Impact of Working Capital Management on Profitability of the Select Car Manufacturing Companies in India

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Abstract

The working capital management has an important role in the firm’s success or failure because of its effect on firm’s performance and liquidity. The study is based on the secondary data collected from prowess database for the period 2007 to 2016 with an attempt to investigate the relationship between working capital management components and performance of the firms by using dynamic panel data analysis. The Indian Automobile Industry is one of the largest firms in the world with an annual production of 29.36 million vehicles in Financial Year 2015-2016. Indian Automobile Industry and plays a pivotal role in the growth of Indian Economy. The Automobile Industry accounts for 22 per cent of the country are manufacturing Gross Domestic Product (GDP). For the purpose of the study Eight Indian Automobile Companies are taken for analysis. Return on Asset is introduced as a dependent variable for measuring profitability of the company. Debtor Turnover Ratio, Inventory Turnover Ratio, Working Capital Turnover Ratio, Current Asset Turnover Ratio, Fixed Asset turnover Ratio are introduced as independent variables. The result of the analysis reveals that the efficiency of working capital management of the companies covered in the study are influenced by the Debtor Turnover Ratio, Inventory Turnover Ratio and Current Asset Turnover Ratio.

Keywords: Working capital management, profitability, working capital ratios.
1. **Introduction**

Each and every business has to plenty liquid resources in the short term to continue everyday cash flow required for operations. However, this does not mean working capital is only significant in the short run because sufficient liquidity asset is also desirable to safeguard the survival of the professional in the long run. The total capital of company is divided into fixed capital and working capital. The board of working capital has regularly abandoned resulting in sub finest consumption of not only working capital but also fixed capital management of working capital. These efforts would simultaneously activate the flow of funds by focusing attention on strangles. This working capital offers in common firm of profitability and liquidity management.

2. **Review of Literature**

1. **L.Moorthy and R.Rajavathana (2013)** they found that both the companies had insignificant relationship with profitability. Although cash conversion cycle of both the company had positive relationship with profitability but average collection period and average payment period of both the companies proved to be in negative relationship with the profitability.

2. **Bhagchi, Kamrui (2012)** they studied that the impact of working capital management on profitability. After conduct familiarity tests, Pearson’s Correlation and panel data regression, it revealed that there is a significant negative relation between the working capital management and firm profitability.

3. **Kulkanya napompech(2012)** he shows a negative relationship between the gross operating profits and inventory conversion period and receivable collection period by limitations of the cash conversion cycle.

4. **Shin and Soenen (1998)** they highlight the efficient Working Capital Management. They identifies that there is a tough pessimistic relationship between extent of the firm's net trading cycle and its profitability.

5. **Vijaykumar and Venkatachalam (1995)** they conclude over correlation and regression analysis that liquid ratio inventory turnover ratio, receivables turnover ratio and cash turnover ratio influence the profitability.

3. **Objectives of the Study**

The following are the objectives of the study

1. To analyze the development of Indian Automobile Industry.

2. To assess the impact of working capital on profitability of the selected Automobile Companies in India.

**Scope of the Study**

The present study includes an empirical analysis of working capital
management of Indian automobile companies in India. The scope of working capital is very wide and broad-based for theoretical understanding, the meaning and definition of working capital and various concepts have come under the purview of this study. The second part is confined to the various approaches to the study of the working capital management.

4. Research Methodology

Sample Size

The present study is descriptive and analytical and the data used for the study is secondary data, by selecting all the eight Automobile Companies which were before liberalization. All the eight manufacturing units among the large commercial car manufacturing companies are selected for the study.

The most essential source of data analyzed and interpret in this study narrate to all those data which is collected from “PROWESS” database. This is the most reliable on the empower corporate record of CMIE.

Sample

The samples are,
1. Maruti Suzuki.
2. Fiat India.
3. Ford India.
4. Hindustan Motors.
5. Honda Cars India Ltd.
7. Mahindra & Mahindra.
8. Toyota.

Data Analysis Technique

Data are analyzed with the help of statistical tool like average, Percentage, CAGR (Compound Annual Growth Rate), AAGR (Average Annual Growth Rate), trend, Correlation coefficient and Regression analysis.

Data Collection

The data used in this study are acquired from “PROWESS” database for a period of last ten years from 2007-2016

India’s Automobile Production

The automobile industry chains wide variety of business segments, together upstream and downstream, along with flanking industries. This leads to support various effects for the expansion and economic development. Automobile Industry contributes to quite a few important dimensions of nations building: generating government income, creating economic development, encouraging society development and promotion R&D and innovation.
### Table 1: Year wise Sales of Automobiles industries in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Ford Annual Growth Rate %</th>
<th>Fiat India Annual Growth Rate %</th>
<th>Hindustan Motor Annual Growth Rate %</th>
<th>Honda Cars Annual Growth Rate %</th>
<th>Hyundai Motors Annual Growth Rate %</th>
<th>Mahindra &amp; Mahindra Annual Growth Rate %</th>
<th>Maruti Suzuki Annual Growth Rate %</th>
<th>Toyota Annual Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-07</td>
<td>17.99</td>
<td>32.96</td>
<td>28.01</td>
<td>10.98</td>
<td>11.25</td>
<td>22.57</td>
<td>87.16</td>
<td>20.65</td>
</tr>
<tr>
<td>2007-08</td>
<td>15.06</td>
<td>5.57</td>
<td>-9.97</td>
<td>-4.94</td>
<td>15.34</td>
<td>18.54</td>
<td>-1.85</td>
<td>32.38</td>
</tr>
<tr>
<td>2008-09</td>
<td>3.43</td>
<td>-24.06</td>
<td>-0.72</td>
<td>4.89</td>
<td>53.72</td>
<td>-27.74</td>
<td>4.84</td>
<td>22.5</td>
</tr>
<tr>
<td>2010-11</td>
<td>26.52</td>
<td>34.03</td>
<td>29.12</td>
<td>26.98</td>
<td>-0.4</td>
<td>64.5</td>
<td>55.85</td>
<td>34.34</td>
</tr>
<tr>
<td>2011-12</td>
<td>5.47</td>
<td>22.13</td>
<td>9.97</td>
<td>15.56</td>
<td>14.17</td>
<td>25.14</td>
<td>34.41</td>
<td>27.13</td>
</tr>
<tr>
<td>2012-13</td>
<td>2.7</td>
<td>-10.38</td>
<td>-4.49</td>
<td>2.052</td>
<td>10.26</td>
<td>-13.63</td>
<td>-16.47</td>
<td>0.47</td>
</tr>
<tr>
<td>2013-14</td>
<td>-4.42</td>
<td>-16.04</td>
<td>-1.14</td>
<td>7.23</td>
<td>6.094</td>
<td>-3.71</td>
<td>75.98</td>
<td>6.52</td>
</tr>
<tr>
<td>2014-15</td>
<td>10.03</td>
<td>11.82</td>
<td>-22.58</td>
<td>16.92</td>
<td>10.03</td>
<td>12.82</td>
<td>-23.58</td>
<td>17.92</td>
</tr>
<tr>
<td>2015-16</td>
<td>9.02</td>
<td>11.03</td>
<td>59.45</td>
<td>12.54</td>
<td>9.02</td>
<td>11.03</td>
<td>59.45</td>
<td>12.54</td>
</tr>
<tr>
<td>AAGR</td>
<td>10.78%</td>
<td>9.99%</td>
<td>10.84%</td>
<td>11.50%</td>
<td>15.89%</td>
<td>14.99%</td>
<td>25.84%</td>
<td>22.50%</td>
</tr>
<tr>
<td>CAGR</td>
<td>10.32%</td>
<td>7.03%</td>
<td>9.82%</td>
<td>10.96%</td>
<td>15.10%</td>
<td>12.34%</td>
<td>20.82%</td>
<td>23.96%</td>
</tr>
</tbody>
</table>

### Nature of relation on working capital and profitability

The study uses correlation co-efficient to check linear relationship between the variables of working capital on profitability, whereas regression analysis is used to assess the impact of various variables of working capital on Return on Asset of the selected automobile companies. The independent variables taken are Debtor Turnover Ratio, Inventory Turnover Ratio, Working Capital Turnover Ratio, Current Asset Turnover Ratio and Fixed Asset turnover Ratio. Whereas ratio of Return on Asset is taken as a dependent variable for checking profitability of the companies SPSS Software is used to analyze the data.

### Table 2: Impact of Working Capital Management on Profitability Auto Cars

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debtor Turnover Ratio</td>
<td>0.848**</td>
<td>0.719</td>
</tr>
<tr>
<td>Inventory Turnover Ratio</td>
<td>0.736**</td>
<td>0.542</td>
</tr>
<tr>
<td>WCR</td>
<td>-0.306</td>
<td>0.094</td>
</tr>
<tr>
<td>FTR</td>
<td>0.203</td>
<td>0.041</td>
</tr>
<tr>
<td>CTR</td>
<td>-0.293</td>
<td>0.086</td>
</tr>
</tbody>
</table>

**Source:** Result obtained by using SPSS software

* Significant at five per cent level **Significant at one per cent level
Out of five variables selected for analysis, working capital turnover ratio and current asset turnover ratios are found to be negatively correlated whereas debtor turnover ratio, inventory turnover ratio and fixed asset turnover ratio are found to be positively correlated with profitability.

Table 3: Impact of Working Capital Management on Profitability Auto Cars

<table>
<thead>
<tr>
<th>Regression Coefficient</th>
<th>Standard Error</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debtor Turnover Ratio</td>
<td>0.019**</td>
<td>0.004</td>
</tr>
<tr>
<td>Inventory Turnover Ratio</td>
<td>0.151*</td>
<td>0.056</td>
</tr>
<tr>
<td>WCR</td>
<td>0.000*</td>
<td>0.000</td>
</tr>
<tr>
<td>FTR</td>
<td>0.017</td>
<td>0.072</td>
</tr>
<tr>
<td>CTR</td>
<td>0.000**</td>
<td>0.000</td>
</tr>
</tbody>
</table>

* Significant at five per cent level **Significant at one per cent level

Source: Result obtained by using SPSS software

The regression coefficient indicates that Debtor Turnover Ratio positively influences the level of profit. The value of regression coefficient indicates that a unit of increase in Debtor Turnover Ratio shall increase the profit by 0.019 units. High level of Debtor Turnover Ratio leads to quantify a firm’s effectiveness in extending credit as well as collecting debts. Inventory turnover ratio and working capital turnover ratios are positively influences the level of profit. The value of regression coefficient indicates that a unit of increase in Inventory Turnover Ratio shall increase 0.151 units. High level of Inventory Turnover Ratio indicates managerial efficiency. Current Asset Turnover Ratio positively influences the level of profit.

The R^2 value is found to be significant at one percent level. This shows that the regression equation outlined is a worthy suitable. About 82.30 per cent of variation in level of profit is due to the selected variables.

5. Findings

Out of five independent variables introduced, only two variables are significant at five per cent level. This displays that the regression equation framed is a worthy suitable. About 82.30 per cent of variation in profit level due to the select variables.

Return on Asset is introduced as dependent variable for measuring profitability of the company. Debtor Turnover Ratio, Inventory Turnover Ratio, Working Capital Turnover Ratio, Current Asset Turnover Ratio, Fixed Asset Turnover Ratio are introduced as independent variables. Out of five independent variables introduced two variables are to be significant. Debtor Turnover Ratio, Inventory Turnover Ratio are to be found at five per cent level.
6. Suggestion

Working Turnover Ratio is found to be low among Hindustan Motor and Fiat India. These companies have to utilize current assets to an optimum extent, in order to the firm’s capacity to emolument its current liabilities with its current assets. And Current Asset Turnover Ratio is found to be low in Maruti Suzuki. These companies have to increase current assets to an optimum extent, in order to reduce the investment level. Higher this ratio is better because it will tell that more products can be sold with less investment in current assets. Profitability of Ford and Fiat India are found to be low. Hence in order to increase their profitability, the companies may produce and sell wide range of products up to the expectation of customers.

7. Conclusion

The automobile company plays a vital role of India’s economy. That is to be found to become one of the worlds the majority striking automobile markets for both producers and consumers. The outcome assistance of the companies to have economic stability, better employment, and permanency of families hired by the automobile industry. In addition, Automobile Companies may adopt better marketing strategies to attract new customer and to retain their existing customer by offering attractive discounts, prices, more number of sales services at the door step of the customers.

References


