Leverage Analysis: Measuring impact on return on equity

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Abstract: Leverage analysis is an important tool in the hands of business firm. Through leverage analysis firm can analyze the impact of fixed cost expenses on return to equity share holders during fluctuating revenue.
This is a case study measuring the impact of fixed cost expenses on return to equity share holders. Data is retrieved from the financial statements of the concern for three years and accordingly the current status of operating leverage, financial leverage and combined leverage is analyzed and it’s impact on return to equity is concluded.
During the period of study, operating leverage, financial leverage and combined leverage is not favorable due to decline in revenue.

Keywords: Trading on Equity, Operating Leverage, Financial Leverage, Combined Leverage, Leverage Analysis.

I. Introduction:
The concern is a midcap firm listed in NSE & BSE stock exchanges. It is a company limited by shares. It is a pioneer firm in the manufacturing of irrigation system in Asia.
During the last consecutive years company disclosed lots of fluctuation in sales. Such fluctuation in sales is short term in nature and caused by the extreme weather condition and decline in oil and polymer prices (Press Release, 2014).
In such prevailing condition, it is desirable to undertake the leverage analysis and ascertain impact of fluctuating sales on return to share holders.

II. Literature Review:
A] Leverage Analysis:
Dictionary meaning of leverage refers “the act of using a lever to open or lift something; the force used to do this” (Hornby, 2005). In financial term leverage analysis refers to “influence of one financial variable over other financial variable” (Monga).
Leverage analysis involves analysis of impact of fixed cost on return to share holders. It involves mainly three types of Leverages as under.

a] Operating Leverage:
It is defined as the firm’s ability to use fixed operating cost to magnify effects of changes in sales on its earnings before interest and taxes. Operating leverage occurs when a firm has fixed operating costs which must be met regardless of volume of sales. It is ratio between percentage change in EBIT divided by Percentage change in sales.

b] Financial Leverage:
It is defined as the ability of a firm to use fixed interest charges to magnify the effects of changes in EBIT /Operating Profits, on the firm’s earning per share. Financial leverage occurs when a firm’s capital structure contains obligation of fixed financial charges i.e. interest cost. It is ratio between percentage change in EPS divided by Percentage change in EBT.

c] Combined Leverage:
Operating leverage explains the operating risk and financial leverage explains the financial risk of firm. However, a firm has to look into overall risk or total risk of the firm i.e., combined risk which is measured by combined leverage. It is ratio between percentage change in EPS divided by Percentage change in sales.

Importance of Leverage Analysis:
- Operating leverage helps to analyze the impact of fixed operating cost on return to equity share holders.
- Financial leverage helps to analyze the ability of firm to raise the borrowed money in order to maximize the return on equity. It analyze impact of fixed Interest cost.
- Combined leverage helps to analyze the overall risk firm is exposed to i.e. operating risk and financial risk (Monga).
III. Objectives of the Study:

- To Analyze the prevailing status of three leverages.
- To ascertain the impact of changes in these leverages on return to equity share holders.
- To identify the strength and weakness in leverages of the concern.

IV. Research Methodology:

A] Research Type:
It is an analytical research based on the secondary data. It investigates the financial figures of the concern using theoretical framework of leverage analysis. Financial statements of 3 years i.e. 2011-12, 2012-13 & 2013-14 is comparatively analyzed to indentify strength and weakness in leverage analysis.

B] Type of Data: Secondary Data
Secondary data involves figures relating to income statements reported in annual report of the business firm for three years i.e. 2011-12, 2012-13 & 2013-14. Also some important information is collected by various sources of secondary data such as books, websites, and official release of business firm.

C] Analysis tools and techniques:
Figures are analyzed using basic mathematical tools like average and percentage etc. and it is interpreted using various kinds of charts and graphs.

V. Data Analysis & Interpretation:

1. Degree of Operating Leverage

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contri</td>
<td>1236.439</td>
<td>986.064</td>
<td>1085.083</td>
</tr>
<tr>
<td>EBIT</td>
<td>696.086</td>
<td>490.871</td>
<td>360.758</td>
</tr>
<tr>
<td>Ratio</td>
<td>1.78</td>
<td>2.01</td>
<td>3.01</td>
</tr>
</tbody>
</table>

(Source: Annual Report of the Concern)

Interpretation: Figure 1 denotes that contribution is marginally declined during 2012-13 and marginally increased in 2013-14 due to fluctuation in sales turnover. EBIT on the other hand is declined throughout these three years. Such decline in EBIT is result of increasing degree of operating leverage i.e. 1.78, 2.01 and 3.01 during these three years.

2. Degree of Financial Leverage

Table 2: Degree of Financial Leverage (I in Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT</td>
<td>696.086</td>
<td>490.871</td>
<td>360.758</td>
</tr>
<tr>
<td>EBT</td>
<td>272.609</td>
<td>48.674</td>
<td>-30.085</td>
</tr>
<tr>
<td>Ratio</td>
<td>2.55</td>
<td>10.08</td>
<td>-11.99</td>
</tr>
</tbody>
</table>

(Source: Annual Report of the Concern)

Interpretation: Figure 2 denotes that EBIT is declining during these three years but EBT is declining sharply if compared with EBIT. This is because degree of financial leverage is increased tremendously in 2012-13 i.e. 10.08. that reflects existence of finance fixed cost causes negative impact on the return if there is decline in EBIT.
Percentage change in EBT is more than percentage change in EBIT.

3. **Degree of Combined Leverage:**

Table 3: Degree of Combined Leverage (In Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution</td>
<td>1236.439</td>
<td>986.064</td>
<td>1085.083</td>
</tr>
<tr>
<td>EBT</td>
<td>272.609</td>
<td>48.674</td>
<td>-30.085</td>
</tr>
<tr>
<td>Ratio</td>
<td>4.54</td>
<td>20.26</td>
<td>-36.07</td>
</tr>
</tbody>
</table>

(Source: Annual Report of the Concern)

Figure 3: Degree of Combined Leverage

Interpretation: Figure 3 denotes that degree of combined leverage is very high and firm is exposed to high risk.

4. **Analysis of Return on Equity Share Holder’s Fund:**

Table 4: Return on Equity Fund (In Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income</td>
<td>268.299</td>
<td>30.106</td>
<td>3.903</td>
</tr>
<tr>
<td>After Tax</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share Holder</td>
<td>1911.957</td>
<td>2336.662</td>
<td>2352.869</td>
</tr>
<tr>
<td>Fund</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio (%)</td>
<td>14.03</td>
<td>1.29</td>
<td>0.17</td>
</tr>
</tbody>
</table>

(Source: Annual Report of the Concern)

Figure 4: Return on Equity

Interpretation: Figure 4 denotes that earnings available to equity share holders is declining during these three years. This is the evident that due to increasing degree of operating, financial leverage, return on equity is declining.

5. **Analysis of EPS:**

Table 5: EPS (In Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
<td>6.62</td>
<td>0.7</td>
<td>0.09</td>
</tr>
</tbody>
</table>

(Source: Annual Report of the Concern)

Figure 5: EPS

Interpretation: Figure 5 denotes that as a result of increased operating and financial leverages Earning per share is declined every years i.e. 6.62, 0.70 and 0.09 respectively.

VI. **Key findings of the study:**

A. **Status of Leverages:**
- Degree of operating leverage, financial leverage and combined leverage is increased during the period of study.

B. **Impact on Return on Equity:**
- During the period of study operating leverage, financial leverage and combined leverage is increased. On the other hand return on equity is declined every years.

C. **Strength And Weakness:**
- During the period of study sales turn over is declined.
- The burden of fixed operating cost is very high in the income statement of the concern. That is small decline in sales resulted high decline in return on equity.
• As well as burden of fixed financial cost is also high in the income statement of the concern. Due to this very small portion of earning is available to equity shareholders.

VII. Conclusion & Suggestions:

• Leverage analysis is very important to those firm which are exposed to high fixed operating and finance cost. It can suggest the impact of these cost on return to share holders in fluctuating revenue conditions.
• The operating leverage, financial leverage and combined leverage are not favourable due to fluctuation in sales during these three years. As well as it is reflecting increasing trend.
• The concern hereby recommended that it should try to increase its overall sales so that it can minimize the impact of increased operating and financial leverage.

References: