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Operational Performance Evaluation of Meghna Petroleum Limited (MPL) - A Case Study

Md.Taslim Uddin
Lecturer, Department of Business Administration, Southern University Bangladesh. Academic Building-2, 739/A Mehedibag Road, Chittagong, Bangladesh.
Email: taslimcu@gmail.com

Kamrul Hasan
Assistant Professor, Department of Business Administration, Southern University Bangladesh. Academic Building-2, 739/A Mehedibag Road, Chittagong, Bangladesh.
Email: kamrul6205@yahoo.com

Abstract:
Evaluating performance through ratio analysis is a sin-qua-non for sustainable growth and measuring future risk of liquidation of a manufacturing company. The current study is an attempt to evaluate the status of the financial performance of Meghna Petroleum Limited (MPL) through liquidity, profitability and productivity position of MPL. The study found that the financial performance in terms of liquidity and profitability is considered to be below satisfactory level. In case of activity ratio total asset turnover ratio indicates satisfactory which means efficient utilization of investment in generating more revenue. Current assets turnover ratio were also found positive and prove efficient management policy in collecting receivables and clearing stock very quickly. The study also depicted that MPL's long term solvency position in terms of debt to total asset ratio was found highly satisfactory which means less risk of sustainability in the long run. The value of Z also indicates the financial soundness and less risk of bankruptcy of MPL. The study suggest some policy implications for future growth and development of MPL like; introduction of modern technologies and research and development, modern marketing techniques to boost up revenue, suitable pricing policy and the like.
Key words: Solvency, Profitability, Asset-management, Productivity, Z score, Balanced Score Card.

1. Statement of the Problem:

The demand of petroleum products both crude oil and oil products are increasing day by day. It was increased by 7.10% in 2011-2012. The yearly demand of petroleum products in Bangladesh is about 5213646 metric ton (Annual report, 2011-2012). Meghna Petroleum Limited (MPL) is one of the largest companies operating its oil business in Bangladesh. It's working alone with other seven operating companies under Bangladesh Petroleum Corporation to mitigate huge gap between demands and supply. MPL has two major challenges, first keeping price level reasonable for the people and second to ensure long term sustainability of the corporation. But it's performance both in terms of financial and operational are very pitiable since its starting period. The situation is still valid. At this stage it is essential to analysis the performance of MPL to find out main causes thereof.

For the sustainable growth and development of a firm an efficient performance evaluation is essential. Performance evaluation means first measures and evaluates the results and then sort out the efficiency, liquidity, profitability, strength and weakness for the continuous improvement of performance. In a efficient performance evaluation includes all aspects of an enterprise. With the advance of computation tools, performance evaluation systems now can cover all aspects of performance.the present study is an endeavor to evaluate the operational performance of MPL by applying the techniques of financial analysis. Financial analysis includes the analysis of balance sheet, profit and loss account and the other financial statement of the company.

2. Literature review:

Jahur and mohiuddin(1995) used financial ratios to find out profitability, activity, liquidity position as well as overall operational performance of a limited company. Jahur and parveen (1996) applied Altman's MDA model to determine overall financial position of Chittagong Still Mills Ltd and found the position of the mill had been at the lowest level of bankruptcy. They concluded scarcity of raw materials, lack of adequate working capital, strict government regulation, lack of accountability etc. were main reasons of failure. Salauddin(2001) exercised ratio analysis, mean, standard deviation and coefficient of variation to analyze the profitability of the pharmaceutical companies of Bangladesh and found in terms of standard norms of return on the investment of pharmaceutical sector was satisfactory at the study period. Masum and johora(2012) applied ratio analysis, standard deviation and Multivariate discriminate model to evaluate the performance of ceramic industry of Bangladesh and tested its financial soundness. They depicted that the financial position and operational performance of the selected ceramic companies in terms of profitability and efficiency is good and suggested due to inefficient liquidity management and lack of proper utilization of debt financing it showed very low performance. Tarawneh (2006) made a comparison of financial performance in the banking sector in Bangladesh by the financial ratios and hypothesis test. He found that the bank with higher total capital, deposits, credits or total assets does not always mean that has better profitability performance. In the article "Bank performance analysis: Methodology and empirical evidence (Estonian Banking System, 1994-2002) Arama, Vainu, Vensel used a modified version of dupond financial ratio and a novel matrix approach for the performance evaluation of commercial banking system. They found the rise of the Estonian commercial Banking system performance efficiency which revealed in the increase of the rate of return indicator such as ROA and ROE.

3. Objectives of the study:
The main objective of the study is to critically evaluate the financial performance of Meghna Petroleum Limited (MPL). To achieve this main objective the study has covered the following specific objectives:

a. To examine the short term solvency of MPL
b. To examine the long term solvency of MPL
c. To examine the asset management position of MPL
d. To evaluate the profitability position of MPL.
e. To measure the productivity position of MPL.
f. To highlight the non-financial performance through Balanced Score Card Model.
g. To find out problems and suggest some policy implications for the improvement of performance of MPL.

4. Scope and methodology of the study:
The present study is based on secondary data collected from the audited profit and loss account, balance sheet of MPL for the period of 7 years (2006-2012), existing text books, related journals and magazines and research work have been checked to prepare the theoretical framework of the study. In order to analyze financial performance in terms of liquidity, solvency, profitability and financial efficiency various accounting ratios have been used.

5. Analyzing financial performance: key ratio forms
Performance evaluation means evaluating or measuring something's in order to ensure that it's behave well or executed normally(jahur & Uddin, 1995). Financial performance of a company can be analyzed by various measures of which, the important one is known as ratio analysis. It is defined as the systematic use of ratio to interpret financial statements so that the strength and weakness of a firm as well as its historical performance and current financial condition can be determined (wiki.answer, 2009)

6. Findings and their analysis:
6. 1 Examination of short term solvency position of MPL.
Liquidity ratios are designed to find out the ability of a firm to meet its short term obligations and reflected short term financial strength. Analyses of liquidity enable financial management to keep a balance liquidity position for the fulfilling all the promises made by the company and ensure short term solvency. Current ratio and quick ratio, cash ratio are common liquidity ratio used to measure the liquidity status, movement of fund, idle fund (if any) of an enterprise. Current ratio indicates a firm's liquidity position and short term solvency. If the ratio is too low, the firm may face liquidity crisis. If the ratio is too high, the firm may have excess investment in current assets. An ideal current ratio is 2:1. Quick test measure the ability of the company to pay its creditors in the short term from its most liquid assets.
Against this back drop, the following table shows the position of short term solvency of MPL of the selected year

Table-1
Position of current ratio and Quick ratio of MPL during the period 2006 to 2012

Year / Ratios	2005-6	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Mean	S.D	C.V
Current ratio	1.08:1	1.05:1	1.08:1	1.09:1	1.07:1	1.11:1	1.09:1	1.08:1	0.023	2.13
Quick ratio	0.57:1	0.54:1	0.75:1	0.58:1	0.77:1	0.87:1	0.86:1	0.71:1	0.15	21.13

Source: - annual reports of MPL for the years from 2006 to 2012 and computations have been made by the researchers.
It is revealed from the above table-1 the current ratio of MPL were 1.08,1.05,1.08,1.09,1.07,1.11,1.09 and 1.08 during the study period and on an average it was 1.08 which is below the standard norm of 2:1(Bhattacharyya and Roy,1999). The current ratio shows the decreasing trend during the study period and it implies that MPL was not able to pay its short term obligation. It is also seen that the quick ratios of MPL were 0.57, 0.54, 0.75,

0.58,0.77,0.87 and 0.86 during study period respectively and on an average 0.71 which was below the standard norm of 1:1(Moshin,1970). It indicates that, MPL has a strong chance of failure to pay its most immediate liquidity. From the analysis it can be conclude that MPL is unable meet the short term obligation satisfactory.

6. 2 Examination of long term solvency position of MPL

To judge the long term financial position of the firm, solvency ratios are calculated. Solvency ratio measures the long term solvency of a firm which includes determining the ability to repay principal amount of its debt, pay interest on borrowing and to meet other financial obligation. They also give insight into the capital structure of the firm i.e. the mix of equity and debt. Financial health of the company can be drawn through using different solvency ratios named debt to total assets, time interest earned and fixed charge coverage ratio. **Debt to Equity ratio** shows the extent to which debt financing has been used in the business. A high ratio shows that the claims of creditors are greater than those of owners. A lower ratio implies a greater claim of owner than creditors. **Debt to total asset ratio** equals to total debt divided by total equities. Generally, creditors prefer a low debt to total asset ratio since it implies a greater protection of their position. **Time interest earned** ratio measures the number of times the interest payable is covered by profit available for such payments. It can be calculated dividing earnings before interest and tax by the interest changes. Some authors consider 8 times of time interest earned as standard norm for any company. **Cash coverage ratio** is an indicator of the ability of a company to pay interest & principal amount when they become due. The ratio tells the number of times the financial obligations of a company are covered by its earning. A ratio equal to 1 or more than 1 means that the company is in good financial health and less than 1 is an indicator of bankruptcy of the company within two years if it fails to improve its financial position. The following table shows the position in the regard:

Table-2

Position of Debt to equity ratio, time interest earned and cash coverage ratio of MPL during the period 2006 to 2012

Year / Ratios	2005-6	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Mean	S.D	C.V
Debt to Equity ratio	7.5	13.99	10.65	9.38	11.91	8.48	9.46	10.2	3.04	29.80
Debt to total asset ratio	0.16	0.07	0.15	0.10	0.08	0.89	0.90	0.36	0.38	1.08
Times interest earned	3.03	3.71	7.28	4.06	5.32	6.45	6.13	5.14	1.58	30.74
Cash coverage ratio	3.37	4.11	7.86	4.61	5.90	6.94	6.63	5.63	1.64	29.12

Source: - annual reports of MPL for the years from 2006 to 2012 and computations have been made by the researchers.

Table-2 depicts that the average Debt to Equity ratio was 10.2 which against the standard norm of (a) 65:35 prescribed by the Bangladesh Shipla Rin Sangstha for its project appraisal (Houque, 1987). (b) 50:50 prescribe by the controller of capital issue, Bangladesh (c) 58:42, observed in selected electricity generation and Supply Company in India. This proves that MPL is a highly geared corporation. The average debt to total asset ratio was 0.38 which was higher than the standard norm of 0.35(Banerjee,1984). It explains that the MPL carried higher debt and had been incurring a heavy burden of interest and risk during 2006 to 2012. The average time interest earned ratio for the period was 5.14 which were lower than the standard. It implies that MPL is aggressive. The average of cash coverage ratio of MPL in studying period was 5.63 times. It implies the firms in a good financial position.

6.3 Analysis of asset management position of MPL

Activity ratios are also known as asset management ratios, efficiency ratios or turnover ratios which indicates the ability to translate its' assets into sales. Inventory turnover, Total assets turnover, and Account Receivable turnover ratio are the commonly used as activity ratios. Account receivable turnover has been computed by dividing net credit sale by closing average receivable. This ratio measures how quick the firm collects their due from their customers. It provides a clear concept credit sale and collection policy. Some authors consider 4 times of account receivable turnover as the reasonable norm. Inventory turnover depicts the relationship between cost of goods sold and the total inventory. some authors consider 8-9 times of Inventory turnover as standard norm. A low inventory turnover indicates firm has excessive investment in inventory & high ratio often means that the firm is running out of stock. Total assets turnover measures the extent of generating sales in terms of the total assets. 2 times is considered as standard norm of this ratio. The following table shows the asset management position of the selected firm:

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Table-3
Position of Debt Account receivable turnover, Inventory turnover and Total assets turnover of MPL during the period 2006 to 2012

Year / Ratios	2005-6	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Mean	**S.D**	**C.V**
Account receivable turnover	26.26	10.60	7.87	11.58	6.59	9.21	6.33	11.20	7.51	67.05
Inventory turnover	19.42	9.21	16.11	10.72	12.32	17.79	14.81	14.34	3.82	26.64
Total assets turnover	8.81	4.38	4.66	4.86	3.38	3.77	3.10	4.67	1.83	39.18

Source: - annual reports of MPL for the years from 2006 to 2012 and computations have been made by the researchers

The above table-3 reveals that. the inventory turnover of MPL was 26.26, 10.60, 7.78, 11.58, 6.59, 9.21 and 6.33 and on an average it was 11.20 times which more than the standard norm of 4 was times (Ibid). It implies that the select company has an efficient policy and management for collecting credit from customers. The inventory turnover on an average during the period under study was 14.34 times which more than the standard norm was 8 to 9 times (Moshin, 1970). Higher the ratio the better because it means the stock is rapidly turned over. The total asset turnover was 8.81, 4.38, 4.66, 4.86, 3.38, 3.77 and 3.10 during the study period 2006 to 2012 respectively and in an average it was 4.67 times which more than the standard norm 2 times(Weston and Brigham-2004). It indicates that MPL Generated higher taka of sales per taka of tangible assets which may be an indication of good use of fixed and circulating capital.

6.4 Profitability as a yardstick for Evaluation:

The profitability ratio measures the efficiency of generating profit of a firm. Profitability ratios are generally satisfied the questions of different users such as (1) what is the rate of profit? (2) Is the profit earned by the company adequate? (3) What is EPS? (4) What is the dividend pay out ratio? (5) What is the rate of return to fund invested by the shareholder? So on (khan and jain, 2004).since, profit is the ultimate objective of the firm, poor performance here indicates a basic failure. To determine different aspects related with the profitability of the firm various ratios are calculated like- Gross profit margin, Net profit margin, operating income margin, return on assets and return on equity ratio the following table depicts the profitability position of the selected firm:

Table-4
Profitability position of MPL from the period 2006 to 2012

Year / Ratios	2005-6	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Mean	S.D	C.V
Gross profit margin(%)	1.18	1.17	1.40	0.94	1.20	1.19	1.03	1.16	0.145	12.50
Operating income margin(%)	0.55	0.74	1.01	0.87	1.01	1.48	1.66	1.05	0.44	41.90
Net profit ratio(%)	0.52	0.70	0.96	0.83	0.96	1.40	1.58	0.99	0.42	42.42
Return on assets(%)	4.36	3.24	4.71	4.24	3.41	5.58	5.15	4.38	.99	22.60
Return on equity ratio(%)	22.54	28.63	37.36	31.08	31.32	37.57	38.71	32.46	7.88	24.28

Source: - annual reports of MPL for the years from 2006 to 2012 and computations have been made by the researchers

Table- 4 shows that the average gross profit margin was 1.16% which lowers than the standard norm of 20% to 30% (Abhijit et.al. 2000). It indicates unfavorable purchasing and mark up policies and inability of management to generate sales volume. The average operating ratio of MPL was 1.05% in the study period which indicates the overall efficiency of its' is not satisfactory. In view of this, MPL on average net profit ratio was 0.99% which was below the standard of 5% to 10% (Mandal, 1998). This indicates that MPL failure to achieve satisfactory return on owner's equity and had a very low efficiency position. The average rate of return on assets for the MPL was 4.38%. This average was below the standard of 10%-12 %(khan and Jain, 2004). This lower ratio indicates the assets were not being properly utilized during the study period. The average return on equity ratio was 32.46% which was higher than the standard norm of 10% to 15 %(Khan and Jain, 2004). It implies the maximum return available for the shareholders and satisfactory position of use shareholders investment.

6.5 Analysis of productivity of MPL:

Productivity is the ratio of output to input. The analysis of productivity provides better insight in to the efficiency and effectiveness of scare and valuable resource utilization of an entity. The higher the productivity; the lower is the cost because of increase in the volume of output. Lower cost increases revenue and profit. The following table shows the position in this regard:

Table-5

Productivity ratios of MPL during the year 2006 to 2012

Year / Ratios	2005-6	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Mean	**S.D**	**C.V**
Sales per employee	961.59	1123.49	1349.13	1502.76	1539.01	2096.54	2401.23	1481.96	523.35	35.31
Net profit per employee	2.99	4.90	9.28	9.27	11.05	22.02	28.70	12.60	9.35	74.18
Asset per employee	13.30	17.12	24.84	29.83	35.29	58.63	74.16	36.17	22.37	61.58
Total income to expense ratio	1.25	1.28	1.20	1.10	1.08	1.13	1.10	1.17	.020	17.09

Source: - annual reports of MPL for the years from 2006 to 2012 and computations have been made by the researchers

Table-5 shows the position of productivity ratio of MPL during the period of 2006 to 2012. It is obvious that the per employee revenue, net profit and asset position increases which shows the positive sign of productivity of MPL. In case to total income to expense ratio the average position was 1.17 which indicates unsatisfactory productivity position of MPL because it was only times greater than the total expenses.

7.0 performance measurement using Balance scorecard:

Balanced Scorecard has been defined "as a set of measures that gives top managers a fast but comprehensive view of the business, combining in a single report the disparate elements of a company's competitive agenda while attempting to prevent sub-optimization by managers as they must consider all of their organization's significant performance areas together"(Kaplan and Norton,1992).

The balanced scorecard allows managers to look at the business from four important Perspectives. It provides answers to four basic questions:

1. How do customers see us? (Customer perspective)
2. What must we excel at? (Internal business perspective)
3. Can we continue to improve and create value? (Innovation and learning perspective)
4. How do we look to shareholders? (Financial perspective)

The balanced scorecard includes four key elements like Customer, Internal, Innovation and financial perspective which is shown in the following diagram:

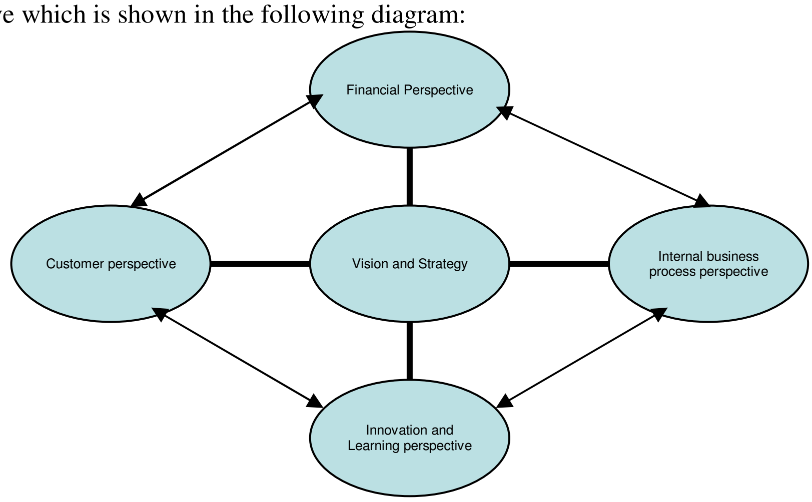

Figure : The Four Perspective of Balanced Score Card

Now we will try to enumerate MPL's balanced scorecard in terms of the four perspectives as follows:

7.1. Customer Perspective:

The customer perspective will help the company address the important concerns of the customers and build continued patronage. MPL is one of the largest petroleum companies in Bangladesh with positive customer focus and services. Some of the specific measures as follows:

1. MPL has huge number of filling station, packed point dealers, Agents and LPG Dealers for providing continuous service to the customer.
2. Company has established business relationship with some direct customers/industries.
3. Company has also been supplied POL (Petroleum, Oil, & Lubricants) product through floating pump.
4. MPL ensures timely delivery of product.

7.2. Internal Business Perspective

The Internal Business perspective aims at identification and improvement of critical internal Business processes that yield competitive edge and result in greater customer satisfaction.MPL have become second largest Petroleum Company in Bangladesh with strong market position.

Some of the measures under the internal perspective are as follows:

1. MPL follows Multi-channel marketing approach like- filling station, packed point dealers, Agents and LPG Dealers and floating pump.
2. Employee motivation and training, colleague reward system based on their performances.
3. Staff grading and promotion, training and development through Bangladesh petroleum institute, Dhaka, Dhaka stock exchange, engineering staff college, ICMAB on regular basis for its work force.
4. MPL arranges environment protection programs through tree plantation extensively in the country.

7.3. Innovation and Learning Perspective

Innovation has become a key driver in the knowledge economy. Competing globally demands an ability to innovate continually and bring about value enhancements in internal business Processes, external product markets.

1. MPL constructs new storage tank for Diesel and Furnace oil and other related construction works in all over the country depots.
2. MPL has taken initiative to extended supply to fuel to the power station for rising energy supply in Bangladesh.

8.0: Testing financial soundness of Sample Company

After analyzing profitability, liquidity, activity and solvency of MPL, now it is necessary to determine the financial health of a company during the study period. For determining a company's financial health and bankruptcy risk, the Altman Z score model (Multivariate Discriminate analysis model) considered as a release tools. The model find out the Z score value and on that basis the enterprise will be classified as good, sick and mixed.

Table-6

Year / score	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	average
Z-score	6.69	6.63	6.75	6.66	6.66	6.83	6.75	6.71

Source: - annual reports of MPL for the years from 2006 to 2012 and computations have been made by the researchers

Table-6 shows the average Z score stood at 6.71 which is upper than the standard norm of 2.675. It indicates the selected company was in safe zone from the risk of bankruptcy and their financial position was sound. But it should be noted that Z score was determined by Prof. Altman to predict the bankrupt and non bankrupt position of firms in the American context that cannot be logically taken as standard in context of Bangladesh yet it is taken as guide line.

9. Policy implications for the improvement of performance of MPL: The study suggests the following policy implications for MPL:

a) The cost of goods sold of MPL constitutes about 99% of total revenue which indicates lower margin of profit and this is because of the fact that oil pricing policy dictated by government and Bangladesh petroleum corporation (BPC). MPL has been suffering from lower margin due to the dual administration impact. So for better performance MPL should have independence in making their own decision.

b) The pricing rules should be practical and flexible so that MPL independently run the business.

c) To improve productivity MPL should increase their revenue.

d) For sustainability in the long run MPL should invest more money in Research and Development.

e) MPL should control the operating expenses like administrative, selling and distribution expenses to increase the operating profit.
f) Government might relax the tax burden for MPL to increase the financial health of MPL.
g) For increasing the revenue MPL might use intensive strategic marketing programs for the long term sustainability of MPL.
h) Efficiency should be developed for proper financial management techniques of MPL.

10. Concluding remarks:

The Current study on MPL has been taken to critically evaluate the operational performance during the period 2006-2012. The study found that overall operational performance of the selected company in terms of asset management and long term solvency was satisfactory level. In case of liquidity and profitability MPL couldn't achieve the standard norm .The overall productivity of MPL was not found reasonable although productivity in terms of per employee sales, profit and total asset found satisfactory. The study also found that non financial performances in case of customer perspective, internal business perceptive and growth and innovation perspective, MPL achieved their target to a greater extent. Discussion made so far lead us to conclude that further research might be taken to explore the performance evaluation of MPL and current study will act as a guideline in this regard.

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