CHANGING FINANCIAL RATIOS OF BASIC METALS MANUFACTURING COMPANIES IN POLAND

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Abstract
Global industrial growth remains sluggish due to the ongoing economic recession in Europe and its growing impact on emerging industrial and developing economies. As global manufacturing output decelerates companies alter their financial strategies. These changes, impact current operations and strategic objectives of businesses operating in industrialized and developed countries. The author provides for a benchmark analysis of metal manufacturing companies in Poland, focusing on recent changes in financing structure and profitability.

Keywords: basic metals, benchmark analysis, economic downturn, Poland.

1. INTRODUCTION
While renewed growth in manufacturing seems imminent the global economic recovery faltered in 2011. Steel manufacturing has recovered since 2009 and in 2011 production (measured in thousand tons) has surpassed the levels from before the crisis (Fig. 1).

Fig. 1. Global production of steel (in thousand tons)
Source: own based on World Steel Association data.

Unfortunately global recovery is not evenly spread as both EU and North America continue to decrease their market share. In 2011 production quantities were still below those before the crisis (Fig. 2). Dynamic growth in share of global production of Asia and Oceania has stopped in 2010 and 2011 but measured in tons, production is growing.
2. BENCHMARKING

During economic crisis investors may expect that companies underperform (compared to previously assumed forecasts). During recovery investors will seek to identify the companies that provide superior performance (competitive strength), which is identified by comparing company’s key financial performance indicators in time and against those of similar companies and within the given industry. Companies able to convince investors of their superiority will be provided with funding, and will be able to exploit opportunities arising from changes in recovering markets.

Most financial performance measurement methods, which are commonly used today, were developed at the beginning of the 20th century [1]. Currently managers and investors use various methods to analyze the information provided in companies’ financial statements. One of popular methods of analyzing data in financial management is to calculate financial ratios. Ratios can be used in benchmarking, forecasting and planning. Although in management financial ratio analysis has been supplemented to include non-financial measures such as market share, customer satisfaction or product and process properties [2,3] financial measures usually form the structure of a consistent analysis.

In management benchmarking can be defined as the process of measuring products, services and practices, processes and entire businesses against competitors, leaders and industries to gain information, which will help the organization to plan actions aimed at improving its performance.

In essence, benchmarking provides a management tool for corporations to measure and compare any element of its activities against the best to identify its weaknesses and strengths [4].

Lema and Price [5] argue that for benchmarking to be applied successfully an organization has to:

- accept that it requires to change and improve its performance,
- accept that it can learn from others,
- be willing and capable of changing its policies and strategies.

Benchmarking is therefore oriented not only at planning and organizing but also at introducing innovative ideas to an organization. [6]

Financial ratios are well established in the theory of financial management. The problem is which ratios should be used in which period to provide most interesting conclusions for managers.

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**Fig. 2.** Share of European Union (EU 27), North America and Asia and Oceania in Global production of steel (in percent)

Source: own based on World Steel Association data.
3. DATA DESCRIPTION
Dataset is based on survey data published by the Polish Central Statistical Office (GUS). The survey covers economic entities with 10 and more people employed. Manufacturing refers to NACE section D. Manufacture of basic metals refers to NACE section D code 27 (Table 1). Dataset has been limited to include the period 2006-2011 in order to emphasize (rather than dilute) the effects of the current economic crisis.

**Table 1. Number of entities covered by the dataset**

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of companies</td>
<td>259</td>
<td>267</td>
<td>276</td>
<td>263</td>
<td>256</td>
<td>272</td>
</tr>
</tbody>
</table>

Source: own, data Central Statistical Office.

4. DEFINING KEY MEASURES IN A CHANGING ENVIRONMENT
Basic metal manufacturing companies suffered from a decrease in revenues in 2009 (Fig. 3). In 2010 revenues increased and in 2011 reached higher values then before the crisis.

Profitability has not recovered to the levels recorded before the crisis (Fig. 2). This is more visible in Return on Sales (ROS) ratio (Fig. 4), which is calculated as Net Profit divided by Revenues.

**Fig. 3. Revenues in Polish basic metal manufacturers, 2006-2011 (in MPLN)**
Source: own based on Polish Main Statistical Office data.

**Fig. 4. Return on Sales in Polish basic metal manufacturers, 2006-2011 (in %)**
Source: own based on Polish Main Statistical Office data.
Major changes in revenues are usually accompanied by substantial changes in net working capital (NWC) ratio, calculated as current assets minus current liabilities (Fig. 5). Comparing Fig. 3 with Fig. 5 it’s relatively easy to spot that in 2010 net working capital grew faster than revenues.

**Fig. 5.** Net Working Capital (NWC) in Polish basic metal manufacturers, 2006-2011 (in MPLN)
Source: own based on Polish Main Statistical Office data.

Net working capital in days (calculated as net working capital divided by daily revenues) provides for even clearer picture (Fig. 6). The ratio increased from 43 days in 2011 to 64 days in 2010.

**Fig. 6.** Net Working Capital (NWC) in Polish basic metal manufacturers, 2006-2011 (in MPLN)
Source: own based on Polish Main Statistical Office data.

Current assets include cash, receivables and inventories. Decreasing revenues result in lower receivables unless managers have problems collecting money from the clients. Some companies may find it difficult to adjust inventories (materials, work in progress and finished goods) especially when decrease in revenues is difficult to forecast [7]. In 2010 basic metal manufacturing companies had problems with inventories. Days of inventories outstanding ratio (DIO) ratio increased during the crisis from 50 days to 58 days in 2010 (Fig. 7). This is a result of optimistic forecasting and aggressive planning.
5. CONCLUSIONS

It’s difficult not to come to the conclusion that Polish basic metal manufacturing companies need better economists. Major changes in ROS, NWC and DIO ratios seem to suggest that these ratios are crucial for this industry in this period. Vast changes in financial standing of basic metal manufacturers indicate that managers should gather and carefully analyze financial data of competitors to benchmark their performance and position. These results are also interesting for researchers as factors inducing management decisions in prolonged economic downturn conditions are to a large degree unknown.

REFERENCES


