is driven primarily by the small companies as the number of small companies are significantly high. The results obtained for "Very Large" Companies are mostly different from the ones obtained at the Sector Level.

Key Words: *Ratio Analysis, Financial Analysis, Piotrowski's F Score, Altman's Z Score, Information Technology.*

I. Introduction

While several sectors are influenced by the stock exchange's rise and fall, IT stocks are the most preferred ones by traders. The IT companies in India have a major portion of their earnings from foreign markets, meaning they earn in foreign currencies. Professional investors constantly look for ways to achieve superior returns on stock investments than the market average offers. The two regions of the United States and Europe are known to be the biggest markets for IT companies in India. India was among the world's top exporters

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of IT and BPO services, with US$157 billion in revenue from US$106 billion in IT services and US$51 billion in BPO services in the fiscal year 2021–2022, according to a report released by Ernst & Young. In FY 2021–2022, it is projected that the IT and BPO sector will employ 5.1 million people directly and create over 12 million indirect jobs. [1]. As per NASSCOM, the Indian Sector works for 75% of Fortune 500 companies headquartered in the US [2]. Several Indian IT companies are quite optimistic about the US business environment. This certainly means that the companies in the US will spend more on information technology services, which will drive up revenue for Indian IT Sector. A similar trend exists with European clients too as they are now offering contracts to Indian IT companies from offshore. This suggests that Indian IT companies are making good inroads into the markets, which will boost the revenue of India's IT companies. With the improved penetration of Indian IT players into the global markets like Artificial Intelligence, Information Security, Internet of Things, BPO and IT management systems, the IT industry is sure to get a boost. This implies that these Indian IT companies will have another revenue stream. As per the NASSCOM Report titled "Digital Enterprise 4.0 – Digital Persistence Among Volatility" (June 2023), India remains the top preferred destination for digital services and overall technology outsourcing

Stocks of the companies in the Information Technology Sector have given good returns compared to the Index (based on Stock Market data):

Table 1: Return on Stock investment

Period	**Sensex**	**Nifty**	**Nifty IT**
Last 10 Year	205.8	207.1	243.0
Last 5 Year	89.6	88.1	119.1

Foreign investors increased their holdings in major information technology (IT) companies in India, such as Infosys, Tech Mahindra, Tata Consultancy Services (TCS), and Wipro, in the September 2023 quarter, despite anticipated weak earnings. This is different from their earlier pattern of Indian IT companies because of a pessimistic outlook. In the second quarter of the financial year 2023-24 (Q2 FY24), foreign institutional investors (FIIs) increased their ownership in Infosys to 33.59 per cent from 33.43 per cent a quarter ago and at TCS to 12.47 per cent from 12.46 per cent over the same period, according to the latest shareholding pattern data on stock exchanges. Additionally, FIIs boosted their stakes in Tech Mahindra and Wipro, pushing up their ownership to 26.22 per cent and 6.47 per cent from 25.69 per cent and 6.32 per cent in the previous quarter, respectively.

This research attempts to analyse the financial performance of the IT Sector in India by analysing the listed companies.

Review of Literature:

Financial analysis of companies and the industry sector is important for decision-making and investment purposes. Several studies have been conducted to assess the financial performance of companies in the Information Technology Sector. The literature review on financial performance analysed existing works on financial performance evaluations, highlighting different methodologies and approaches used [3]. Three different methodologies or approaches were adopted in evaluating the financial performance of firms. The first approach employed the use of financial ratios either overtime within the firm or between different firms for comparative analysis. Another strand of the surveyed works examined the impacts of selected indicators like capital structure and operational practices on financial performance. A third approach employed metrics from internal key performance indicators to examine a firm's financial performance. It was ascertained that the majority of existing literature in the field and on the topic deployed the first two

approaches [3]. Profitability ratios such as return on assets (ROA) and return on equity (ROE) have been used to evaluate the operating performance and efficiency of 12 global IT firms [4]. The Grover model has been used to analyse the financial ratios of 28 global technology companies and categorize them into safe, grey, or distress zones [5]. A study conducted on Chinese IT Companies examined the relationship between financial flexibility and corporate performance, and further studied the relationship between internal control, financial flexibility and corporate performance [6]

DuPont model was used in a study on the Financial Performance of IT Companies covering 3 Technology companies in India [7]. Altman's Z-score model has been used in multiple studies to predict the financial performance and distress of companies. In the Indian context, Bhuvaneskumar et al. analysed the performance of socially responsible companies (SRCs) in India using Altman's Z-score methodology. The study found that most of the SRCs evaluated were stable and showcased consistent performance, indicating a low propensity towards bankruptcy behaviour [8]. Another study conducted by Ashutosh Kolte et al. used the Altman Z-score and Piotroski F-score to compare performance, predict the solvency of companies, test the strength of the companies and foresee the future of the Indian IT-ITES industry [9]. Analysis of financial distress in NIFTY companies was done in 2021 [10]

The Information Technology sector in India has very large companies to very small companies. The studies done so far mostly cover select companies in the Technology Sector. This study attempts to examine the financial performance of the IT Sector by analysing financials of companies of different sizes in the recent past and also understand the relationship between financial parameters in the IT Sector.

Scope & Methodology:
For this purpose, this paper, the financial parameters of Information Technology (IT) Companies listed in the National Stock Exchange of India as of 15th August 2023 have been considered. The initial analysis relates to 240 companies but a deeper analysis has been done for 99 companies that have an annual revenue of INR 100 Crores or more. This research analyses the financial performance of the 99 companies considering their revenue growth, profitability, solvency, market performance and financial strength for the year ended 31st March 2023. Based on the revenue, the 99 companies have been classified into Very Large, Large, Medium and Small Companies. 10 financial ratios have been considered to analyse the performance of each category. Piotrowski's F Score has been used to measure the financial strength of these companies and Altman's Z Score to assess the financial solvency of the IT companies.

The study of financial parameters also covers the relationship between the financial parameters of the 99 companies.

The ratios have been arrived at based on the financial statement published for the financial year 2022-23 and market price has been taken as of 15th August 2023 from NSE data.

Analysis of Financial Parameters:

An Analysis of the annual revenue of the IT companies and the Market capitalization was done for all the 240 companies listed on the National Stock Exchange.

Table 2: Analysis of listed companies in Indian IT Sector

Category	Annual Revenue In INR Crores	No of companies	Revenue contribution	Market Capitalization

Very Large	Above 10000	7	81.3%	82.8%
Large	5000 - 9999	10	8.8%	6.1%
Medium	1000 - 4999	22	6.7%	7.7%
Small	100 - 1000	60	2.8%	2.9%
Very Small	Below 100	141	0.4%	0.5%
	Total	**240**	**100.0%**	**100.0%**

Analysis of the revenue of the 240 listed companies shows that the top 7 companies contribute to 81.3% of the revenue, while the bottom 141 companies contribute just 0.4% of the total revenue from all the companies. Hence further analysis of the companies in the IT Sector has been done for the 99 companies that have an annual revenue of INR 100 and above.

Analysis of the market capitalization of the 240 listed companies shows that 82.8% contributed by the top 7 companies (classified as "Very Large") and the bottom 141 companies contributed just 0.5%. Total Market capitalization as of the middle of August 2023 is INR 32.86 Lac Crores.

Table 3: Analysis of the revenue profile of the listed companies in IT Sector

Annual Revenue	**No of companies**	**Lowest (INR Cr)**	**Highest (INR Cr.)**	**Median (INR Cr.)**	**Kurtosis**	**Skewness**
Very Large (Above 10000)	7	13639	232081	91790	0.55	0.930
Large (5000 – 9999)	10	5758	8794	7558	-1.50	-0.066
Medium (1000 – 4999)	22	1122	4903	2308	-0.73	0.707
Small (100 – 1000)	60	100	961	315	-0.09	0.963
Total	**99**	**100**	**232081**	**676**		

The lowest and the highest revenue in the Very Large category is INR 13639 Crores to INR 232081 Crores.

The median revenue of the 99 companies is INR 315 Crores. Kurtosis values for Large, Medium and Very Small categories are negative, which indicates a "light-tailed" distribution. The Skewness of the Very Large, Medium and Small categories is ranging from 0.5 to 1, indicating that the distribution is moderately skewed. The Skewness of the Large category is close to symmetric.

Table 4: Analysis of Price Earnings Ratio

Category	**No. of Companies**	**Below 15**	**15 - 20**	**20 -30**	**Above 30**
Very Large	7			6	1
Large	10	1	1	2	6
Medium	22	3	2	7	10
Small	60	19	12	3	26
Total	**99**	**23**	**15**	**18**	**43**

All the companies under the "Very Large "category have a Price Earnings Multiplier of 20 or more. 31 out of 60 companies under the "Small" category (52%) have a Price Earnings Multiplier below 20. 7 out of 32 companies under the Large and Medium Categories (22%) have a Price Earnings Multiplier below 20.

Table 5: Sales Growth

Category	No of Companies	Negative	0% - 10%	10% - 20%	Above 20%
Very Large	7	0	1	5	1
Large	10	0	2	2	6
Medium	22	0	3	6	13
Small	60	7	10	11	32
Total	**99**	**7**	**16**	**24**	**52**

3 out of 17 companies (18%) under the Very Large and Large Categories have a sales growth of less than 10%. 28% of companies under the Small Category have sales growth below 10%. Only companies under the Small category have negative growth. 12% of small companies have negative growth.

Table 6: Current Market Price to Book Value

Category	No of Companies	Below 1	1 to 4	4 to 8	Above 8
Very Large	7		1	4	2
Large	10	2	1	2	5
Medium	22	2	6	6	8
Small	60	7	26	14	13
Total	**99**	**11**	**34**	**26**	**28**

50% of the Large companies have a market price 8 times above the book value. 12% of the Small companies have a market price below their book value. 6 out of 7 companies (86%) in the Very Large category have a Market price 4 times or more than book value.

Table 7: Interest Coverage

Category	No. of Companies	Below 10	10 to 20	20 to 40	Above 40
Very Large	7		2	2	3
Large	10	4	2	2	2
Medium	22	2	5	8	7
Small	60	34	8	3	15
Total	**99**	**40**	**17**	**15**	**27**

All the Very Large companies have an Interest Cover above 10. 20 out of 23 (87%) Medium-sized companies have interest cover above 10. 57% of the Small companies have interest cover below 10.

Table 8: PAT/Sales %

Category	No. of Companies	Negative	0 to 5%	5% - 10%	10% - 20%	Above 20%
Very Large	7			1	6	
Large	10	1	1	4	3	1
Medium	22	1	2	7	11	1
Small	60	7	22	10	15	6
Total	**99**	**9**	**25**	**22**	**35**	**8**

6 out of 7 (86%) Very Large companies have a Profit Margin of 10% or more. 29 out of 60 (48%) Small companies have a profit margin below 5% and 7 out of 60 (12%) Small companies make a loss. Overall, 34% of the listed Companies in the IT Sector have a Profit Margin below 5%.

Table 9: Return on CE

Category	No. of Companies	Negative	0 to 10%	10% - 20%	20% - 40%	Above 40%
Very Large	7			1	4	2
Large	10			3	7	
Medium	22	1	4	3	13	1
Small	60	5	17	19	15	4
Total	**99**	**6**	**21**	**26**	**39**	**7**

All the Very Large Companies make a Return of 10% or above on the Capital Employed in the company. 37% of the Small Companies make a return below 10% and 8% of the Small Companies make a negative return on Capital Employed.

Table 10: Return on Assets

Category	No. of Companies	Negative	0 to 5%	5% - 10%	10% - 20%	Above 20%
Very Large	7				5	2
Large	10	1	1	2	5	1
Medium	22	1	4	3	10	4
Small	60	8	17	18	13	4
Total	**99**	**10**	**22**	**23**	**33**	**11**

All the Very Large Companies make a Return of 10% or above on the Assets deployed in the company. 37% of Small Companies make a return below 10% and 8% of Small Companies make a negative return on Capital Employed.

Table 11: Current Ratio

Category	No. of Companies	Below 1	1 to 2	2 to 4	Above 4
Very Large	7		5	2	0
Large	10	2	5	1	2
Medium	22		5	13	4
Small	60	3	26	22	9
Total	99	**5**	**41**	**38**	**15**

46% of the companies in the IT Sector have a current ratio below 2. 5 out of 7 Very Large companies have a Current Ratio below 2. 70% of the Large companies also have a Current Ratio below 2.

Table 12: Altman's Z Score

Category	No. of Companies	Below 1.88	1.88 - 3.0	Above 3.0
Very Large	7			7
Large	10	1		9
Medium	22		1	21
Small	60	1	7	52
Total	**99**	**2**	**8**	**89**

Altman's Z-Score model is a numerical measurement that helps to predict the chances of a business getting into bankruptcy. 90% of the companies in the IT Sector have a Z Score above the safe zone (>3.0). 13% of the Small companies are in the distress zone (below 1.88).

Table 13: Piostroski F Score

Category	No. of Companies	2 & 3	4 & 5	6 &7	8 & 9
Very Large	7		4	2	1
Large	10	3	3	3	1
Medium	22	2	9	8	3
Small	60	4	29	20	7
Total	**99**	**9**	**45**	**33**	**12**

Piotroski score is a discrete score between zero and nine that indicates the strength of a firm's financial position based on 9 criteria. nine being the best and zero being the worst. 7 out of 17 companies in Very Large and Large companies (41%) have a score of 6 & above. On the contrary, 38 out of 82 Small and Medium companies (46%) have a score of 6 & above. Only 2 out of 17 companies (12%) have a score of 8+ in the Very Large and Large category, while 10 out of 82 companies (12%) in the Small and Medium companies also have a score of 8+.

Table 14: CROIC %

Category	No. of Companies	Negative	0-12	12-24	Above 24

Very Large	7			5	2
Large	10		2	7	1
Medium	22	1	12	8	1
Small	60	22	24	11	3
Total	**99**	**23**	**38**	**31**	**7**

CROIC % indicates a company's cash return to invested capital. All the Very Large Companies have a CROIC % above 12%. Only 23% of the Small companies have CROIC % above 12%. 37% of the Small companies have negative CROIC %.

Table 15: CORELATION ANALYSIS OF FINANCIAL PARAMETERS - VERY LARGE COMPANIES

PARAMETERS	SALES ROWTH	PE	ROCE	PROFIT%	F Score
SALES GROWTH	1.000	**0.728**	0.209	-0.001	-0.242
PE	0.728	1.000	0.209	0.006	-0.330
ROCE	0.209	0.489	1.000	0.841	0.055
PROFIT%	-0.001	0.006	0.841	1.000	0.245
F Score	-0.242	-0.330	0.055	0.245	1.000

A significant positive correlation is observed between Sales Growth and Price Earnings. There is also a strong positive correlation between Profit % and Return on Capital Employed. But there is no linear relationship between sales growth and profitability as well as Profit % and PE.

Relationship between Financial Parameters:

The following Tables provide an analysis of the relationship between the key financial parameters of the companies in the IT Sector:

Table 16: CORELATION ANALYSIS OF FINANCIAL PARAMETERS - LARGE COMPANIES

PARAMETERS	SALES GROWTH	PE	ROCE	PROFIT%	F Score
SALES GROWTH	1.000	-0.092	0.438	0.020	0.238
PE	-0.092	1.000	0.438	-0.666	-0.300
ROCE	0.438	-0.272	1.000	0.533	0.098
PROFIT%	0.020	-0.666	0.533	1.000	0.281
F Score	0.238	-0.300	0.098	0.281	1.000

A weak negative correlation is observed between Sales Growth and Price Earnings. A strong positive correlation is seen between Profit % and Return on Capital Employed. A strong negative correlation is seen between Profit % and Price Earnings. However, no linear relationship exists between sales growth and profitability.

Table 17: CORELATION ANALYSIS OF FINANCIAL PARAMETERS - MEDIUM COMPANIES

PARAMETERS	SALES GROWTH	PE	ROCE	PROFIT%	F Score
SALES GROWTH	1.000	0.374	-0.033	-0.163	0.268
PE	0.374	1.000	0.045	0.081	0.052
ROCE	-0.033	0.045	1.000	0.740	0.236
PROFIT%	-0.163	0.081	0.740	1.000	0.234
F Score	0.268	0.052	0.236	0.234	1.000

A weak negative correlation is observed between Sales Growth and Profitability. A strong positive correlation is seen between Profit % and Return on Capital Employed. A weak positive correlation is observed between Profit % and Price Earnings. A weak negative correlation exists between Sales Growth and Profitability. A weak positive correlation is seen between Profitability and Price Earnings Ratio.

Table 18: CORELATION ANALYSIS OF FINANCIAL PARAMETERS - SMALL COMPANIES

PARAMETERS	SALES GROWTH	PE	ROCE	PROFIT%	F Score
SALES GROWTH	1.000	-0.063	-0.063	0.071	-0.064
PE	-0.063	1.000	0.783	-0.151	-0.144
ROCE	0.783	-0.199	1.000	0.349	0.067
PROFIT%	0.071	-0.151	0.349	1.000	0.152
F Score	-0.064	-0.144	0.067	0.152	1.000

A weak negative correlation is observed between Sales Growth and Price Earnings. A Moderate positive correlation is seen between Profit % and Return on Capital Employed. A weak negative correlation is observed between Profit % and Price Earnings. A weak positive correlation exists between Sales Growth and Profitability. A weak negative correlation is seen between Profitability and Price Earnings Ratio.

Table 19: CORELATION ANALYSIS OF FINANCIAL PARAMETERS - All COMPANIES IN IT SECTOR

PARAMETERS	SALES GROWTH	PE	ROCE	PROFIT%	F Score
SALES GROWTH	1.000	-0.018	0.668	0.038	-0.011
PE	-0.018	1.000	-0.205	-0.169	-0.077
ROCE	0.668	-0.205	1.000	0.412	0.071
PROFIT%	0.038	-0.169	0.412	1.000	0.172
F Score	-0.011	-0.077	0.071	0.172	1.000

A weak negative correlation is observed between Sales Growth and Price Earnings. A Moderate positive correlation is seen between Profit % and Return on Capital Employed. A weak negative correlation is observed between Profit % and Price Earnings. A weak positive correlation exists between Sales Growth and Profitability.

The following Table summarises the relationship pattern between financial parameters.

Table 20: Correlation between Financial Parameters in IT Sector

Sl. No.	**Co-relation between**	**Very Large Companies**	**Large Companies**	**Medium Companies**	**Small Companies**	**Overall**
1.	Sales Growth & Price Earnings Ratio	Positive Strong	Negative Weak	Positive Moderate	Negative Weak	Negative Weak
2	Profit % & Return on Capital Employed	Positive Strong	Positive Strong	Positive Strong	Positive Moderate	Positive Moderate
3	Profit % & Price Earnings Ratio	No Linear Relationship	Negative Strong	Positive Weak	Negative Weak	Negative Weak
4	Sales Growth & Profit%	No Linear Relationship	Positive Weak	Negative Weak	Positive Weak	Positive Weak
5	F Score and Price Earnings Ratio	Negative Moderate	Negative Weak	Positive Weak	Negative Weak	Negative Weak
	No of Companies	**7**	**10**	**22**	**60**	**99**

From the above, it is observed that the relationship between financial parameters varies based on the size of the companies. Only the relationship between Profit on Sales and Return on Capital employed which is, moderate to strong positive is similar for all types of companies in the Sector. The relationship between financial parameters at the Sector level is driven primarily by small companies as the number of small companies is significantly high. The results obtained for Very Large Companies are mostly different from the ones obtained at Sector Level. This study exposes the limitation of Sector level analysis when the size of the companies varies too much.

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