

Strategic financial ratio analysis

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Meghna Cement Mills Bangladesh Limited & Heidelberg Cement Bangladesh Limited For the year of 2009, 2010 & 2011| Course Title : Fin 254 Section : 11 Submitted to : SFR Submission date: 09/04/2013

External usage of the ratio analysis data is widespread. While these ratios don't tell the whole story, sharp deviations from an industry standard, can forecast growth or decline. In this project we have selected two companies from The Cement Industries of Bangladesh, one as our main company for which we intend to analyze through Ratio Calculation and the other one as the direct competitor to that company. The main company we have selected is the Heidelberg Cement and the competitor company is to be Meghna Cement Mills Bangladesh Limited. Both of these companies are enlisted in Dhaka Stock Exchange since 2007 till present.

The whole purpose of this project is to comparatively evaluate the main company (The Heidelberg Cement) to its direct competitor (The Meghna Cement Mills Bangladesh Limited), to determine the over-all strategic financial health of The Heidelberg Cement. Heidelberg Cement Bangladesh Ltd, one of the group companies of Heidelberg Cement Group, founded in Germany in 1873, with its core products being cement, ready-mixed concrete, aggregates and related activities, is one of the leading producers of building materials worldwide. The group employs around 43, 000 people in more than 50 countries.

In 1999, Heidelberg Cement acquired its operations in Bangladesh. The subsidiary Heidelberg Cement Bangladesh Ltd. , which is the market leader

in Bangladesh, operates two cement grinding plants in Dhaka, the capital city, and in Chittagong. At present it has 9.31% market shares among total market share of 78.29% of 13 major cement manufacturers in Bangladesh. The company's last estimated production from 2011 was 1,320,129 MT and observed sales were 1,318,110 MT. The last observed market value from 2001 of this company was 248.8 Taka/share and the book value was 142 Taka/share.

So the company was overvalued by the Market. These worked as the reasons for us to choose this company as a test company for The Strategic Ration Analysis. We have selected Meghna Cement Mills Bangladesh Limited to be the direct competitor of our test company for this project. Meghna Cement Mills Ltd is the first manufacturing unit of Bashundhara Group and it is one of the largest cement industries in the country producing nearly 1 million metric tons a year. The company is listed with both Dhaka and Chittagong Stock Exchanges. The last observed Share price of the company from 2011 was 136.0 Taka/share. Although it's a domestic company compared to The Heidelberg Cement, it gives quite a completion to the Heidelberg Group in Bangladesh as we are going to observe in the following part of this project.

Ratio Analysis: When we calculate the ratios of a firm we have to go through five major categories of ratios as follows:

- Liquidity Ratio : Which determines if the firm can make required payments for its maturing financial responsibilities through Liquid Cash drawn from its Assets
- Productivity Ratio: Which measures the ability of a firm to generate Sales from its employed Assets
- Leverage Ratio: These ratios put a light

on the Financial Leverages of a firm and the ability of that firm to meet those Financial Leverages effectively.

- Profitability Ratio: These ratios measure how efficiently a unit of sales is turned into profit for the company
- Valuation Ratio: These ratios are used to assess how the market is valuing the firm (share price) in relationship to assets and current earnings, profits and dividends. Liquidity Ratio: There are three different ratios under liquidity ratios as follows;
- Current Ratio

Working Capital Ratio Quick Ratio

Current Ratio: Measures the number of units of current assets to pay out for each unit of current liabilities. The formula for Current Ratio: $\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$

Company name	2011	2010	2009
Heidelberg cement	0.56 (x)	0.17 (x)	0.56 (x)
Meghna cement	0.70 (x)	0.64 (x)	0.66 (x)

Interpretation: In 2009 Heidelberg's working capital ratio was 0.56 (x) and in 2010 and in 2011 its working capital was 0.17 (x) and 0.56 (x) which implies its current asset went down and total asset went up in 2010.

In 2009 Meghna's working capital ratio was 0.66 and in 2010 and in 2011 its working capital was 0.64 and 0.70 which implies its current asset went down and total asset went up in 2010. Heidelberg holds a constant working capital ratio which decreased in 2010 and they managed to pull it up in 2011 whereas Meghna's working capital increased gradually from 2009 to 2011.

2) Working Capital Ratio: This Ratio measures the percentage of total assets that is invested in current assets. The formula of Working Capital Ratio:

Working Capital Ratio = $\frac{\text{Current Assets}}{\text{Total Assets}}$

Total Assets

Working Capital Ratio = $\frac{\text{Current Assets}}{\text{Total Assets}}$

Total Assets Company name	2011	2010	2009
Heidelberg cement	0.56 (x)	0.17 (x)	0.56 (x)
Meghna cement	0.70 (x)	0.64 (x)	0.66 (x)

Interpretation: In 2009 Heidelberg's working capital ratio was 0.56(x) and in 2010 and in 2011 its working capital was 0.17 (x) and 0.56 (x) which implies its current asset went down and total asset went up in 2010. In 2009 Meghna's working capital ratio was 0.66 (x) and in 2010 and in 2011 its working capital was 0.64 (x) and 0.70 (x) which implies its current asset went down and total asset went up in 2010.

Heidelberg holds a constant working capital ratio which decreased in 2010 and they managed to pull it up in 2011 where as Meghna's working capital increased gradually from 2009 to 2011. 3) Quick Ratio: The quick ratio gives a clearer indication of the firm's ability to meet its maturing financial obligations out of current, liquid assets. The formula for the Quick Ratio: $\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$ Quick Ratio = $\frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$

Current Liabilities

Company name	2011	2010	2009
Heidelberg	1.61	1.74	1.51
Cement	(x)	(x)	(x)
Meghna	0.86	0.80	0.79
Cement	(x)	(x)	(x)

Interpretation: In 2011 Heidelberg's current asset without its inventory was 1.61 (x) and in 2010 and 2009 it was 1.74 (x) and 1.51 (x) its current liabilities. In 2011 Meghna's current asset without its inventory was 0.86 (x) and in 2010 and in 2009 it was 0.80 (x) and 0.79 (x) its current liabilities. Heidelberg's performance declined over the year of 2009 to 2011. This decrease can be attributed to the fact that the relevant change in its current liabilities was more than the relevant change in its current asset and inventory. Whereas its competitor Meghna cement's performance increased over the year.

Productivity Ratios:

There are five different ratios under the criterion of Productivity Ratio:

Receivable Turnover Ratio

- Days Sales Outstanding (DSO)
- Inventory Turnover
- Total asset turnover ratio
- Fixed Asset turnover Ratio

Total Asset Turnover Ratio (TA TO): This ratio estimates the number of units in Sales, produced by each units investment in the company's Assets ; TA TO = $\frac{\text{Net Sales}}{\text{Total Assets}}$ TA TO = $\frac{\text{Net Sales}}{\text{Total Assets}}$

The formula for TA TO:

Company name	2011	2010	2009
Heidelberg	1. 0631	1. 1586	1. 1951
Cement	(x)	(x)	(x)
Meghna	1. 844	1. 5855	1. 4189
Cement	(x)	(x)	(x)

Interpretation: In 2009 Heidelberg's TA TO was 1. 1951 (x), in 2010 and 2011 it's TA TO was 1. 1586 (x) and 1. 0631 (x) of its Total Assets In 2009 Meghna's TA TO was 1. 4189 (x), in 2010 and 2011 it's TA TO was 1. 5855 (x) and 1. 4844 (x) of its Total Assets Both the two company's TA TO s are relatively close to each other. However Meghna's Ratios are a little bit higher than Heidelberg's. So we could say that over the past three years Meghna

has shown a little bit more efficiency than Heidelberg in utilizing its total assets for generating sales.

In this scenario Meghana's performance as a competitor is better than Heidelberg Cement Fixed Asset Turnover Ratio (FA TO): This ratio estimates the number of units in Sales, produced by each unit investment in the company's Net Fixed Assets; $FA\ TO = \frac{Net\ Sales}{Net\ Fixed\ Assets}$

Net Fixed Assets

The formula for FA TO:

Company name	2011	2010	2009
Heidelberg Cement	2.4539 (x)	3.817 (x)	2.7202 (x)
Meghna Cement	4.9925 (x)	4.3774 (x)	4.1159 (x)

Interpretation: In 2009 Heidelberg's FA To was 2.7202 (x) and in 2010 it went up to 3.817 (x) of its Fixed Assets. But in 2011 the FA TO went down to 2.4539 (x), the company's Fixed Assets. This indicates that in 2011 Heidelberg invested more in its Current Assets in comparison to the previous years. As a result the company was generating fewer sales from its Fixed Assets compared to 2009 & 2010. In 2009 Meghna's FA TO was 4.1159 (x) of its Fixed Assets. In 2010 and 2011 the FA TO was 4.3774 (x) and 4.9925 (x) of its Fixed Assets. Meghna had a significant rise in its FA TO over the years.

This means they are utilizing their Fixed Assets more efficiently for generating sales.

Over the years Meghna has shown efficiency in utilizing its Fixed Assets and has generated significantly higher sales, on the other hand Heidelberg's Sales generating capacity from its Fixed Assets has declined. So Meghna holds an upper hand when it comes to utilize its Fixed Assets effectively.

Leverage Ratios: There are four different ratios under the criterion of Productivity Ratio:

- Debt to Asset ratio:
- Debt to Equity:
- Times Interest Earned:
- Cash Flow to Debt ratio:

Debt to Asset Ratio: This ratio indicates the proportion of total assets financed by debt at a particular point in time; The formula for Debt to Asset Ratio:

Debt to Asset = $\frac{\text{Total Liabilities}}{\text{Total Assets}} \times 100$ Debt to Asset = $\frac{\text{Total Liabilities}}{\text{Total Assets}} \times 100$

Company name	2011	2010	2009
Heidelberg	34.2989	33.7784	34.1261
Cement	(%)	(%)	(%)
Meghna	83.5524	81.5425	79.7020
Cement	(%)	(%)	(%)

Interpretation: Heidelberg did not have any significant change in its Debt to Asset Ratio over the year though it went down by a little in 2010. We can see that in 2009, 34 % of its Assets were financed by Debt and in 2010 and 2011 33% and 34% of its Assets were financed by its Liabilities.

Heidelberg holds a large proportion of Assets to its Equity and a less proportion to debt. Meghna has a large Debt to Asset Ratio which has a significant rise over the years, from 2009 to 2011 its debt to asset went up from 79% to 83%. Meghna holds a large proportion of Assets financed by its Liabilities. In comparison, Heidelberg has the upper hand In this segment, because it has a lot less Assets exposed to Debt rather than Meghna, which has a large Debt against its Assets. Dupont Analysis: At the end of the project we'd like to draw a concluding summary by using the concept of Dupont Analysis in comparative traits for both of the firms.

The Dupont system provides a good starting point for any financial analysis. It shows that financial strength in a company comes from three major sources, rather it focuses on three major segments;

- Profitability : Profit generated from a company's Sales
- Asset Utilization : Sales generated from investment in Assets
- Debt Utilization: Portion of Assets that is held against

Owner's Equity. Return on Equity (ROE) = $\frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Asset}} \times \frac{\text{Total Asset}}{\text{Total Equity}}$ Or, ROE = Profit Margin (PM) X TA TO X Equity Multiplier (EM)

Return on Equity (ROE) = $\frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Asset}} \times \frac{\text{Total Asset}}{\text{Total Equity}}$ Or, ROE = Profit Margin (PM) X TA TO X Equity Multiplier

(EM) So, the formula for Dupont looks like this: Dupont analysis for Heidelberg Cement: From the Ratios we calculated earlier (PM, TA TO & EM); we get the following values for ROE by using the Dupont formula:

Year	PM	TA TO	EM	ROE
2011	8.8028%	1.0631 (x)	1.5220 (x)	14.3243%
2010	12.0014%	1.1586 (x)	1.5101 (x)	20.9977%
2009	11.5059%	1.1951 (x)	1.5181 (x)	20.8749%

Interpretation: From 2009 to 2010 we can see a slight rise up from 20.8749% to 20.9977% in the ROE Ratio for Heidelberg Cement. However from 2010 to 2011 there was major decline in ROE of 20.9977% to 14.3243%. Where TA TO and EM remains approximately similar, the ROE falls due to a declining Profit Margin in the year of 2011. So undermining the decline in the Profit Margin, it is safe to say that Heidelberg showed a considerable poor performance in generating Profit from its Sales, in the last observed year of 2011.