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Teaching Notes

Case Summary

Rajesh Vyas, a financial advisor at a prominent brokerage in Mumbai, is examining the latest financial information from Amtek Auto Limited (Amtek Auto), an integrated automotive component manufacturer headquartered in New Delhi, India. In 2015, Amtek Auto defaulted on the INR 800 crore worth of bond payment to its lenders on account of its inability to refinance maturity obligations, resulting in a decline in stock from a high of INR 156 per share in July 2015, to INR 45 per share in Oct 2015. As instructed by his reporting manager, he was required to evaluate the financial position of the firm on the basis of information embedded in current financial statements (income statement, balance sheet, and cash flows) to inform his firm’s clients and help them develop a rationale for their investment decisions with Amtek Auto. Rajesh believed that the right understanding of various aspects of a firm’s performance including liquidity, profitability, working capital, capital structure, coverage and financial risk could reveal the underlying financial position of the company. The case puts students in a financial advisor role where they scrutinize financial statements (income statement, balance sheet and cash flow) to advise investors about the overall financial health and risk profile of a company in order to inform their investment decisions.

Teaching Objectives

The case achieves the following objectives:

- to enable students to understand the relevance and framework of various financial ratios by using real time company data;
- to help students comprehend the purpose and calculation of liquidity ratios, working capital ratios, profitability ratios, turnover ratios, capital structure ratios, and return on investment ratios;
- to offer students practice in using the financial analysis techniques generally followed in analyzing the financial risk profile of a company.

Target Audience

This case is designed for use in a postgraduate program in business management, particularly, in financial management courses. This case could also be beneficial in a banking or credit analysis elective course generally taught in MBA schools. Within these courses, the case could serve two purposes:

- discuss the best practices financial ratio analysis techniques recommended for assessing various aspects of a firm’s performance;
- to better understand the context and framework of sound financial statement analysis in understanding the overall risk profile of a target company so as to arrive at rationale investment decision.

Suggested Teaching Strategy

The case underlines the best practices financial statement analysis techniques in order to explore various aspects of Amtek Auto’s performance, including liquidity, working capital, profitability, efficiency, and financial risk. The case can be discussed within a time frame of 90 minutes using a well-directed structure discussed as follows.
The instructor may spend the first 15 minutes helping participants understand the nuances of financial statements analysis in understanding the company’s overall financial risk profile. The instructor can make the audience aware of Amtek Auto’s default on account of its inability to refinance maturity obligations and its impending consequences on its share price.

The next 25 minutes of the case discussion can center on the critical financial parameters (and resultant ratios) generally used in assessing the company’s financial position including liquidity, profitability, working capital, capital structure, efficiency, and return on investment. The instructor can then apprise students of the various formulae and components required for calculating the various listed ratios.

After discussing the formulae and calculation techniques, the instructor can now direct the attention of students towards Amtek Auto’s financial statements (income statement and balance sheet). The information for this could be found in the tables at the end of the case. At this point, the instructor could ask the participants to estimate various ratios on the basis of concepts and formulae discussed above. This exercise should consume roughly another 25 minutes.

After the students have completed their calculation of various financial ratios using the published Income Statement and Balance sheet, the last 25 minutes of the discussion should focus on the trend analysis of the numbers derived and the comparison with the industry averages. The trend and industry analysis of the financial ratios could provide the best way for the participants to understand the weakness in financial position of a company in question and advice Rajesh’s client with regards to their future investment decision in Amtek Auto shares.

**Background Information**

Instructors can offer important background information to inform students’ understanding and assessment of the financial analysis conducted in the case.

A financial analyst generally looks at the following parameters to determine the underlying financial position of a company:

**Liquidity**: Liquidity refers to the ability of the company to meet its short term obligation in the normal course of business. At any given point of time, the short term obligations (current liabilities) of the firm should be adequately covered by its current assets to ensure solvency. The financial analysis here should focus on current and prospective liquidity position of a company through various liquidity ratios.

**Working Capital Efficiency**: Working capital efficiency analyzes a target company’s performance in managing the individual items of working capital, i.e., trade receivables/debtors, inventories and trade payables/creditors. While liquidity ratios make aggregative analysis of how current liabilities are covered by total current or quick assets, working capital ratios analyze various components of working capital.

**Profitability**: To generate value for the shareholders, it is necessary that the firm generates sufficient profitability from its business after providing for expenses. Sales are profitable when the selling price of a product or service not only covers its cost, but also leaves a profit margin. The higher the profit margin, more viable and sustainable the business and better prepared it would be to cope with volatility in sales. Therefore, it is helpful to analyze how profit margins are changing over time and in relation to other firms in the same industry.

**Capital Structure & Coverage**: Capital Structure measures the extent to which a company is financed by debt or borrowed funds and help users analyze the possible implications of such financing for long term liquidity and solvency of the company. While investors generally focus on the assets side of the balance sheet...
to assess the future performance of the firm, analysis of liabilities side is an equally important task given the possible implications of sources of finance for long term liquidity, profitability, and solvency of the company.

**Efficiency:** The prime objective of investing in assets is to support the company’s business activities. Therefore, the amount of such investment should be justified by the level of sales achieved. Turnover ratios measure the efficiency with which the company utilizes its resources to generate sale revenue. The financial analysis here focuses on the efficiency or utilization of firm’s assets to generate future period’s sales or revenue.

The various financial parameters can be categorized into the following six types of financial ratios to assess the overall financial position of a company:

- liquidity ratios;
- working capital ratios;
- profitability ratios;
- capital structure ratios;
- efficiency ratios;
- return on investment ratios.

### I. Liquidity ratios

The two commonly used ratios by credit analysts to evaluate the liquidity position of a firm are current ratio and the quick (or acid test) ratio.

**Current ratio**

Current ratio, one of the frequently used ratios to measure the short term liquidity of a company, compares the amount of current assets as a multiple (or times) of current liabilities

\[
\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}}
\]

Current assets would include cash and cash equivalents, trade receivables (debtors), inventories, short term loans & advances, or any other current assets that are expected to be realized in, or is intended for sale or consumption in, the company’s normal operating cycle. Current liabilities would include short term borrowings, trade payables (creditors), short term provisions or any other current liabilities that is expected to be settled in the company’s normal operating cycle.

Generally a high current ratio (>1) indicates that the firm has adequate cash to cover up its obligations and there is little risk of default in settling its dues on time. Similarly, a low current ratio (<1) would imply that current liabilities exceeds current assets in the short term leading to a strain on liquidity. However, while a higher current ratio is desirable from the solvency point of view, excessive investments in current assets may sometimes be an indication of inefficient financial management. For example, a very high current ratio (>2) would reduce the overall return on investment in the firm as excessive cash gets tied up in inventories and trade receivables which could have been used up for more productive purposes.

**Quick ratio OR acid-test ratio**

While current ratio is an important indicator of the liquidity position of the firm, it includes inventory among
the liquid resources which is generally regarded as the least liquid among the current assets. Consequently, efficacy of current ratio is sometimes questioned as an appropriate measure of liquidity because inventory may not be readily saleable in the event of adversity. In essence, a company with a high proportion of current assets in the form of cash and trade receivables would be regarded as more liquid than a company whose current assets consist primarily of inventories. Quick or acid-test ratio excludes inventories while comparing the amount of current assets as a multiple (or times) of current liabilities.

\[
\text{quick ratio} = \frac{\text{current assets} - \text{inventories}}{\text{current liabilities}}
\]

In addition to inventories, items such as hire-purchase debtors, loans and advances made to employees or associate companies, and pre-paid expenses which cannot be readily converted to cash should also be generally excluded while calculating the quick ratio.

II. Working capital ratios

Working capital ratios analyze a firm's performance in managing the individual items of working capital, i.e., trade receivables, inventories, and trade payables.

**Trade receivables OR debtor collection period**

Trade receivables or debtor collection period measures the average number of days taken to collect payment from debtors. In essence it represents the average number of days taken to convert trade receivables or debtors into cash.

\[
\text{debtor collection period} = \frac{\text{trade receivables} \times 365}{\text{annual credit sales}}
\]

The "debtor" in the above ratio should ideally be “average debtor” held by a firm during a period. When data is available about the debtor levels at the beginning and close of the year, an estimate of the average debtor may be obtained by adding the beginning and closing balances of debtor and then dividing the sum total by two.

The lower the debtor collection period, the better it indicates efficient management of debtors and shorter working capital cycles. A high debtors' collection period generally indicates inefficient debtors' control policy which in turn could lead to excessive investment in debtors and longer working capital cycles.

In the above ratio, if the ‘credit sales’ figure is not specified, we can use ‘gross sales’ figure given in the income statement.

**Inventory holding period OR inventory days**

Inventory holding period measures the average time an item of inventory remains in stock before it is sold or used up in the normal course of business. In other words, it measures the number of days taken to convert inventory into sales.
inventory holding period = inventory × 365/annual cost of goods sold

The “inventory” in the above ratio should ideally be “average inventory” held by a firm during a period. When data is available about the inventory levels at the beginning and close of the year, an estimate of the average inventory may be obtained by adding the beginning and closing balances of stock and then dividing the sum total by two.

average inventory = (opening stock + closing stock)/2

However, if the figure of “average inventory” is not available, we can use the year-end figure of inventory.

**Trade payable days OR creditor days**

Trade payables or creditor days measure the average number of days a firm takes to pay its creditors or suppliers.

creditor days = trade payables × 365/annual credit purchases

In the above ratio, if the “credit purchases” figure is not known, we can use “total purchases.” If data on purchases is not available, an alternative may be to use the cost of goods sold as the basis.

The “creditor” in the above ratio should ideally be “average creditor” held by a firm during a period. When data is available about the creditor levels at the beginning and close of the year, an estimate of the average creditor may be obtained by adding the beginning and closing balances of creditor and then dividing the sum total by two.

The higher the creditor days, the better it indicates a shortening of working capital cycle and cost-free source of financing.

**Cash Conversion Cycle (CCC)**

Cash conversion cycle (CCC) is primarily a measure of how long cash is being tied up in working capital. CCC can be estimated as the number of debtor days plus the number of days of inventory minus the number of creditor days.

\[
CCC = \text{debtor days} + \text{inventory days} - \text{creditor days}
\]

**III. Profitability ratios**

Profitability ratios basically measure the performance of the firm by associating the profits earned during a period to sales or revenue. Profitability ratios can be measured at four sub levels:

⇒ **Gross Profit Ratio** = Gross Profit/Net Sales

where
gross profit = sales − cost of goods sold

⇒ Operating profit or Earnings before Interest and Taxes (EBIT) Ratio = Operating Profit/Net Sales

where

operating profit = gross profit − all operating expenses except interest and taxes

⇒ Profit before taxes (PBT) Ratio = Profit before Tax/Net Sales

where

profit before taxes (PBT) level = operating profit − interest expense

⇒ Net profit after taxes (PAT) Ratio = Net Profit/ Net Sales

where

net profit after taxes = profit before taxes − taxes

IV. Capital structure ratios

The various capital structure ratios generally used are enumerated below:

**Long term debt to equity ratio**

Long term debt to equity ratio is the ratio of long term debt to shareholder’s equity. Short term borrowings are not included in the debt for this ratio.

long term debt to equity ratio = long term debt/shareholders’ funds

where

long term debt = long term borrowings + long term provisions

shareholders’ funds = paid up share capital + reserves and surplus

**Total debt to equity ratio**

Total debt to equity ratio is the ratio of total debt (long term debt + short term debt) to shareholder’s equity. Unlike the previous ratio (long term debt to equity), this ratio takes into account the short term borrowings in addition to long term debt in the numerator.

total debt to equity ratio = total debt/shareholders’ funds

where
total debt = long term borrowings + current maturities of long term borrowings + short term borrowings

**Interest coverage ratio**

This ratio measures the ability of the company to service debt out of its operating earnings. It is defined as a ratio of earnings before interest and taxes (EBIT) to annual interest expense. Generally, higher the ratio, better it is as it signifies that the firm would be able to service its debt comfortably even in recessionary conditions when sales and profitability tend to decline.

Interest coverage ratio = earnings before interest and taxes (EBIT)/annual interest expense

**VI. Turnover/efficiency ratios**

The turnover ratios commonly used are:

**Asset Turnover Ratio:** Asset turnover ratio measures how efficiently firm’s assets are being utilized to generate the period’s sales. The ratio is calculated as follows:

\[
\text{total assets turnover ratio} = \frac{\text{annual sales revenue}}{(\text{total assets} - \text{noncurrent investments})}
\]

**Fixed Assets Turnover Ratio:** Fixed asset turnover ratio measures how efficiently firm’s fixed assets are being utilized to generate the period’s sales. The ratio is calculated as follows:

\[
\text{total fixed assets turnover ratio} = \frac{\text{annual sales revenue}}{\text{fixed assets}}
\]

**VII. Return on investment ratios**

The return on investment ratios commonly used are:

**Return on Capital Employed:** Return on capital employed measures the return earned by stakeholders on total capital employed in the business. The ratio is calculated as follows:

return on capital employed = earnings before interest and taxes (EBIT)/total capital employed

where

\[
\text{total capital employed} = \text{net worth} + \text{minority interest} + \text{long term borrowings} + \text{current maturities of long term borrowings} + \text{short term borrowings} + \text{deferred tax liabilities}
\]

**Return on Net-Worth (RONW):** Return on net worth measures the return from the point of view of shareholders or equity holders and is calculated by dividing the net profit available to ordinary shareholders by the shareholders’ funds or net worth.

\[
\text{return on net worth} = \frac{(\text{profit after tax} - \text{preference dividends})}{\text{shareholder’s fund or net worth}}
\]
shareholders’ funds or net worth = paid up share capital + reserves and surplus

Note: While calculating shareholders’ fund or net worth, reserves created out of revaluation of assets, write-back of depreciation and amalgamation are not be taken into account.

Suggested Answers to Discussion Questions

1. Evaluate the potential usefulness of Rajesh’s financial statement analysis.

The basic objective of financial statement analysis is to provide information that is useful to existing and potential investors, lenders and other creditors in making investment decisions about the firm. While equity investors use the information contained in financial statements (profit and loss account, balance sheet, and cash flow) to assess the future earnings and cash flows generation ability of the firm, lenders use it to assess the creditworthiness or debt paying capacity. In either case, it becomes pertinent that the users understand and interpret the large amount of data that these financial statements contain. The process of analyzing the firm using financial ratios begins with the collection of financial data from the annual reports of the companies. Generally users look at three types of financial statements, namely profit and loss account, balance sheet, and cash flow, to analyze the financial performance of the firm. Financial ratios then use information from these financial statements to provide a useful insight into the various aspects of a firm’s performance including liquidity, working capital, profitability, efficiency, net worth, return on capital employed, and financial risk.

By choosing to conduct a financial statement analysis, Rajesh has made a good decision. He will be able to assess Amtek’s various financial parameters to help investors develop rationales for their future holdings.

In the case of Amtek, most of the investors (and lenders) were caught unaware of the impending default because they failed to look beyond the broad measures of profitability or earnings. While profitability for Amtek (for the year FY 2014) was at a healthy level of INR 3234 million (see case Table 2) and revenues from operations were growing at a robust rate (reflecting significant traction in company’s products), a deeper analysis of financial statements could have revealed a significant deterioration in various financial parameters. For example, there has been an almost 100% increase in finance costs between the year FY13 and FY14 (from INR 2753 million to INR 4291 million) thereby clearly portraying a drastic deterioration in debt servicing ability of Amtek and increased probability of default in bond payments. Similarly, as evident from the balance sheet (see case Table 1), there had been a sudden fall in cash and cash equivalents from INR 6424 million in the year 2013 to INR 2233 million in the year 2014 thereby reflecting a crunch in liquidity position of the company from the point of view of bond payments to lenders. Consequently, the financial statement analysis of Amtek will allow Rajesh to uncover further weaknesses in status of Amtek’s various financial parameters and help his clients take informed decision about their current and future investments in the company (rather than being caught completely unaware again).

2. Assess whether Rajesh chose the proper financial parameters/ratios to evaluate Amtek Auto’s overall financial health and risk profile.

Students should note that Rajesh chose valid financial parameters/ratios—and that these are the typical parameters/ratios that are looked into while conducting financial statement analysis for target companies in order to assess their overall financial health. Students should note that various financial ratios can be used in
financial statement analysis to capture the financial parameters discussed above. As discussed above, the investors (and lenders) need to deeply analyze the financial statements in order to detect financial distress and risk profile rather than just being fixated on broad measure of earnings or profitability. For capturing the ability of the company to meet its short term obligations and liquidity needs on time, one of the measures is current ratio. Current ratio can provide a critical signal of impending liquidity position and financial crunch company may face in the near future. With the help of current ratio, Rajesh would be able to assess the true status of Amtek’s liquidity and advice clients on the same. Similarly, working capital efficiency ratios such as inventory days, receivables days, and creditor days would provide insight on how fast Amtek is converting its current assets into cash. Another parameter which could adequately capture the bond default status of Amtek would be interest coverage ratio. Interest coverage ratio tends to measure the ability of the company to service its debt from earnings generated from operations. With the help of this ratio, Rajesh can decipher the deteriorating position of Amtek in servicing its debt and increased probability of default. Lastly, with the help of capital structure (total debt/shareholders’ funds) ratio, Rajesh would be able to determine the overall financial risk taken by Amtek in terms of leverage/debt. A higher debt relative to shareholder’s equity is generally an indication of difficulty in servicing the debt obligations, particularly in times of adverse macroeconomic environment and reduced operating profitability as in case of Amtek (Amtek’s operating profit margin has declined from positive 17% in FY 2012 to negative 9% in FY 2015.

All the above financial ratios calculated from financial statement analysis would adequately cover the overall financial health of Amtek and create a risk profile for informed investment decision of investors.

3(a). Estimate the various financial ratios (liquidity ratios, working capital ratios, profitability ratios, turnover ratios, capital structure ratios, and return on investment ratios) for Amtek Auto using publicly available audited financial statements.

Students should understand the concept and formulae of various financial statement ratios used in analyzing the financial position of a target company (refer to the Background Information as needed) before answering this question. With that base knowledge, students can estimate the same for Amtek Auto using the tables given in the case study. Amtek Auto’s financial statement ratios are shown in Teaching Notes Table 1.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Liquidity ratios</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current ratio</td>
<td>Current assets/current liabilities</td>
<td>1.06</td>
<td>1.33</td>
<td>0.82</td>
<td>0.69</td>
</tr>
<tr>
<td>Quick ratio</td>
<td>(Current assets – inventories)/current liabilities</td>
<td>0.79</td>
<td>0.91</td>
<td>0.47</td>
<td>0.33</td>
</tr>
</tbody>
</table>
### Working capital ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
<th>Amtek Auto</th>
<th>Other Company 1</th>
<th>Other Company 2</th>
<th>Other Company 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debtor collection period (Debtor days)</td>
<td>((\text{Sundry debtors} \times 365)/\text{annual credit sales})</td>
<td>86.82</td>
<td>73.49</td>
<td>80.90</td>
<td>88.25</td>
</tr>
<tr>
<td>Inventory holding period (Inventory days)</td>
<td>((\text{Inventory} \times 365)/\text{annual cost of goods sold})</td>
<td>151.15</td>
<td>135.69</td>
<td>162.94</td>
<td>197.92</td>
</tr>
<tr>
<td>Trade payables (Creditor days)</td>
<td>((\text{Trade payables} \times 365)/\text{annual credit purchases})</td>
<td>49.29</td>
<td>25.26</td>
<td>24.92</td>
<td>12.52</td>
</tr>
<tr>
<td>Cash conversion cycle (CCC)</td>
<td>(\text{Debtor days} + \text{inventory days} - \text{creditor days})</td>
<td>188.68</td>
<td>183.92</td>
<td>218.92</td>
<td>273.66</td>
</tr>
</tbody>
</table>

### Profitability ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
<th>Amtek Auto</th>
<th>Other Company 1</th>
<th>Other Company 2</th>
<th>Other Company 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross profit ratio</td>
<td>(\text{Gross profit/net sales})</td>
<td>0.44</td>
<td>0.40</td>
<td>0.42</td>
<td>0.37</td>
</tr>
<tr>
<td>Operating profit ratio</td>
<td>(\text{Operating profit (EBIT)/sales})</td>
<td>0.17</td>
<td>0.12</td>
<td>0.12</td>
<td>-0.09</td>
</tr>
<tr>
<td>Profit before tax ratio</td>
<td>(\text{PBT/sales})</td>
<td>0.17</td>
<td>0.18</td>
<td>0.12</td>
<td>-0.05</td>
</tr>
<tr>
<td>Profit after tax ratio</td>
<td>(\text{PAT/sales})</td>
<td>0.12</td>
<td>0.14</td>
<td>0.08</td>
<td>-0.03</td>
</tr>
<tr>
<td>ROCE</td>
<td>(\text{Earnings before interest and taxes (EBIT)/total capital employed})</td>
<td>0.05</td>
<td>0.03</td>
<td>0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td>RONW</td>
<td>(\text{Profit after tax/shareholder’s fund or net worth})</td>
<td>0.07</td>
<td>0.09</td>
<td>0.06</td>
<td>-0.02</td>
</tr>
</tbody>
</table>
### Capital structure ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
<th>Current</th>
<th>Industry Average</th>
<th>Amtek 2020</th>
<th>Amtek 2019</th>
<th>Amtek 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long term debt to equity ratio</td>
<td>Long term debt/shareholders’ funds</td>
<td>0.63</td>
<td>1.11</td>
<td>1.02</td>
<td>1.19</td>
<td></td>
</tr>
<tr>
<td>Total debt to equity ratio</td>
<td>Total debt/shareholders’ funds</td>
<td>0.92</td>
<td>1.41</td>
<td>1.52</td>
<td>1.78</td>
<td></td>
</tr>
<tr>
<td>Interest coverage ratio</td>
<td>Earnings before interest and taxes (EBIT)/interest expense OR finance charges</td>
<td>4.17</td>
<td>3.14</td>
<td>2.77</td>
<td>0.95</td>
<td></td>
</tr>
</tbody>
</table>

### Efficiency/turnover ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
<th>Current</th>
<th>Industry Average</th>
<th>Amtek 2020</th>
<th>Amtek 2019</th>
<th>Amtek 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset turnover ratio</td>
<td>Annual sales revenue/(total assets – non-current investments)</td>
<td>0.29</td>
<td>0.30</td>
<td>0.33</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>Fixed assets turnover ratio</td>
<td>Annual sales revenue/fixed assets</td>
<td>0.56</td>
<td>0.44</td>
<td>0.48</td>
<td>0.38</td>
<td></td>
</tr>
</tbody>
</table>

3(b). Compare those ratios with Amtek Auto’s various competitors and industry averages.

A comparison of Amtek’s financial ratios with Industry averages ([Teaching Notes Table 2](#)) reveals the following:

**Liquidity Ratios**: In terms of liquidity ratios, Amtek scores poorly vis-à-vis industry averages. For Amtek, the current ratio is abysmal 0.69 compared to 1.13 for the industry which implies an impending liquidity crunch. Similarly quick ratio is only 0.33 compared to industry average of 0.74 which again is an indication of strained liquidity position.

**Working Capital Ratios**: In terms of working capital efficiency, it takes 273 days for Amtek to convert its products into cash through sales as compared to only 96 days for the Industry. This is on account of poor collection period and inventory turnover. Overall Amtek scores very poorly relative to the industry on working capital efficiency ratios.

**Profitability Ratios**: In terms of profitability metrics, although Amtek scores well in terms of gross profit margins, it performs very poorly on operating profitability front relative to the industry. Amtek’s operating profit
margin is negative 9% compared to positive 7% for the industry. This is attributed primarily to high interest cost burden on account of burgeoning debt levels. As a result of this, Amtek scores very poorly on return on capital employed vis-a-vis the industry from the point of view of investors.

**Capital Structure Ratios**: Amtek debt burden (relative to equity) is much higher (1.78) compared to average industry levels (0.76). This has resulted in very poor interest coverage ratio for Amtek (0.95) relative to the Industry (1.41) and has led to deterioration in its debt servicing ability.

**Turnover Ratios**: Amtek’s use of assets in generating sales compares very poorly with that of the Industry. For example, Amtek’s turnover ratio (a reflection of efficiency) is a poor 0.26 compared to 1.05 for the industry. This has resulted in lower profitability and margins for Amtek compared to that of the industry.

### Teaching Notes Table 2: Financial Ratios (Amtek Auto) – Comparison with Industry

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets/current liabilities</td>
<td>1.06</td>
<td>1.33</td>
<td>0.82</td>
<td>0.69</td>
<td>1.13</td>
<td>Poor</td>
</tr>
<tr>
<td>(Current assets-inventories)/current liabilities</td>
<td>0.79</td>
<td>0.91</td>
<td>0.47</td>
<td>0.33</td>
<td>0.74</td>
<td>Poor</td>
</tr>
<tr>
<td>(Sundry debtors x 365)/annual Credit sales</td>
<td>86.82</td>
<td>73.49</td>
<td>80.90</td>
<td>88.25</td>
<td>67.0</td>
<td>Poor</td>
</tr>
<tr>
<td>(Inventory x 365)/annual cost of goods sold</td>
<td>151.15</td>
<td>135.69</td>
<td>162.94</td>
<td>197.92</td>
<td>65.0</td>
<td>Poor</td>
</tr>
<tr>
<td>(Trade Payables x 365)/annual credit purchases</td>
<td>49.29</td>
<td>25.26</td>
<td>24.92</td>
<td>12.52</td>
<td>36.0</td>
<td>Poor</td>
</tr>
<tr>
<td>Debtor days + inventory days – creditor days</td>
<td>188.68</td>
<td>183.92</td>
<td>218.92</td>
<td>273.66</td>
<td>96.00</td>
<td>Poor</td>
</tr>
<tr>
<td>Gross profit/net sales</td>
<td>0.44</td>
<td>0.40</td>
<td>0.42</td>
<td>0.37</td>
<td>0.10</td>
<td>Good</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Operating profit(EBIT)/sales</td>
<td>0.17</td>
<td>0.12</td>
<td>0.12</td>
<td>-0.09</td>
<td>0.07</td>
<td>Poor</td>
</tr>
<tr>
<td>PBT/sales</td>
<td>0.17</td>
<td>0.18</td>
<td>0.12</td>
<td>-0.05</td>
<td>0.023</td>
<td>Poor</td>
</tr>
<tr>
<td>PAT/sales</td>
<td>0.12</td>
<td>0.14</td>
<td>0.08</td>
<td>-0.03</td>
<td>0.016</td>
<td>Poor</td>
</tr>
<tr>
<td>Earnings before Interest and taxes (EBIT)/total capital employed</td>
<td>0.05</td>
<td>0.03</td>
<td>0.04</td>
<td>-0.02</td>
<td>0.13</td>
<td>Poor</td>
</tr>
<tr>
<td>Profit after tax/shareholder’s fund or net worth</td>
<td>0.07</td>
<td>0.09</td>
<td>0.06</td>
<td>-0.02</td>
<td>0.031</td>
<td>Poor</td>
</tr>
<tr>
<td>Total debt/shareholders’ funds</td>
<td>0.92</td>
<td>1.41</td>
<td>1.52</td>
<td>1.78</td>
<td>0.76</td>
<td>Poor</td>
</tr>
<tr>
<td>Earnings before interest and taxes (EBIT)/interest expense OR finance charges</td>
<td>4.17</td>
<td>3.14</td>
<td>2.77</td>
<td>0.95</td>
<td>1.41</td>
<td>Poor</td>
</tr>
<tr>
<td>Annual sales revenue/(total assets-non current investments)</td>
<td>0.29</td>
<td>0.30</td>
<td>0.33</td>
<td>0.26</td>
<td>1.05</td>
<td>Poor</td>
</tr>
<tr>
<td>Annual sales revenue/fixed assets</td>
<td>0.56</td>
<td>0.44</td>
<td>0.48</td>
<td>0.38</td>
<td>1.10</td>
<td>Poor</td>
</tr>
</tbody>
</table>

**Source:** Created by author

### 4. Based on your trend analysis of financial ratios, what would be your suggestion to Rajesh’s clients with regards to their current holdings in Amtek Auto and future investment decisions?

After the financial statement analysis for Amtek Auto has been estimated over the past four years, students can comment on various aspects of the company’s financial performance.

**Liquidity Ratios:** Amtek Auto’s liquidity ratios have worsened over a period of last four years. While current ratio has gone down from 1.06 in the financial year 2012 to 0.69 in the financial year 2015, Quick ratio has
declined to 0.33 from 0.79 during the same period. This indicates strained liquidity position of the company on account of inadequate cash to meet its obligations and a subsequent risk of default.

**Working Capital Ratios:** Amtek Auto’s cash conversion cycle has increased from 188 days in the financial year 2012 to 273 in the financial year 2015 suggesting tie-up of funds in working capital and stretched liquidity position. An elongated cash conversion cycle is generally a reflection of inefficiency in managing various components of working capital such as debtors, creditors and inventory. Amtek Auto’s debtor, inventory and creditor days have all worsened during the past four years leading to an increase in cash conversion cycle, inferior profitability and inefficient cash flow management.

**Profitability & Return on Investment Ratios:** Amtek Auto profitability ratios have been consistently declining and turned negative in the financial year 2015. The operating profit ratio for Amtek Auto had decreased from 17% in the financial year 2012 to negative 9% in the financial year 2015 suggesting a decline in its market share and pricing power. Similarly, ROCE and RONW have turned negative in the financial year 2015 signifying inefficient allocation and use of shareholder’s resources. Overall, the profitability ratios indicate deteriorating financial position of the company on account of declining margins, increasing interest cost and insufficient cash flow generation.

**Capital Structure Ratios:** Amtek Auto’s debt to equity ratio has almost doubled from 0.92 in the financial year 2012 to 1.78 in the financial year 2015 suggesting weak internal cash flow generation ability and increased probability of default. Similarly, Amtek Auto’s interest coverage ratio has fallen from 4.17 in the financial year 2012 to 0.95 in the financial year 2015 suggesting worsening of its ability to service repayment obligations in a timely manner.

**Efficiency/Turnover Ratios:** Amtek Auto has seen a consistent decline in its efficiency ratios (Asset Turnover Ratio and fixed asset turnover ratio) implying an inefficient utilization of its fixed and current assets in generating revenues for the company. A low efficiency ratio is generally associated with inefficient use of firm’s assets and decline in sales and profitability.

Overall, the detailed financial trend and industry analysis of Amtek Auto clearly shows a deteriorating financial position along with an inability to service its debt obligations on time. The company scores very poorly on all crucial financial parameters (liquidity, working capital intensity, capital structure, profitability, and efficiency) analyzed and indicate an increased probability of default.

To sum up, the analysis of information embedded in financial statements (income statement and balance sheet) reveal the underlying deterioration in the financial position Amtek Auto vis-a-vis preceding years as well as industry averages and there could be a further meltdown in the share price of the company. Rajesh should therefore advise his clients to completely exit from the shares of Amtek Auto.

**Further Resources**
[http://dx.doi.org/10.4135/9781526427205](http://dx.doi.org/10.4135/9781526427205)