



A STUDY ON FINANCIAL ANALYSIS OF ASHOK LEYLAND LTD

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Abstract

Ashok Leyland is one of the leading companies in Indian commercial vehicle industry. The company principally engages in manufacturing of commercial vehicle and related components. Its product portfolio includes buses, trucks, light vehicles and power solutions .Ashok Leyland long-term plan to become a global player by benchmarking global standards of technology and quality was soon firmed up. Access to international technology and a US\$200 million investment program created a state of the art manufacturing base to roll out international class products. The present study is based on financial analysis that shows the strength and weakness of a business and also evaluating financial performance of measuring the results of a firm policies and operations in monetary terms (i.e.,) Current ratio, Quick ratio, Current asset to total asset, Current liabilities to total liabilities, Gross profit ratio, Net profit ratio, stock turnover ratio, Working capital turnover ratio.

Keyword: Monetary, Performance, Strength, Weakness & Vehicles.

I.Introduction

Ashok Leyland is an Indian automobile manufacturing company based in Chennai, India. Founded in 1948, it is the 2nd largest commercial vehicle manufacturer in India, 4th largest manufacturer of buses in the world and 16th largest manufacturer of trucks globally. Operating six plants, Ashok Leyland also makes spare parts and engines for industrial and marine applications. The Ashok Leyland has been a major presence in India’s commercial vehicle industry with a tradition of technological leadership, achieved through tie-ups with international technology leaders and through vigorous in house research and development.

II Review of Related Literatures

Review of literature is essential for every research to carry on investigation successfully. Hence the present study is also based on the following review. “*Brindadevi .V & Dr. A. Muthumoni (2015)* The study is based on profitability ratio that shows the primary goal of most companies is to make profits for their owners of different automobile industry in india. Profitability ratios can be used to judge whether companies are making enough operational profit from their asset”.

III.Objectives of the Study

- To analyze the financial performance of Ashok Leyland Ltd.
- To highlight the overall analysis of Ashok Leyland Ltd

IV.Scope of Study

The study is about the role of automobile industry in India which deals with financial performance of Ashok Leyland Ltd. Financial performance is the process of identifying the financial strengths & weaknesses of the firm. It measures a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation.

V.Period of Study :The study covers for a period of 5 years from 2010- 2011 to 2014-2015.

VI.Methodology

(6.1)Data Collection

The study is based on secondary data and the information required for the study has been collected from the annual report of Ashok Leyland Ltd & different books, journals, magazines & data collected from various bank websites.

(6.2)Statistical Tools

In this study various statistical tools are used (i.e.,) Mean, Standard deviation, Coefficient of variation, correlation, F- test have been used for data analysis.

- Mean = $\frac{\sum X}{N}$
- Standard deviation = $\sqrt{\frac{\sum X^2}{N} - (\frac{\sum X}{N})^2}$

- Coefficient of Variation = $\frac{SD}{MEAN} \times 100$
- Coefficient of Correlation = $\frac{XY}{X^2 \times Y^2}$

The value of Correlation (r) always lies between -1 to +1 and divided into three types (i.e.,) perfect negative correlation, no correlation & perfect positive correlation.

| Correlation (R) | +VE | -VE |
|--------------------|------------|--------------|
| NO CORRELATION | 0 to 0.1 | 0 to -0.1 |
| WEAK CORRELATION | 0.1 to 0.3 | -0.1 to -0.3 |
| MEDIUM CORRELATION | 0.3 to 0.6 | -0.3 to -0.6 |
| STRONG CORRELATION | 0.6 to 1 | -0.6 to -1 |

(6.3)Hypotheses

F-test is used to find out whether the two independent estimates of population variance differ significantly or whether the two samples may be regarded as drawn from the normal populations having the same variance.

H₀: $\sigma_1 = \sigma_2$ (Variance are equal)

H₁: $\sigma_1 \neq \sigma_2$ (Variance are not equal)

The F test statistic indicates that there is a significant difference in the variance within each group should be equal for all groups. Here this computed value is compared with critical values of each group. If F exceeds the critical value for F at some significance level (usually 0.05) it means that there is evidence to reject the null hypothesis in favour of the alternative hypothesis.

$$F = \frac{\text{Larger Estimate of variance}}{\text{Smaller Estimate of variance}}$$

V₁=Degrees of freedom for sample having larger variance (i.e.,) $v_1 = n_1 - 1$

V₂=Degrees of freedom for sample having smaller variance (i.e.,) $v_2 = n_2 - 1$

(VII)limitation of the study

- The study is related to a period of 5 years.
- Data are only secondary, i.e., they are collected from the published annual reports.
- Due to shortage of time only short term, long term, turnover & profitability ratio are used for the study.

(VIII) Overview of Financial Analysis

The analysis of financial statement is a process of evaluating the relationship between the component parts of financial statement to obtain a better understanding of the firm's position and performance. This analysis can be undertaken by management of the firm or by parties outside the namely, owners, creditors, investors. It also helps in short-term and long term forecasting and growth can be identified with the help of financial performance analysis.

Short Term Solvency Analysis

Short-term solvency ratios attempt to measure the ability of a firm to meet its short-term financial obligations. In other words, these ratios seek to determine the ability of a firm to avoid financial distress in the short-run. Solvency and liquidity are both terms that refer to an enterprises state of financial health. The following short term analyses are,

(8.1) Current Ratio

This ratio is also called as `working capital ratio`. It is used to assess the short-term financial position of the business concern. In other words, it is an indicator of the company's ability to meet its short-term obligations. It matches total current assets of the company against its current liabilities.

Current Ratio= Current Assets / Current Liabilities.

Table 8.1 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | CURRENT ASSETS (in lakhs) | CURRENT LIABILITIES (in lakhs) | CURRENT RATIO |
|--------------------------------|------------------------------|-----------------------------------|---------------|
| 2010-2011 | 635193.94 | 812345.60 | 0.781925747 |
| 2011-2012 | 828765.80 | 860301.36 | 0.963343589 |
| 2012-2013 | 858078.01 | 1013923.76 | 0.84629441 |
| 2013-2014 | 780363.12 | 988269.97 | 0.78962545 |
| 2014-2015 | 821973.26 | 962212.14 | 0.854253678 |
| MEAN | | | 0.846308 |
| SD | | | 0.06498523 |
| CV | | | 7.67159834 |
| COEFFICIENT OF CORRELATION (r) | | | 0.706513 |
| <i>SOURCE: SECONDARY DATA</i> | | | |

As per table 8.1 it has been found that current assets to current liabilities of Ashok Leyland Ltd has mean value of 0.8463. Standard deviation of current ratio has 0.06498 with highest coefficient of variation of 7.67159. The current assets & current liabilities has highest value of 858078.01 & 1013923.76 at the end of March 2013 and compare to the remaining period lowest value of 635193.94 & 812345.6 at the end of March 2011. The coefficient of correlation of current ratio is perfect positive of (+ 0.7065) and therefore, suggest that there is a strong correlation between current assets & current liabilities.

Hypothesis

H₀: $\rho_1 = \rho_2$ (There is no significant relationship between current assets to current liabilities among Ashok Leyland Ltd)

H₁: $\rho_1 \neq \rho_2$ (There is a significant relationship between current assets to current liabilities among Ashok Leyland Ltd)

Table: 8.1(b) Analysis of F- Test

| Short Term | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|---------------|---------------------------------------|----------------------|--|------------------------|
| Current Ratio | V ₁ =4 & V ₂ =4 | 1.0312 | 6.3882 | ACCEPTED |

Since the calculated value of F (1.0312) is less than the table value (6.3882) as shown in table 8.1(b), null hypothesis is accepted. It is therefore, concluded that there is no significant relationship between the current assets to current liabilities among Ashok Leyland Ltd.

(8.2) Quick Ratio

The quick ratio is a measure of a company's ability to meet short term obligations using its most liquid assets (near cash or quick assets). Quick assets include those current assets that presumably can be quickly converted to cash at close to their book values. Quick ratio is viewed as assign of a company's financial strength or weakness it gives information about a company's short term liquidity. The ratio tells creditors how much of the company's short term debt can be met by selling all the company's liquid asset at very short notice.

Quick Ratio = Liquid Assets / Current Liabilities

Table 8.2 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | LIQUID ASSETS (in lakhs) | CURRENT LIABILITIES (in lakhs) | QUICK RATIO |
|-----------|-----------------------------|-----------------------------------|-------------|
| 2010-2011 | 465978.62 | 648903.12 | 0.718101987 |
| 2011-2012 | 384812.94 | 860357.6 | 0.447270925 |
| 2012-2013 | 447377.27 | 1013923.76 | 0.441233639 |
| 2013-2014 | 504760.49 | 988269.97 | 0.510751622 |
| 2014-2015 | 563250.23 | 962212.14 | 0.585370114 |
| MEAN | | | 0.540546 |
| SD | | | 0.093974 |
| CV | | | 17.38495 |

| | |
|--------------------------------|----------|
| COEFFICIENT OF CORRELATION (r) | 0.271511 |
| SOURCE: SECONDARY DATA | |

Table 8.2 shows that Liquid Assets to Current Liabilities of Ashok Leyland Ltd has mean value of 0.5405 .Standard deviation of quick ratio has 0.0939 with highest coefficient of variation of 17.3849.The Liquid assets has highest value of 563250.23 at the end of March 2015 & lowest value of 384812.94 for the period of March 2012.The current liabilities has highest value of 1013923.76 at the end of March 2013 & lowest value of 648903.12 for the period of March 2011.The coefficient of correlation of quick ratio is perfect positive of (+0.2715) and therefore, suggest that there is a weak correlation between Liquid Assets & Current Liabilities.

Hypothesis

H₀: $\rho = 0$ (There is no significant relationship between Liquid assets to current liabilities among Ashok Leyland Ltd)

H₁: $\rho \neq 0$ (There is a significant relationship between Liquid assets to current liabilities among Ashok Leyland Ltd)

Table: 8.2(b) Analysis of F- Test

| Short Term | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|-------------|---------------------------------------|----------------------|--|------------------------|
| Quick Ratio | V ₁ =4 & V ₂ =4 | 1.8450 | 6.3882 | ACCEPTED |

Since the calculated value of F (1.8450) is less than the table value (6.3882) as shown in table 8.2(b), null hypothesis is accepted .It is therefore, concluded that there is no significant relationship between the Liquid assets to current liabilities among Ashok Leyland Ltd.

Long Term Solvency Analysis

Solvency refers to an enterprise's capacity to meet its long-term financial commitments. Solvency ratios are of interest to long-term creditors and shareholders. These groups are interested in the long-term health and survival of business firms. In other words, solvency ratios have to prove that business firms can service their debt or pay the interest on their debt as well as pay the principal when the debt mature. The following ratios are

(8.3) current assets to total assets

Current assets are assets include assets that will converted in the current operating period while total assets include all assets regardless of when they will be converted to cash consumed.

Current assets to Total assets= Current Assets / Total Assets

Table 8.3 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | CURRENT ASSETS (in lakhs) | TOTAL ASSETS (in lakhs) | CURRENT ASSETS to TOTAL ASSETS |
|--------------------------------|---------------------------|-------------------------|--------------------------------|
| 2010-2011 | 850692.96 | 1338632.57 | 0.635493995 |
| 2011-2012 | 828765.80 | 1250906.16 | 0.662532352 |
| 2012-2013 | 860041.87 | 2501244.92 | 0.343845524 |
| 2013-2014 | 813232.88 | 2590469.78 | 0.313932587 |
| 2014-2015 | 821973.26 | 2611948.77 | 0.314697313 |
| MEAN | | | 0.454100354 |
| SD | | | 0.145821746 |
| CV | | | 32.11222901 |
| COEFFICIENT OF CORRELATION (r) | | | -0.48712 |
| SOURCE: SECONDARY DATA | | | |

The above table 8.3 which depicts that current assets to total assets of Ashok Leyland Ltd has mean value of 0.4541.Standard deviation of current assets to total asset has 0.1458 with highest coefficient of variation of 32.1122.The current assets has highest value of 860041.87 at the end of March 2013 & lowest value of 813232.88 for the period of March 2014.The total assets has the highest value of 2611948.77 at the end of March 2015 & lowest value of 1250906.16 at the end March of 2012.The coefficient of correlation of current assets to total assets is perfect negative of (-0.4871) and therefore, suggest that there is a medium correlation between current assets & total assets.

Hypothesis

$H_0: \mu_1 = \mu_2$ (There is no significant relationship between current assets to Total assets among Ashok Leyland Ltd)

$H_1: \mu_1 \neq \mu_2$ (There is a significant relationship between current assets to Total assets among Ashok Leyland Ltd)

Table: 8.3(b) Analysis of F- Test

| LONG TERM | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|------------------------------|--------------------|----------------------|--|------------------------|
| Current asset to Total asset | $V_1=4$ & $V_2=4$ | 0.00079 | 6.3882 | ACCEPTED |

Since the calculated value of F (0.00079) is less than the table value (6.3882) as shown in table 8.3(b), null hypothesis is accepted .It is therefore, concluded that there is no significant relationship between the current assets to total assets among Ashok Leyland Ltd.

(8.4) Current Liabilities to total Liabilities

The current to total liabilities ratio measures the percentage of total current liabilities to total liabilities, a useful measurement when reviewing a company`s debt structure.

Current Liabilities to total liabilities= Current liabilities/ Total liabilities.

Table 8.4 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | CURRENT LIABILITIES (in lakhs) | TOTAL LIABILITIES (in lakhs) | CURRENT LIABILITIES to TOTAL LIABILITIES |
|--------------------------------|--------------------------------|------------------------------|--|
| 2010-2011 | 563001.34 | 1338632.57 | 0.420579442 |
| 2011-2012 | 860357.6 | 1250906.16 | 0.687787484 |
| 2012-2013 | 1013923.76 | 2501244.92 | 0.405367644 |
| 2013-2014 | 988269.97 | 2590469.78 | 0.381502219 |
| 2014-2015 | 962212.14 | 2611948.59 | 0.368388621 |
| MEAN | | | 0.452725082 |
| SD | | | 0.108563144 |
| CV | | | 23.97992686 |
| COEFFICIENT OF CORRELATION (r) | | | 0.784479 |
| <i>SOURCE: SECONDARY DATA</i> | | | |

Table 8.4 exhibits that current liabilities to total liabilities of Ashok Leyland Ltd has mean value of 0.4527 .Standard deviation of current liabilities to total liabilities has 0.10856 with highest coefficient of variation of 23.9799.The current liabilities has highest value of 1013923.76 at the end of March 2013 & lowest value of 563001.34 for the period of March 2011.The total liabilities has the highest value of 2611948.59 at the end of March 2015 & lowest value of 1250906.16 for the period of March 2012.The coefficient of correlation of current liabilities to total liabilities is perfect positive of (+0.7844) and therefore, suggest that there is a strong correlation between current liabilities & total liabilities.

Hypothesis

$H_0: \mu_1 = \mu_2$ (There is no significant relationship between Current Liabilities to Total liabilities among Ashok Leyland Ltd)

$H_1: \mu_1 \neq \mu_2$ (There is a significant relationship between Current liabilities to Total liabilities among Ashok Leyland Ltd)

Table: 8.4(b) Analysis of F- Test

| LONG TERM | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|--|--------------------|----------------------|--|------------------------|
| Current liabilities to total liabilities | $V_1=4$ & $V_2=4$ | 0.0701 | 6.3882 | ACCEPTED |

Since the calculated value of F (0.0701) is less than the table value (6.3882) as shown in table 8.4(b), null hypothesis is accepted .It is therefore, concluded that there is no significant relationship between the current liabilities to total liabilities among Ashok Leyland Ltd.

Profitability Analysis

Profitability ratios compare the income statement accounts and categories to show a company's ability to generate profits from its operations. Profitability ratios focus on a company's return on investment in inventory and other assets. These ratios basically show how well companies can achieve profits from their operations. The following profitability analyses are

(8.5) Gross Profit Ratio

This ratio is also known as “Gross Margin Ratio” or “Trading Margin Ratio”. It shows the relationship between the gross profit to net sales and is generally expressed in percentage. In other words, it expressed the gross margin as a percentage of sales.

Gross profit ratio = Gross profit / Net sales

Table 8.5 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | GROSS PROFIT (in lakhs) | NET SALES (in lakhs) | GROSS PROFIT RATIO |
|--------------------------------|----------------------------|-------------------------|-----------------------|
| 2010-2011 | 387299.85 | 1844819.92 | 6.155852328 |
| 2011-2012 | 113564.39 | 2410390.1 | 4.711452723 |
| 2012-2013 | 71768.11 | 2548822.83 | 2.815735529 |
| 2013-2014 | 241804.87 | 2255349.89 | 10.72139055 |
| 2014-2015 | 387299.85 | 2374627.7 | 16.30991881 |
| MEAN | | | 8.14287 |
| SD | | | 4.424377 |
| CV | | | 54.33437 |
| COEFFICIENT OF CORRELATION (r) | | | -0.70437397 |
| SOURCE: SECONDARY DATA | | | |

As per table 8.5 it has been found that gross profit to Net sales of Ashok Leyland Ltd has mean value of 8.1428. Standard deviation of gross profit ratio has 4.4243 with highest coefficient of variation of 54.3343. The gross profit has highest value of 387299.85 at the end of March 2011 and there is a sudden decreasing up to the end of March 2014 & lowest value of 71768.11 for the period of March 2013. The net sales has the highest value of 2548822.83 at the end of March 2013 & lowest value of 1844819.92 for the period of March 2011. The coefficient of correlation of gross profit ratio is perfect negative of (-0.7043) and therefore, suggest that there is a strong correlation between gross profit & net sales.

Hypothesis

H₀: $\rho = 0$ (There is no significant relationship between gross profit ratio among Ashok Leyland Ltd)

H₁: $\rho \neq 0$ (There is a significant relationship between gross profit ratio among Ashok Leyland Ltd)

Table: 8.5(b) Analysis of F- Test

| PROFITABILITY | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|--------------------|---------------------------------------|----------------------|--|------------------------|
| Gross Profit Ratio | V ₁ =4 & V ₂ =4 | 0.3044 | 6.3882 | ACCEPTED |

Since the calculated value of F (0.3044) is less than the table value (6.3882) as shown in table 8.5(b), null hypothesis is accepted. It is therefore, concluded that there is no significant relationship between the gross profit ratio among Ashok Leyland Ltd.

(8.6) Net Profit Ratio

This ratio is also known as “the net profit to sales ratio”. It measures the rate of the net profit per unit sale. It is determined by the net profit to the net sales for period.

Net profit ratio = Net profit after taxes / Net sales

Table 8.6 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | NET PROFIT (in lakhs) | NET SALES (in lakhs) | NET PROFIT RATIO |
|-----------|--------------------------|----------------------|------------------|
| 2010-2011 | 105497.41 | 1836241.95 | 5.745289176 |
| 2011-2012 | 119727.59 | 2401909.93 | 4.984682752 |
| 2012-2013 | 99968.33 | 2538552.65 | 3.938004989 |
| 2013-2014 | 46308.78 | 2242462.67 | 2.065085882 |

| | | | |
|--------------------------------|----------|------------|-------------|
| 2014-2015 | 36418.71 | 2350561.03 | 1.549362452 |
| MEAN | | | 3.656485 |
| SD | | | 1.482058 |
| CV | | | 40.53232 |
| COEFFICIENT OF CORRELATION (r) | | | -0.07656217 |
| SOURCE: SECONDARY DATA | | | |

The above table 8.6 which depicts that net profit to net sales of Ashok Leyland Ltd has mean value of 3.6564. Standard deviation of net profit ratio has 1.4820 with highest coefficient of variation of 40.5323. The net profit has highest value of 119727.59 at the end of March 2012 & lowest value of 36418.71 for the period of March 2015. The net sales has the highest value of 2538552.65 at the end of March 2013 & lowest value of 1836241.95 for the period of March 2011. The coefficient of correlation of net profit ratio is perfect negative of (-0.0765) and therefore, suggest that there is a weak correlation between Net profit after tax & Net sales.

Hypothesis

$H_0: \rho = 0$ (There is no significant relationship between Net profit ratio among Ashok Leyland Ltd)

$H_1: \rho \neq 0$ (There is a significant relationship between Net profit ratio among Ashok Leyland Ltd)

Table: 8.6(b) Analysis of F- Test

| PROFITABILITY | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|------------------|--------------------|----------------------|--|------------------------|
| Net Profit Ratio | $V_1=4$ & $V_2=4$ | 0.0198 | 6.3882 | ACCEPTED |

Since the calculated value of F (0.0198) is less than the table value (6.3882) as shown in table 8.6(b), null hypothesis is accepted. It is therefore, concluded that there is no significant relationship between the Net profit ratio among Ashok Leyland Ltd.

Activity Or turnover Analysis

Performance or activity ratios are usually calculated on the basis of cost of sales the ratio is known as turnover ratio. Activity ratios measure the efficiency of asset management. The efficiency in asset utilization the use of assets would be reflected by the speed with which they are converted into sales. Activity ratios indicate the relationship between various assets of the firm. The following activity ratios are

(8.7) Stock Turnover Ratio

This ratio is also known as inventory turnover ratio or stock velocity ratio. It establishes the relationship between average stock at cost and cost of goods sold.

Stock Turnover Ratio = Cost of goods sold / Average stock

Table 8.7 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | COST OF GOODS SOLD (in lakhs) | AVERAGE STOCK (in lakhs) | STOCK TURNOVER RATIO |
|--------------------------------|-------------------------------|--------------------------|----------------------|
| 2010-2011 | 1793901.7 | 192357.17 | 9.325889438 |
| 2011-2012 | 2341618.81 | 221976.43 | 10.54895247 |
| 2012-2013 | 2610320.76 | 206332.30 | 12.6510525 |
| 2013-2014 | 2484267.54 | 154236.195 | 16.1069037 |
| 2014-2015 | 2687193.29 | 129361.515 | 20.77274134 |
| MEAN | | | 13.8811079 |
| SD | | | 3.7818666 |
| CV | | | 27.2447029 |
| COEFFICIENT OF CORRELATION (r) | | | -0.04787 |
| SOURCE: SECONDARY DATA | | | |

Table 8.7 shows that cost of goods sold to average stock of Ashok Leyland Ltd has mean value of 13.8811. Standard deviation of stock turnover ratio has 3.7818 with highest coefficient of variation of 27.2447. The cost of goods sold has

highest value of 2687193.29 at the end of March 2015 & lowest value of 1793901.7 for the period of March 2011. The average stock has the highest value of 221976.43 at the end of March 2012 & lowest value of 129361.515 for the period of March 2015. The coefficient of correlation of stock turnover ratio is perfect negative of (-0.0478) and therefore, suggest that there is a medium correlation between cost of goods sold & average stock.

Hypothesis

$H_0: \rho_1 = \rho_2$ (There is no significant relationship between Cost of goods sold to Average stock among Ashok Leyland Ltd)

$H_1: \rho_1 \neq \rho_2$ (There is a significant relationship between Cost of goods sold to Average stock among Ashok Leyland Ltd)

Table: 8.7(b) Analysis of F- Test

| TURNOVER RATIO | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|----------------------|--------------------|----------------------|--|------------------------|
| Stock Turnover Ratio | $V_1=4$ & $V_2=4$ | 86.2770 | 6.3882 | REJECTED |

Since the calculated value of F (86.2770) is more than the table value (6.3882) as shown in table 8.7(b), null hypothesis is rejected. It is therefore, concluded that there is a significant relationship between the Cost of goods sold to Average stock among Ashok Leyland Ltd.

(8.8) Working Capital Turnover Ratio

A measurement comparing the depletion of working capital to the generation of sales over a given period. This provides some useful information as to how effectively a company is using its working capital to generate sales.

Working capital turnover ratio = Cost of goods sold or sales / Net working capital

Table 8.8 Mean, Standard deviation, Coefficient of variation & Correlation

| YEAR | COGS (OR) SALES (in lakhs) | NET WORKING CAPITAL (in lakhs) | WORKING CAPITAL TURNOVER RATIO |
|--------------------------------|----------------------------|--------------------------------|--------------------------------|
| 2010-2011 | 1996620.42 | 201789.84 | 9.894553759 |
| 2011-2012 | 2581147.56 | -31591.80 | -81.70308624 |
| 2012-2013 | 2701936.39 | -153881.89 | -17.55850796 |
| 2013-2014 | 2385940.42 | -175037.09 | -13.63105625 |
| 2014-2015 | 2504677.88 | -140238.88 | -17.86008188 |
| MEAN | | | -24.17163571 |
| SD | | | 27.88382461 |
| CV | | | -115.3576239 |
| COEFFICIENT OF CORRELATION (r) | | | -0.80235 |
| SOURCE: SECONDARY DATA | | | |

As per table 8.8 it has been found that working capital turnover ratio of Ashok Leyland Ltd has mean value of -24.1716. Standard deviation of COGS to net working capital turnover ratio of 27.8838 with highest coefficient of variation of -115.3576. The sales has highest value of 2701936.39 at the end of March 2013 & lowest value of 1996620.42 for the period of March 2011. The networking capital has highest value of 201789.84 at the end of March 2011 & lowest value of -31591.80 for the period of March 2012. The coefficient of correlation of working capital turnover ratio is perfect negative of (-0.8023) and therefore, suggest that there is a strong correlation between sales & networking capital.

Hypothesis

$H_0: \rho_1 = \rho_2$ (There is no significant relationship between sales to net working capital among Ashok Leyland Ltd)

$H_1: \rho_1 \neq \rho_2$ (There is a significant relationship between sales to net working capital among Ashok Leyland Ltd)

Table: 8.8(b) Analysis of F- Test

| TURNOVER RATIO | Degrees Of Freedom | F (calculated value) | Table value (at 5 % level of significance) | H0: ACCEPTED /REJECTED |
|--------------------------------|--------------------|----------------------|--|------------------------|
| Working capital turnover ratio | $V_1=4$ & $V_2=4$ | 2.9853 | 6.3882 | ACCEPTED |

Since the calculated value of F (2.9853) is less than the table value (6.3882) as shown in table 8.8(b), null hypothesis is accepted. It is therefore, concluded that there is no significant relationship between the Sales to Networking capital among Ashok Leyland Ltd.

(IX) Findings

- Current ratio of Ashok Leyland Ltd shows that the current asset & current liabilities has highest value of 858078.01 & 1013923.76 at the end of March 2013 and compare to the remaining period lowest value of 635193.94 & 812345.6 at the end of March 2011. To conclude that there is no significant relationship between the current assets to current liabilities among Ashok Leyland Ltd.
- The coefficient of correlation of quick ratio is perfect positive of (+0.2715) and therefore, suggests that there is a weak correlation between liquid assets & current liabilities. To conclude that there is no significant relationship between the liquid assets to current liabilities among Ashok Leyland Ltd.
- Standard deviation of current assets to total assets has 0.1458 with highest coefficient of variation of 32.1122. To conclude that there is no significant relationship between the current assets to total assets among Ashok Leyland Ltd.
- Current liabilities to total liabilities of Ashok Leyland Ltd gives the clear picture that mean value of 0.4527. To conclude that there is no significant relationship between the Current liabilities to total liabilities among Ashok Leyland Ltd.
- The gross profit has highest value of 387299.85 at the end of March 2011 and there is a sudden decreasing up to the end of March 2014 & lowest value of 71768.11 for the period of March 2013. To conclude that there is no significant relationship between the gross profit among Ashok Leyland Ltd.
- The net sale has highest value of 2538552.65 at the end of March 2013. The coefficient of correlation of net profit ratio is perfect negative of (- 0.0765) and therefore, suggest that there is a weak correlation between Net profit after tax & Net sales. To conclude that there is no significant relationship between the Net profit ratio among Ashok Leyland Ltd.
- The cost of goods sold has highest value of 2687193.29 at the end of March 2015 & average stock has the highest value of 221976.43 at the end of March 2012. To conclude that there is a significant relationship between the cost of goods sold to average stock among Ashok Leyland Ltd.
- Standard deviation of COGS to net working capital turnover ratio of 27.8838 with highest coefficient of variation of -115.3576. To conclude that there is no significant relationship between the Sales to Networking capital among Ashok Leyland Ltd.

(10) Conclusion

Ashok Leyland is a distant second in the segment with a nearly 13% market share of all commercial vehicle sales, including small goods carriers. The firm's large trucks and buses are popular, but it has had limited success in smaller capacity truck models. Ashok Leyland is a market leader in buses and a leading vehicle supplier to the Indian armed forces. The company has recently tied up with Nissan for manufacturing light commercial vehicles and engines. Government of India aims to make automobiles manufacturing the main driver of 'Make in India' initiative, as it expects passenger vehicles market to triple to 9.4 million units by 2026, as highlighted in the Auto Mission Plan (AMP) 2016-26. The government plans to promote eco-friendly cars in the country i.e. CNG based vehicle, hybrid vehicle, and electric vehicle and also made mandatory of 5 per cent ethanol blending in petrol. The Automotive Mission Plan (AMP) envisages increase in production of automotive industry from the current level of Rs.169000 crore to reach Rs. 600000 crore by 2016.

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