



## FUNDAMENTAL ANALYSIS OF LOGISTICS INDUSTRY IN INDIA

Maria Queen Annes.

D

M. Phil Research Scholar V.O.Chidambaram College Tuticorin – 628008 Tamilnadu

Dr. V. Sornaganesh\*

Assistant Professor and Guide V.O. Chidambaram College Tuticorin-628008 Tamilnadu \*Corresponding Author

**ABSTRACT**

By managing the transfer of goods from their point of origin to their point of consumption, the logistics sector plays a significant role in India's economy. Logistics companies are ripe for investments and brokerages. Logistics players may gain due to increased domestic consumption, rising exports, surging container volumes, loosening infrastructure bottlenecks and increased investments in the new facilities. Steps such as implementation of the GST, which created a unified indirect tax, and introduction of the e-way bill, will make logistics players more efficient. The government has also provided strong support to the sector by including it in the harmonized master list of infrastructure sub-sector. Ambitious infrastructure projects aimed at improving the efficiency of freight movement across the country, will further boost the logistics sector. This paper was analyzed using various fundamental ratios. The analysis from this study will help to know about the efficiency of the logistics companies and also research scholars to gain a better understanding of the role of Logistics Companies.

**KEYWORDS** : Logistics, Net Profit Margin, Operating Profit Margin, Debt Equity Ratio, Quick ratio, Current ratio, Return on Net Worth.

**INTRODUCTION**

Logistics is regarded as the backbone of the economy, providing cost effective flow of goods on which other commercial sectors depend. Logistic industry in India is evolving rapidly, it is the interplay of infrastructure, technology and new types of service providers, which defines whether the logistic industry is able to help its customers to reduce their costs in logistic sector and provide effective services. The recent Indian logistics sector comprises of inbound and outbound segments of the manufacturing and service supply chains. Of late, the logistics infrastructure has gained a lot of attention both from business industry as well as policy makers. Inadequate logistics infrastructure has an effect of creating bottlenecks in the growth of an economy. The most essential challenge faced by the industry today is insufficient integration of transport networks, information technology and warehousing & distribution facilities. Regulations are imposed by national, regional and local authorities. The regulations differ from city to city, hindering the creation of national networks. Despite of the weak economic sentiments, the logistics industry continues to witness growth due to the growth in retail, e-commerce and manufacturing sectors. It is expected that the size of India's logistics sector will be around \$215 billion by 2020, aided by the implementation of the GST. Rise of e-commerce logistics and increased domestic consumption will lead the way for the industry in the coming years. With a promise of growth and improvements, the service oriented logistics industry is ready to expand beyond the horizons in the latter half of this decade.

**REVIEW OF LITERATURE**

- Mark P. Bauman (1996) has outlined the development of fundamental valuation model and reviewed related empirical work. First, an accounting-based expression for a firm's equity value has been developed into a rich theoretical framework. They verified its descriptive validity regarding them aping of accounting numbers into stock prices. This paper identified three major issues associated with practical implementation of the model; the prediction of future profitability, the length of appropriate forecast horizon, and the determination of the appropriate discount rate.
- Jim Berg (1999) examined that fundamental analysis looks at the fundamental issues that drive the value of the particular company. These issues include its financial position, its industry sector, and the current economic environment. The objective was to identify companies that may be considered undervalued in the market with a view to investing when the time is right. In this study, Jim Berg outlined more about what fundamental

analysis is and how it could be used.

- Dr. Maria Nevis Soris and Dr. V. Sornaganesh (2012) conducted to examine the economic sustainability of the five major NBFC in Indian NBFC sector and its financial performance.

**OBJECTIVES OF THE STUDY**

- To test the financial efficiency and profitability position of the Logistic Companies.
- To analysis the efficient company in controlling costs and expenses of Logistic Companies.
- To reveals the effective company in the terms of generating Net Profit Margin.
- To find out most efficient company in generating yield over assets and hence their overall efficiency.

**HYPOTHESES FORMULATED**

- H1: The Operating Profit Margin (OPM) position of 5 Logistics companies does not differ significantly.
- H2: The Net Profit Margin (NPM) position of 5 Logistics companies does not differ significantly.
- H3: The Return On Net Worth (RONW) position of 5 Logistics companies does not differ significantly.
- H4: The Current Ratio (CR) position of 5 Logistics companies does not differ significantly.
- H5: The Debt Equity Ratio (DER) position of 5 Logistics companies does not differ significantly.
- H6: The Inventory Turnover Ratio (ITR) position of 5 Logistics companies does not differ significantly.
- H7: The Debtors Turnover Ratio (DTR) position of 5 Logistics companies does not differ significantly.

**RESEARCH METHODOLOGY**

The present study adopts an analytical and descriptive research design. The data of 5 Logistic companies (for a period of five years from 2014 to 2018) has been collected from the annual reports published by the Logistic Companies. Finite sample sizes of 5 Logistic companies are All Cargo Logistics (ACL), GATI Ltd (GL), AGEIS Logistics (AGL), VRL Logistics (VRL) and Container Corporation of India (CCI). The variables used in the analysis of the data are Operating Profit Margin (OPM), Net Profit Margin (NPM), Return On Net Worth (RONW), Current Ratio (CR), Quick Ratio (QR), Debt Equity Ratio (DER), Inventory Turnover Ratio (ITR), Debtors Turnover Ratio (DTR) and Fixed Assets Turnover Ratio (FATR). While interpreting the results, the statistical tool of one-way Analysis of Variance (ANOVA) has been used. In view of the objectives of the study listed above, exploratory research design has been adopted. Exploratory

research is one, which largely interprets the already available information, and it lays particular emphasis on analysis and interpretation of the existing and available information, and it makes use of secondary data.

**TIME PERIOD FOR THE STUDY**

The study is conducted based on the audited financial statements of Logistics Companies for a period of last five years

**LIMITATIONS OF THE STUDY**

- Only limited tools were used.
- Due to time constraint, the researcher is not able to cover all the ratios listed in the report

**TOOLS USED FOR ANALYSIS**

**1. Financial Tools:**

The Financial tool that is used for the purpose of analysis are Operating Profit Margin (OPM), Net Profit Margin (NPM), Return On Net Worth (RONW), Current Ratio (CR), Debt Equity Ratio (DER), Inventory Turnover Ratio (ITR), and Debtors Turnover Ratio (DTR).

**2. Statistical Tools:**

The statistical tool that is used for testing hypothesis is One –way Analysis Of Variance (ANOVA).

**RESULT AND DISCUSSION**

**OPERATING PROFIT MARGIN (OPM)**

Operating Profit Margin indicates how effective a company is at controlling the costs and expenses associated with their normal business operations. A rise in the operating profit margin indicates a decline in efficiency. This ratio is used to test the efficiency of the business. This ratio is found out using the following formulae and expressed in percentage terms.

$OPM = \text{Operating Profit} / \text{Net Sales} \times 100$

**Table 1: Operating Profit Margin (OPM in %) position of Logistic companies**

OPM	2018	2017	2016	2015	2014	AVERAGE
ACL	13.24	19.84	19.47	20.46	20.46	18.694
GL	2.23	4.19	8.9	9.32	4.42	5.812
AGL	21.27	24.99	24.47	18.48	12.82	20.406
VRL	12.18	12.1	15.54	16.32	13.82	13.992
CCI	28.95	28.95	27.4	27.96	29.91	28.634

As shown in the table, among all the Logistics companies, Container Corporation of India has sustained the highest operating profit margin followed by AGEIS Logistics which has registered a reasonably higher margin. On an aggregate basis, Container Corporation of India is highly successful in controlling the expenses by registering the five years OPM of 28.634. Thus it is found that Container Corporation of India is the most efficient company in controlling costs and expenses when compared to other Logistics companies. The OPM position of Logistics companies are compared and tested using the following hypothesis.

**Table 2: One-way ANOVA for OPM**

Source of Variation	SS	df	MS	F	P-Value	F crit
Between Groups	1413.75	4	353.43	36.21	0	2.86
Within Groups	195.18	20	9.759			
Total	1608.94	24				

Since the calculated value P 0is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the OPM of logistics companies differ significantly.

**NET PROFIT MARGIN (NPM)**

Net Profit Margin indicates how much a company is able to earn after accounting for all the direct and indirect expenses to every rupee of revenue. The ratio is designed to focus attention on the net profit margin arising from business operations before interest and tax is deducted. The convention is to express profit after tax and

interest as a percentage of sales. This ratio is calculated by using the following formula and is expressed in percentage terms.

$NPM = \text{Net Profit} / \text{Net Sales} \times 100$

**Table 3: Net Profit Margin (NPM in %) position of Logistic companies**

NPM	2018	2017	2016	2015	2014	AVERAGE
ACL	2.41	9.05	10.3	0	8.56	6.064
GL	7.72	3.52	4.08	5.38	8.15	5.77
AGL	20.11	17.06	15.07	31.23	5.23	17.74
VRL	4.81	3.9	5.93	5.45	3.82	4.782
CCI	17.01	17.01	5.93	16.05	18.79	16.832

As shown in the table, among all the Logistics companies, AGEIS Logistics has sustained the highest net profit margin followed by Container Corporation of India which has registered a reasonably higher margin. The OPM position of Logistics companies are compared and tested using the following hypothesis.

**Table 4: One-way ANOVA for OPM**

Source of Variation	SS	Df	MS	F	P-Value	F crit
Between Groups	834.57	4	181.25	6.453	0.00167	2.86
Within Groups	462.76	20	28.08			
Total		24				

Since the calculated value P 0.00167is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the NPM of logistics companies, differ significantly.

**RETURN ON NET WORTH (RONW)**

Return on net worth expresses the net profit in terms of the equity shareholders' funds. This ratio is an important yardstick of the performance of equity shareholders since it indicates the return on the funds employed by them. The factor which motivates shareholders to invest in a company is the expectation of an adequate rate of return on their funds and periodically, they will want to assess the rate of return earned in order to decide whether to continue with their investment. This ratio is useful in measuring the rate of return as a percentage of the book value of shareholders equity. It is computed with the help of the following formula and expressed in percentage:

$\text{Return on Net Worth} = \text{Net Profit After Interest and Tax} / \text{Net Worth} \times 100$

**Table 5: Return on Net Worth (RONW in %) position of logistics companies**

RONW	2018	2017	2016	2015	2014	AVERAGE
ACL	2.19	7.92	9.11	7.61	7.61	6.88
GL	4.57	2.72	3.21	3.88	3.24	3.52
AGL	13.12	9.48	12.76	26.66	6.02	13.60
VRL	15.6	13.02	19.92	25.61	18.65	18.56
CCI	11.15	11.15	9.69	11.39	13.71	11.41

As shown in the table, among all the Logistics companies, VRL Logistics has sustained the highest Return on Net worth followed by AGEIS Logistics which has registered a reasonably higher net worth. The RONW position of Logistics companies are compared and tested using the following hypothesis.

**Table 6: One-way ANOVA for RONW**

Source of Variation	SS	df	MS	F	P-Value	F crit
Between Groups	683.64	4	170.91	9.079	0.00024	2.86
Within Groups	376.48	20	18.82			
Total	1060.13	24				

Since the calculated value P 0.00024 is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the RONW of logistics companies, differ significantly.

**CURRENT RATIO (CR)**

The current ratio is a liquidity ratio that measures a company's ability

to pay short-term and long-term obligations. To calculate the ratio, analysts compare current assets to current liabilities. Current assets include assets that are expected to be turned into cash in less than a year. Current liabilities include accounts, wages, taxes payable, and the current portion of long-term debt. The formula for calculating current ratio is as follows:

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$$

**Table 7: Current Ratio (CR in %) position of logistics companies**

CR	2018	2017	2016	2015	2014	AVERAGE
ACL	1.26	1.15	1.14	0	1.48	1.02
GL	0.95	0.55	1.11	1.06	1.33	1
AL	0.58	0.62	1.3	1.32	0.93	0.95
VRL	0.7	0.56	0.58	0.47	0.42	0.54
CCI	3.22	3.22	3.42	1.93	4.34	3.22

As shown in this table, Container Corporation of India has sustained the highly solvent position among all the Logistics companies and followed by All Cargo Logistics which has a reasonable solvent position. The CR position of Logistics companies are compared and tested using the following hypothesis.

**Table 8: One-way ANOVA for CR**

Source of Variation	SS	df	MS	F	P-Value	F crit
Between Groups	22.76	4	5.69	22.03	0	2.86
Within Groups	5.21	20	0.26			
Total	27.98					

Since the calculated value P 0 is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the CR of logistics companies differ significantly.

**DEBT EQUITY RATIO (DER)**

The Debt Equity Ratio is calculated by dividing a company's total liabilities by its shareholder equity and it is shown in the balance sheet of a company's financial statements. The ratio is used to evaluate a company's financial leverage. The debt/equity ratio is also referred to as a risk or gearing ratio. The formula for calculating the D/E ratio is:

$$\text{Debt Equity Ratio} = \text{Total Liabilities} / \text{Total Shareholder's Equity}$$

**Table 11: Debt Equity Ratio (DER in %) position of logistics companies**

DER	2018	2017	2016	2015	2014	AVERAGE
ACL	0.19	0.25	0.06	0.18	0.18	0.172
GL	0.15	0.16	0.4	0.39	0.29	0.278
AGL	0.34	0.26	0.19	0.25	0.58	0.324
VRL	0.12	0.23	0.32	0.82	1.18	0.534
CCI	0.01	0.01	0	0.02	0.02	0.012

As shown in the table, among all the Logistics companies, VRL Logistics has sustained the highest Debt equity Ratio followed by AGEIS Logistics. Container Corporation of India has no debt during 2016. The DER position of Logistics companies are compared and tested using the following hypothesis.

**Table 12: One-way ANOVA for DER**

Source of Variation	SS	df	MS	F	P-Value	F crit
Between Groups	0.74	4	0.18	3.79	0.018	2.86
Within Groups	0.97	20	0.04			
Total	1.72	24				

Since the calculated value P 0.018 is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the DER of logistics companies, differ significantly.

**INVENTORY TURNOVER RATIO (ITR)**

Inventory turnover is a ratio showing how many times a company has sold and replaced inventory during a given period. A company

can then divide the days in the period by the inventory turnover formula to calculate the days it takes to sell the inventory on hand. Calculating inventory turnover can help businesses make better decisions on pricing, manufacturing, marketing and purchasing new inventory.

$$\text{Inventory turnover ratio} = \text{Sales} / \text{Average Inventory}$$

**Table 13: Inventory turnover Ratio (ITR in %) position of logistics companies**

ITR	2018	2017	2016	2015	2014	AVERAGE
ACL	125.53	124.45	132.74	129.87	129.87	128.492
GL	209.54	338.38	370.63	489.24	160.8	313.718
AGL	27.88	23.3	52.45	23.75	20.86	29.648
VRL	79.65	98.42	93.96	111.44	110.86	98.866
CCI	225	225	248.72	334.56	331.37	272.93

As shown in the table, GATI Ltd has highest Inventory turnover during last five years among all the Logistics companies and followed by Container Corporation Of India. The ITR position of Logistics companies are compared and tested using the following hypothesis.

**Table 14: One-way ANOVA for ITR**

Source of Variation	SS	df	MS	F	P-Value	F crit
Between Groups	288615.2	4	72177.27	17.44	0	2.86
Within Groups	82704.13	20	4136.14			
Total	371319.3	24				

Since the calculated value P 0 is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the ITR of logistics companies differ significantly.

**DEBTORS TURNOVER RATIO (DTR)**

It is also known as receivables turnover ratio. The receivables turnover ratio is an accounting measure used to quantify a firm's effectiveness in extending credit and in collecting debts on that credit. The method for calculating receivables turnover ratio can be represented with the following formula:

$$\text{Debtors Turnover Ratio} = \text{Net credit sales} / \text{Average accounts receivable}$$

**Table 15: Debtors turnover Equity Ratio (DTR in %) position of logistics companies**

DTR	2018	2017	2016	2015	2014	AVERAGE
ACL	5.02	5.89	7.02	6.96	6.96	6.37
GL	10.72	8.32	7.11	8.82	7.64	8.52
AL	13.49	12.18	10.97	12.22	14.98	12.76
VRL	24.62	24.29	21.11	19.65	18.07	21.54
CCI	85.94	97.49	97.67	93.35	117.35	98.36

As shown in the table, among all the Logistics companies, Container Corporation of India has sustained the highest Debt turnover ratio followed by VRL Logistics which has registered a reasonably higher Debtors Turnover Ratio. The DTR position of Logistics companies are compared and tested using the following hypothesis..

**Table 16: One-way ANOVA for DTR**

Source of Variation	SS	df	MS	F	P-Value	F crit
Between Groups	30299.83	4	7574.95	254.94	0	2.86
Within Groups	594.2532	20	29.71			
Total	30894.08	24				

Since the calculated value P 0 is lesser than the table value of 0.005 (CV<TV at 5% significant level), the null hypothesis is rejected and the alternative hypothesis is accepted. Hence, it is concluded that the DTR of logistics companies differ significantly.

**FINDINGS:**

- CCI is highly successful in controlling the cost and expenses in the last five years (2014-2018) with Operating Profit Margin of

28.634.

- AGEIS Logistics has sustained the highest Net profit margin (NPM) of 17.74
- The Return on Net worth of VRL Logistics is substantially higher than other Logistic Companies and has generated RONW of 18.56, making it one of the efficient companies for generating profits on shareholders' equity.
- Container Corporation of India has achieved the highest Current ratio 3.22 and it is most efficient company in generating yield over assets and hence their overall efficiency for paying debts is better than that of other Logistic Companies.
- VRL Logistics has generated DER of 0.534 indicating that the portion of assets provided by stockholders is greater than the portion of assets provided by creditors.
- GATI Ltd has achieved the highest Inventory turnover ratio 313.718 and it indicates that companies merchandise fluctuates greatly throughout the year than that of other Logistic Companies.
- Container Corporation of India has sustained the highest Debt turnover ratio of 98.36 demonstrating company's financial and operational performance

#### CONCLUSION:

The Indian logistics sector is on a big growth tide. With implementation of GST the sector is expected to benefit and touch US\$ 215 billion over the next two years, as per the Economic Survey 2017-18. The economy's increasing alignment to policy changes and its ability to withstand temporary disruptions caused by GST implementation is expected to help its transition towards a new framework in the future. Going forward, strategic investment and government initiatives to support the sector are going to be crucial for the logistics industry in India. If the cards are played right, the sector has the potential to create huge number of jobs for the countrymen and play a key role in driving the economy on a high wave. The study concludes that the volatility and seasonality of Logistic companies are not the same in all the days of a week, in all the months of the year. This is due to the changes in the socio, economic and political factors within the country and outside the country. Abolition of check-posts, Seamless movement of goods within a state and across different state borders, Boost to India's logistics ecosystem resulting in lesser traffic on major transportation routes, Reduction in transportation costs and lead time by replacing physical check posts with mobile squads and incorporating E-way bill under GST ensures various benefits to the industry in the forthcoming years.

#### REFERENCES:

1. John Lynch, "Share Market Analysis-Fundamental analysis Vs. Technical Analysis", (www.eninarticle.com)
2. Dr. Maria Nevis Soris and Dr. V.Sornaganesh (2012), Fundamental Analysis of NBFC in India, OUTREACH – A Multi-Disciplinary Refereed Journal in 2012.
3. Dr.V.Sornaganesh and D.Maheswari (2014), Fundamental Analysis of Indian IT Industry, IJIFR International Journal of Informative & Futuristic Research, ISSN: 2347-1697, Volume -1 Issue -8, April 2014, pp:33-48 (www.ijifr.com)
4. K. SivagnanaSankari and Dr. V.Sornaganesh (2016), Fundamental analysis of Large Scale Retail formats in India – International Journal of Informative & Futuristic Research, ISSN: 2347-1697, Volume -3 Issue -5, January 2016. pp:1630-1645 (www.ijifr.com)
5. Dr.V.Sornaganesh and A.V.Chellamma (2016), Fundamental Analysis Of Media And Entertainment Industry In India-International Journal of Informative & Futuristic Research, ISSN: 2347-1697, Volume -3 Issue -8, April 2016. pp:3076-3089 (www.ijifr.com)
6. EconomicTimes//economictimes.indiatimes.com/articleshow/67776219.cms?utm\_source=contentofinterest&utm\_medium=text&utm\_campaign=cppst