

# A Study on Financial Analysis of Profitability and Liquidity Position of Software Companies in India

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## ABSTRACT

Indian economy stands today as one of the influential and attractive economies. The liberalization moved by the Indian Government in 1990s has given a boost to the Indian economy and put her into a fast track economic growth route. IT industry is one of the successful industries in India. Its rapid growth and development has caught the attention of the world, so that India is now being identified as the major powerhouse for incremental development of computer software. The reason for this attention is not the actual size of the industry but its rapid growth rate over the nineties and the subsequent decade. The growth of the company can be measured in terms of changing investment, sales, profit and profitability. Hence, an analysis of profitability and liquidity is felt relevant. The study is confined to only the IT industry in India. As many as 34 Software companies were selected for the study. The present study was based on secondary data and covers a period of ten years from 2004-05 to 2014-2015. To analyze the profitability and liquidity position of selected Software companies in India, various accounting and statistical techniques have been applied. Accounting techniques including ratio analysis adopted to analyze and interpret general financial statements to assess the profitability and liquidity position. The tools and techniques are Mean, Standard deviation, Coefficient of variation, Analysis of variance, Correlation, and Multiple regressions. The determination of profitability of a company and analyses of overall trend and pattern of profitability of the total sample companies will help to understand the performance of Software companies.

**Keywords:** indian economy, liquidity, profitability, software companies

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## INTRODUCTION

Indian economy stands today as one of the influential and attractive economies. The liberalization moved by the Indian Government in 1990s has given a boost to the Indian economy and put her into a fast track economic growth route. With the beginning of the new millennium, India was considered as an emerging super power. In 2009, Indian GDP based on purchasing power parity (PPP) stood at USD 3.5 trillion making it the fourth largest economy. The agricultural sector which was the backbone of post-independence Indian economy took a back seat in the 21<sup>st</sup> century and contributed only 17.5 percent to the GDP while India's service industry accounted for 62.5 percent

of the GDP. Indian service sector has witnessed a major boom and is one of the major contributors to both employment and national income in recent times. Among all the major service sector industries, information technology industry is undoubtedly a vital sector for Indian economy.

Information technology industry in India is among the fastest growing segment of Indian industry compounding with an annual growth rate exceeding 50 percent. The liberalization of the Indian economy in the early nineties has played a major role in the growth of the IT industry of India. Deregulation policies adopted by the Government of India have led to

substantial domestic investment and inflow of foreign capital to this industry. The potential of high capacity to generate wealth, foreign exchange and employment has already caught the consideration of India's businessmen, citizens, economists, bureaucracy and politicians. Software-driven IT industry is today at the top of India's national agenda as an instrument and model for the modernization of India's economy. The last twenty years of the 20<sup>th</sup> century were the most significant period for Indian economy. During this period the nation identified its economic destiny with great clarity. The most precious achievements of this period are the development of Information Technology. A business will be able to survive under unfavorable situation only if it has some past earnings to rely upon. Profit is the main source of finance for the growth of a business.

## REVIEW OF LITERATURE

The researcher has referred earlier studies for molding and creating most useful study for the society. Marcus (1969) [1] had described on "Profitability and size of the firms: Some further evidence", tried to evaluate the hypothesis that the rate of return increases with the size of the firm, against new data within an improved analytical framework. His conclusion was that the hypothesis did not perform uniformly in all the industries and that it cannot be therefore being viewed for having general validity. Agarwal (1972) [2] had attempted a study to examine the size, profitability and growth of seven manufacturing industry viz. cotton spinning, weaving, cotton ginning, jute, textile, paper and pulp, sugar and aluminum from 1962–1972 by taking the variables namely profit to net worth, profit to net assets and size to total sales. He observed that a positive relationship exists between size and profitability in cotton spinning industry, jute textile industry, sugar brewing industry and aluminum

industry but from cotton ginning and weaving industry no such relationship exists. Barthwal (1976) [3] in his study on "The Determinants of Profitability in Indian Textile Industry" has identified the factors which cause variation in the profitability. The explanatory variables used by him are past profitability and size of the firm, age of the firm, past growth, capital output ratio and changes in average cost of production. The other factors like capital output ratio, size and age of the firm and past growth had explained less than 25 percentage of the variation in the profitability and were considered as insignificant. Usha (2010) [4] in her study "Financial performance of selected software Companies in India", took a sample of 65 companies during the study period from 1997 to 2007. Ratio analysis and Statistical tools such as Summary Statistics (Mean, Standard deviation (SD), Variance) and Stepwise Regression model are used for the study. Ratio analysis has been performed for the selected 65 software companies and the summary statistics has been analyzed to find out the overall financial performance. The study concluded that Return on Investment of the selected companies has been influenced by the variables like Net Sales, long-term debt, Operating Expenses, Net Worth, Net Working Capital, Employee Cost.

## STATEMENT OF THE PROBLEM

IT industry is one of the successful industries in India. Measured by the age of many industries, the IT industry in India is still in its infancy. Its rapid growth and development has caught the attention of the world, so that India is now being identified as the major powerhouse for incremental development of computer software. The reason for this attention is not the actual size of the industry but its rapid growth rate over the nineties and the subsequent decade. Rapid growth of this sector gets the attention of research people

in the field of Finance, Marketing, and Human Resource Management etc. [5]. Therefore, it would be an attention-grabbing task to study the profitability position of this sector and the various factors influencing the profitability ratio of the sunshine sector of the Indian economy. Finance is regarded as the life blood of a business enterprise. This is because in the modern money-oriented economy, finance is one of the basic foundations of all kinds of economic activities. Profit earning is the main aim of every economic activity. No business can survive without earning a profit. Profit is a measure of efficiency of a business enterprise. Profits also serve as a protection against risk. So, the researcher wants to analyze the profitability of selected Software companies listed in BSE and NSE in India. The growth of the corporate sector in India has been rapid. The economic growth of a nation largely depends on the growth and development of its corporate sector. The growth of the company can be measured in terms of changing investment, sales, profit and profitability. Hence, an analysis of profitability and liquidity is felt relevant.

### Objectives of the Study

The following are the main objectives of the study:

- [1]. To analyze the profitability position of selected software companies in India.
- [2]. To analyze the liquidity position of selected software companies in India.
- [3]. To study the relationship between liquidity and profitability of Software companies in India.
- [4]. To ascertain the determinants of profitability of Software companies in India.

### METHODOLOGY

The researcher has taken secondary data for the present study, which were collected from the Prowess of the Centre for Monitoring Indian Economy (CMIE).

Variables pertaining to the behavior of profitability and liquidity were collected from the Balance Sheet and Profit and Loss account of the selected Software companies for a period of 10 years from 1<sup>st</sup> April 2004 to 31<sup>st</sup> March 2014. Besides that, the corporate database reports were collected from RBI bulletin, annual survey of industries and research publications. The study is confined to only the IT industry in India. As many as 34 Software companies were selected for the study on the basis of the following criteria in the present study. The study covers a period of ten years from 2004–2005 to 2014–2015 and the accounting years of the company consisting of twelve months starting from 1<sup>st</sup> April to 31<sup>st</sup> March of the next year [6]. To analyze the profitability and liquidity position of selected Software companies in India, various accounting and statistical techniques have been applied. Accounting techniques including ratio analysis adopted to analyze and interpret general financial statements to assess the profitability and liquidity position. The tools and techniques are Mean, Standard deviation, Coefficient of variation, Analysis of variance, Correlation, and Multiple regressions.

### SCOPE OF THE STUDY

The study aims to make an analysis of the growth, profitability and liquidity of Software companies in India. The efficiency of the management in accomplishing its goal of profit maximization is measured by the profitability of the business. The scope of profitability and liquidity is very wide and this study is based only on accounting information. Thus, the determination of profitability of a company and analyses of overall trend and pattern of profitability of the total sample companies will help to understand the performance of Software companies. The present study has analyzed only the commercial or accounting

profitability and the analyses of social profitability and value-added profitability is beyond the scope of this study.

### ANALYSIS AND INTERPRETATION

The growth of the Software companies can be measured in terms of some key variables such as sales, net worth, net profit and total assets.

#### Profitability Analysis of IT Industry

Profitability is the main indicator of the efficiency and effectiveness of a business enterprise in achieving its goals of earning

profit. Profitability of a firm can be measured by its profitability ratios. In the process of performance appraisal of a business, profitability ratios can be calculated to measure the operating efficiency. Table 1 shows the average profitability ratios of select Software companies during the study period.

**Table 1.** Profitability ratios of select software companies.

| Ratios | Mean   | Max     | Min     | SD    | CV   |
|--------|--------|---------|---------|-------|------|
| OP     | 21.03  | 123.38  | -210.24 | 35.21 | 0.58 |
| GP     | 15.91  | 47.43   | -29.48  | 12.49 | 0.64 |
| NPR    | 14.37  | 84.13   | -60.31  | 17.74 | 0.66 |
| ROE    | 11.46  | 43.78   | -95.26  | 21.81 | 0.44 |
| ROA    | 10.49  | 32.71   | -5.62   | 8.69  | 0.69 |
| ROI    | 15.69  | 51.34   | -35.47  | 13.95 | 0.57 |
| INCV   | 154.33 | 2417.06 | -18.23  | 136.2 | 0.89 |

Source: calculated value.

Table 1 reveals that the average operating profit ratio of 34 selected Software companies is 21.03 percent, of that ratio, 20 companies are above the average ranging from 21.03 percent to 123.38 percent. The highest average ratio of SFPS is 123.38 percent. The ratio of the remaining 14 companies is below the average ranging between 21.03 percent and -210.24 percent. The lowest average ratio of TRGN is -210.24 percent. The average standard deviation and co-efficient variation of these companies is 35.21 percent and 58 percent respectively. The average gross profit ratio of the selected Software companies is 15.91 percent, of which ratio, 14 companies are above the average ranging from 15.91 percent to 47.43 percent. The highest average ratio of CRNS is 47.43 percent and the ratio of the remaining 14 companies is below the

average ranging from 15.91 percent to -29.48 percent. The lowest average ratio of TRGN is -29.48 percent. The average standard deviation and coefficient of variation is 12.49 and 64 percent respectively. The average net profit ratio of selected 34 Software companies is 14.37 percent. The ratios of 16 companies are above the average and ranging from 14.37 percent to 84.13 percent. The highest average ratio of SFPS is 84.13 percent. The remaining 18 companies are below the average ranging from 14.37 percent to -60.31 percent [7]. The lowest average ratio of TRGN is -60.31 percent. The average standard deviation of industry is 17.74 percent and the coefficient of variation is 66 percent.

Table 1 depicts that the average return on equity ratio of selected 34 Software

companies is 11.46 percent; of that ratio 19 companies are above the average ranging from 11.46 percent to 43.78 percent. The highest average ratio of GDTs is 43.78 percent. The ratio of remaining 15 companies is below the average ranging from 11.46 percent to -95.26 percent. The average standard deviation of these companies is 21.81 percent and the coefficient of variation is 44 percent respectively. The average return on assets ratio of selected Software companies is 10.49 percent. Among these 17 companies shows above the average ranging from 10.49 percent to 32.71 percent and the remaining 17 companies ratios is below the average level ranging from 10.49 percent to -5.62 percent. The highest average ratio of INFS is 32.71 percent and the lowest for TRGN is -5.62 percent respectively. The average standard deviation of return on assets is 8.69 percent and the coefficient of variation is 69 percent. The average return on investment ratio of the 34 selected Software companies is 15.69 percent, of that ratio, 16 companies are above the average ranging from 15.69 percent to 51.34 percent. The highest average ratio of TELX is 51.34 percent and the ratio of the remaining 18 companies is below average ranging from 15.69 percent to -35.47 percent. The lowest average ratio of TRGN is -35.47 percent. The average standard deviation and coefficient of variation of these companies is 13.95 percent and 57 percent respectively. The average interest coverage ratio of selected 34 Software companies is 154.33 percent, of which ratio, 5 companies are above average ranging from 154.33 percent to 2417.06 percent. The highest average ratio of INFS is 2417.06 and the ratio of the remaining 29 companies is below the average ranging from 154.33 percent to -18.23 percent. The lowest average ratio of ZNIT is -18.23 percent. The standard deviation and coefficient of variation of interest coverage ratio is 136.2 percent and 89 percent, respectively [8].

### Analysis of Liquidity Position

The liquidity position of a company is critical to its survival. The liquidity of a firm should be neither excessive nor very low since too much of liquidity will result in accumulation of current assets, which do not yield income to the firm. The study attempts to analyze the corporate liquidity by computing various measures of liquidity. The average current ratio of selected Software companies is 4.66 to 1 with a maximum ratio of 13.24 to 1 and the minimum ratio of 1.09 to 1. The average current ratio of 30 companies during the study period is above 2:1 and the remaining 4 companies are having a current ratio below 2:1, but above 1:1. The average standard deviation of current ratio of the selected Software companies during the study period is 3.43 and the coefficient of variation is 61 percent. Hence the current ratio is better for selected Software companies during the study period.

The quick ratio is very useful in measuring the liquidity position of a firm. It measures the firm's capacity to pay off current obligations immediately and it is more a rigorous test of liquidity than the current ratio. The quick ratio of selected Software companies is 4.52 to 1 with a maximum ratio of 23.28 to 1 and minimum ratio of 0.98 to 1. All the selected companies show the average quick ratio of above 1:1 except for CMC Ltd which has only 0.98 to 1. The average standard deviation of quick ratio is 3.12 during the study period and the coefficient of variation is 60 percent. Hence the quick ratio is better for selected Software companies during the study period.

Debtor's turnover ratio measures the efficiency of a company's credit and collection policy. It shows a number of times each year a company's debt's turn into cash. The average debtor's turnover ratio of selected Software companies during the study period is 355.99. The

maximum ratio is 788.20 and the minimum ratio is 81.49 percent during the study period. Debtor's turnover ratio of 16 companies is above the average and the remaining 18 companies is below the average level. The average standard deviation of debtor's turnover ratio of the selected Software companies is 160.91 and coefficient of variation is 47.44.

The working capital turnover ratio shows the number of times working capital is turned over in a stated period. This ratio is calculated by dividing sales into working capital. The average working capital turnover ratio of the selected Software companies during the study period is 760.04. The maximum ratio is 2407.09 and the minimum ratio is -2551.37 during the study period. The average standard deviation of working capital turnover ratio of the selected Software companies is 1047.65 and coefficient of variation is 137.84 [9]. The higher working capital turnover ratio indicates the effective utilization of working capital with regard to sales. However, too high working capital turnover ratio of TRIGN is due to low average working capital to their sales during the study period which seems that there is very low value of current assets even below 1:1 ratio. On the contrary out of 34 Software companies, the average working capital turnover ratio of three companies is negative, it reveals that the current assets are lower than the current

liability, that needs attention and thus these companies have been faced with short-term financial crisis.

### **Correlation – Relationship between Liquidity and Profitability of Selected Software Companies**

Liquidity and profitability are two important aspects of corporate business life. Liquidity measures the ability of a company to honor the entire maturing obligation.

No firm can endure without liquidity. Profitability is the rate of return on company's investment. To analyze the relationship between liquidity and profitability, liquidity ratios have been taken as independent variable and Return on Investment has been taken as the dependent variable, with the pooled values of all the firms during the period of study. The correlation coefficient shows a positive correlation between return on investment and other independent variables except working capital ratio (Table 2). A high correlation is observed between current ratio and absolute liquid ratio (0.665). Hence, there is a significant relationship exists between return on investment and liquidity ratios of selected Software companies during the study period.

**Table 2. Correlation analysis.**

| Variables | ROI    | WC      | QR      | CR      | DTR  | ABL |
|-----------|--------|---------|---------|---------|------|-----|
| ROI       | 1      |         |         |         |      |     |
| WC        | -0.019 | 1       |         |         |      |     |
| QR        | 0.032  | -0.02   | 1       |         |      |     |
| CR        | 0.026  | -0.051  | 0.295** | 1       |      |     |
| DTR       | 0.031  | 0.239** | -0.031  | -0.065  | 1    |     |
| ABL       | 0.013  | -0.026  | 0.174** | 0.665** | 0.03 | 1   |

**\*\*Correlation is significant at the 0.01 level (2-tailed).**

### **Multiple Regression Analysis**

Multiple regression analysis is applied to test the significant difference between

Return on investment and liquidity ratios of selected Software companies in India. Table 3 represents the statistical

significance of the model. The R square value 0.113 states that the dependent variable of Return on Investment is influenced by all the independent variables

by 11.3 percent. The analysis reveals that there is no significant difference between return on investment and liquidity ratios of selected Software companies.

**Table 3. Model summary.**

| Model | R                  | R square | Adjusted R square | Std. error of estimate |
|-------|--------------------|----------|-------------------|------------------------|
| 1     | 0.562 <sup>a</sup> | 0.113    | 0.102             | 0.263189               |

*a*Predictors: (constant), ABL, WC, QR, CR, DTR.

In the above Table 4, the calculated value of F is 0.213, which is less than the table value of 2.214 (5, 334 degrees of freedom) at 5 percent significant level. The analysis

supports the null hypothesis and hence influence of liquidity ratios on profitability factor is not significant.

**Table 4. Analysis of variance (ANOVA).**

| Model      | Sum of squares | Df  | Mean square | F     | Sig   |
|------------|----------------|-----|-------------|-------|-------|
| Regression | 0.074          | 5   | 0.015       | 0.213 | 0.957 |
| Residual   | 23.136         | 334 | 0.069       |       |       |
| Total      | 23.209         | 339 |             |       |       |

*a. Predictors: (constant), ABL, WC, QR, CR, DTR.*

*b. Dependent variable: ROI.*

## SUGGESTIONS

This part is concerned with a few suggestions from the above observations relating to the study that are given to improve their operational efficiency.

- Judicious planning of operating cost would result in increased profits of the firm.
- Increase leverage to utilize the unused debt capacity and provide funds for further growth.
- Reduce the payout ratio because this would increase the proportion of earnings available to finance growth opportunities [10].
- The government should encourage growth of small-scale IT sector.
- The information technology companies receive their income through foreign currencies whose fluctuations could affect earnings. Any drop in quality, reflected in errors in code, could lead to defective solutions and customer attrition. In that case, they can make

use of the services of external foreign exchange experts to risk management policies.

## CONCLUSION

Based on the analysis, it is inferred that all the Software companies performed better in terms of growth and profitability. All the information technology companies have sufficient liquid assets to meet the liabilities without affecting the value of the firm and therefore, no liquidity problem is cited. It is concluded that Indian IT industry is a flourishing industry and the liberalized policies of Government help this sector to grow gradually. IT services and information technology enabled services have shown unprecedented growth. The demand for such services has grown substantially. The growth of the Indian IT industry is likely to be very good in future. The future trend of Indian IT industry appears to be very bright, promising and prosperous.

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