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FINANCIAL PERFORMANCE EVALUATION OF CONSTRUCTION COMPANIES

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ABSTRACT

This paper is focuses on how the tool analysis can be used for analyzing the financial performance of the construction companies by determining various financial ratios. The calculated ratios will be used to showcase the performance of each department the company. The trend performance of companies for four years will be evaluated.This study explains ways in which ratio analysis can be of assistance in long-range planning, budgeting and asset management to strengthen financial performance and help avoid financial difficulties. The study not only throws on the financial position of a firm but also serves as a stepping stone to remedial measures.

Keywords: Construction Companies. Finance Annual Report, Ratio Analysis

I. INTRODUCTION

Indian construction industry has witnessed drastic changes in the last decade. With large number of project involving infrastructure, power generation, water supply, oil and gas projects etc. with huge capital involved in all projects at various stages the management has to keep an eye on each aspects like assets, liabilities, funds flow, liquidity, profitability, operating expenses etc. A financial tool which helps the management of the company to handle all these elements together is ratio analysis. Ratio analysis is done by using company's annual reports. It allows shareholders, creditors, government and analysts to make an evaluation of firm's performance. Ratio provide an easy way to compare present performance with past. Analysis of different financial ratios shows how the company performs in each department and helps predict the expected future outcome using past and present performance.

II. LITERATURE REVIEW

2.1 I.M. Horta, A.S. Camanho, J. Moreiradacosta, Performance Assessment of Construction Companies: A Study of Factors Promoting Financial Soundness And Innovation in the Industry" This paper examines the trends in the performance of the Portuguese construction industry and identifies the factors that promote excellence and innovation in the sector. This involve Envelopment Analysis to estimate weights for aggregating the key the use of Data performance indicators of the construction companies. The paper also proposes a new DEA method to assess innovation within an industry, identifying the innovative companies based and the extent of innovation. The determinants of good performance and innovation are examined using regression techniques and the statistical significance of the results is ensured.

The study reveals that the Portuguese construction industry experienced a remarkable performance improvement during the 1990s, but this growth trend in performance slowed down in recent years.

2.2 Yaqiong Liu Tarek Zayed and Shujing Li, "Cash Flow Analysis or Construction Projects Construction Projects are Complex and Risky. The objective of the research presented in this paper to examine the impact of these factors on contractor cash flow during the construction is process. A model has been established by integrating analytic hierarchy process(AHP) and simulation to examine the impact of various factors on cash flow. Results show that cash outflow varied approximately from 12.9% to 20.4% with a mean value of 16.7% considering the effects of all factors on the basis of 30% total cost variation. By analyzing the results of the developed model, contractors will recognize which factors contribute the most to contractor cash flow performance. Professional cash flow management (i.e. prediction) might greatly reduce failures in the construction business.

2.3 Roozbeh Kangari, Foad Farid and Hesham M. Elgharib, Members, ASCE, "Financial Performance Analysis for Construction Industry" Business failure in the construction industry is an important research issue for forecasting the financial status of a company, The construction industry i the United States has several unique characteristics that sharply distinguish it from other sectors of the economy. These characteristics contribute in many ways to the high rate of business failure in the industry Analysis of major financial ratios to predict performance of a company is one method of failure analysis. This paper presents a quantitative model based on financial ratios to assess the financial performance and grade of a construction company, and its chances of business survival. The following financial ratios are used for developing the model: Current ratio, total liabilities to net worth, total assets to revenues, and revenues to net working capital, return on total assets, and return on net worth. The model also considers characteristics of various trades in the construction industry and the impact of the company size. The model is developed for the following six groups: general contractors, operative builders, heavy construction, plumbing, heating and air-conditioning, electrical works, and other specialty trades.

2.4 Mohd. Suberi Ab Halim, Mastura Jaafa, omar osman, Sher Akbar, "The Contracting Firm's Failure and Financial Related Factors: A Case Study of Malaysian Contracting Firms" This paper pertains to the role of financial factors, which influencing the success or failure of the constructing firms. Some studies have determined the impact of financial factors on the failure of constructions firms; such is bad financial management and lack of capital which are the main determinants of failure. So the construction industry is facing these problems everywhere to some extent. Where the Malaysian Phenomenon is concern, the failure rate of the construction companies is quite high. This research based on secondary data which have been taken from case studies of six representative large- and medium-sized construction's contractors in Malaysia. Annual financial reports of selected construction companies for three years(2005, 2006, and 2007) were employed. In this case study, a total of 17 financial ratios, as proposed by Peterson(2005), were employed as measurement performance tools. Interpreting these ratios, typical median(industry average) and typical range were used to compare a company's annual average ratios for three years. It was found that most of the construction companies do not have sufficient financial resources, lack of monitoring system for the cash flow and project costs. Without effective financial practices, construction companies are putting their self up to failure.

2.5 MICHAIL KAGIOGLOU, "Performance management in construction: a conceptual framework" This paper presents a review of literature of performance management/measurement in various industries with the aim of transferring best practise into construction. A framework is presented which ensures that effective strategies are deployed to form the performance management system that construction organisations can adopt. The Process Performance conceptual Framework (PPF) adopts the balanced scorecard (BSC) with the addition of a number of elements/perspectives and it rationalises the relationships between performance measures and goals derived from strategy. In doing so, the impact of those measures to an organisation's performance can be examined and analysed to indicate potential improvement areas. The paper also identifies a number of areas that can be used to validate the PPF.

III. OBJECTIVES AND METHODOLOGY

3.1 Objectives

1. To study and analyze of cash flows of the construction companies.
2. To compare and analyze the balance sheet of the companies of last 3 years to determine and calculate the various financial ratios using Ratio Analysis.
3. To study various methods to evaluate the financial performance of construction company.
4. To determine and study financial statements of residential and commercial building.
5. To determine various financial ratios for collected data performance evaluation.
6. To provide suggestions for improving the overall finance performance of the construction companies.

3.2 Methodology

The methodology involves using financial statements of 3 multinational companies (MNC). By considering their data from four years from 2012 to 2015 and using that data performing various financial analysis techniques.

3.2.1 Define the Objective

Clearly understand ing the objective of the project and its exact requirements to fulfill the project needs.

3.2.2 Collection of data

Collecting the balance sheets, income statements, profit loss statements and other secondary data of the selective construction company companies of four years.

3.2.3 Background study

Studying the annual reports, balance sheets, income statements, profit and loss statements and cash flow statement etc. of the selective companies of four years.

3.2.4 Ratio analysis

Calculating various financial ratios for the companies for four years. This financial analysis includes ratio formulas, tables, graphs and inferences etc.

3.2.5 Comparison and common-size analysis

Comparing and a analyzing the performance of the selective companies in the last three years and from that predicting their performance for the defined future perspective from the collected data and preparing comparative and common-size statements.

3.2.6 Conclusion

After all financial ana lysis, finding out which company has best per formance among the selected companies and reasons for it.

3.2.7 Suggestions

Suggesting the selected companies about their weaknesses in different areas in which it can improve in the future to have better financial performance.

IV. DATA COLLECTION AND DATA ANALYSIS

The data for the analysis is secondary is secondary in nature i.e. already collected information. This data is collected data, which through Company's Annual Reports from 2012 to 2015.

Interpretation of Annual Reports:

1. Balance sheet
2. Profit and Loss account
3. Cash Flow statement

4.1 Ratio Analysis

Ratio is quotient of two numbers expressed between two accounting figures is known as accounting ratio. The ratio analysis concentrates on the interrelationship among the figures appearing in the financial statements. Ratios depict the areas in which the construction company is competitively advantaged or disadvantaged to comparing those of other companies of the same size within the same industry.

The annual reports of three construction companies HCC LTD., L&T LTD. and Punj Loyd Ltd. have been taken from the year 2012 to 2015 for the calculation of ratio analysis. The consolidated statements consisting of Profit and Loss account cash Flow statement data has been taken for analysis purpose.

Ratio	Formula
• Liquidity rati	
Current ratio	Current Assets \ current liabilities
Quick ratio	(current assets - inventories) / current liabilities
• Leverage rati	
Proprietary ratio	(Shareholder's fund x 100) /total assets
Debt-Equity ratio	Total debt / Shareholder's fund
Shareholder's equity ratio	Shareholder's fund / total assets
• Asset management rati	
Debtors turnover ratio	Total revenue / sundry debtors

Stock / inventory turnover ratio	Cost of goods sold / average inventory
Debtors collection period	(sundry debtors x 100) / total revenue
Creditors ratio	Credit purchased / average creditors
Creditors payment period	(average creditors x 365) / Credit purchased
Fixed assets turnover ratio	Total revenue / fixed assets
Total assets turnover ratio	Total revenue / total assets
Sales to capital employed ratio	Total revenue / capital employed
• Profitability rati	
Net profit margin	(net profit x 100) / total revenue
Gross profit margin	(total revenue-cost of goods sold x 100) / total revenue
Cash profit ratio	(Net profit + depreciation x 100) / total revenue
Return on total assets	(net profit after tax x 100) / total assets
Return on capital employed	(net profit x 100) / capital employed
• Operating rati	
Labour cost ratio	(employee cost x 100) / total revenue
Material cost ratio	(material consumed x 100) / total revenue

Table1: Financial Ratios Formula

By using the formulae from table 1, the ratio analysis is done and calculated ratios are displayed in

Sr. No.	Ratios	Company	2012	2013	2014	2015
Liquidity ratio						
1	Current ratio	HCC	1.21	1	1.28	1.11
		L&T	1.37	1.17	1.4	1.25
		Punj Lloyd	1.35	1.17	1.02	1.01
2	Quick ratio	HCC	0.44	0.4	0.56	0.53
		L&T	1.29	1.3	1.31	1.17
		Punj Lloyd	0.64	0.5	1	1
Levarage ratio						
3	Proprietary ratio	HCC	8.96	5.26	3.39	3.4
		L&T	26.44	24.7	23.66	22.18
		Punj Lloyd	24.39	20.01	17.35	14.08
4	Debt-equity ratio	HCC	4.4	6.72	15.94	15.31
		L&T	1.19	1.41	1.55	1.58
		Punj Lloyd	0.72	0.71	0.67	1.06
5	Shareholders equity ratio	HCC	0.61	0.39	0.19	0.29
		L&T	2.3	2.08	1.62	1.82
		Punj Lloyd	1.46	1.15	1.08	0.76
Asset management ratio						
6	Debtors turnover ratio	HCC	11.19	11.78	12.62	14.65
		L&T	3.75	3.19	3.28	3.26
		Punj Lloyd	3.7	4.45	3.63	4.65
7	Stock / inventory turnover ratio	HCC	2	1.74	2	2
		L&T	16.85	11.24	14.46	14.7
		Punj Lloyd	1.72	1.92	3.63	57.17
8	Debtors collection period	HCC	32.61	31	28.92	24.91
		L&T	97.21	114.3	111.1	111.8
		Punj Lloyd	98.58	81.95	100.5	78.48
9	Creditors ratio	HCC	3.83	3.65	4.34	4.56
		L&T	2.56	2.82	2.91	2.96
		Punj Lloyd	1.1	0.96	0.99	0.98
10	Creditors payment period	HCC	75.5	78.55	68.32	65.69
		L&T	142.6	129.2	125.5	123.5
		Punj Lloyd	174.2	186	183.2	184.4
11	Fixed assets turnover ratio	HCC	1.56	1.56	1.44	1.87
		L&T	2.3	2.39	2.34	2.5
		Punj Lloyd	3.5	3.53	3.44	3.21
12	Total assets turnover ratio	HCC	0.54	0.57	0.57	0.6
		L&T	0.56	0.55	0.53	0.51
		Punj Lloyd	0.67	0.74	0.72	0.7
13	Sales to capital employed ratio	HCC	1.04	1.3	0.95	1.06
		L&T	0.94	0.89	0.85	0.85
		Punj Lloyd	0.67	0.74	0.72	0.7
Profitability ratio						
14	Net profit margin	HCC	-0.89	-6.43	-5.59	-2.82
		L&T	8.41	7.21	6.89	5.69
		Punj Lloyd	-0.73	0.85	-0.06	-4.91
15	Gross profit margin	HCC	0.95	-9.08	-7.3	-379
		L&T	12.83	10.71	10.1	8.69
		Punj Lloyd	0.19	0.38	0.35	-5.69
16	Cash profit ratio	HCC	2.09	-3.25	-1.95	0.3
		L&T	10.89	9.63	9.05	7.37
		Punj Lloyd	2.57	3.62	2.95	-1.39
17	Return on total assets	HCC	-0.49	-3.66	-3.17	-1.7
		L&T	4.7	3.94	3.64	4.84
		Punj Lloyd	-0.41	0.77	-0.18	-4.06
18	Return on capital employed	HCC	-0.93	-8.35	-5.3	-2.98
		L&T	7.92	6.44	5.83	2.88
		Punj Lloyd	-0.94	2.14	-0.58	-13.6
Operating ratio						
19	Labour cost ratio	HCC	11.03	11.52	11.05	10.03
		L&T	7.05	7.67	8.23	9.32
		Punj Lloyd	13.81	12.54	14.34	13.76
20	Material cost ratio	HCC	0.49	0.99	0.65	0.69
		L&T	16.67	16.78	14.27	11.18
		Punj Lloyd	29.22	28.74	29.97	34.89

Table 2: Financial ratio analysis

V RESULTS AND DISCUSSIONS

5.1 Liquidity Ratios

a. Current ratio

A current ratio of 2:1 is considered as a standard value. comparatively has maintained a low current ratio, almost 1:1 which means it has low level of current assets to meet its short term obligation, while L&T has maintained a good ratio range of 1.35:1. Punj Lloyd has current ratio decreasing from 2012 to 2015 which is not satisfactory indication.

All the companies have ratio below standard value 2:1 which is unacceptable

b. Quick ratio

HCC has a quick ratio of 0.45:1 which is lower than standard value 1:1 and it cannot meet its current obligations. L&T has maintained the standard level of this ratio. Punj Lloyd has managed to keep an optimum level of Quick ratio.

L&T has a good ratio of 1:1 which is as per standard and well maintained.

5.2 Leverage Ratios

c. Proprietary ratio

The standard value is 60% and above, HCC has very low ratio in range 3 to 8% which is dangerous and indicates that company large depends on debts for its operations and is in unsound financial position. L&T has this ratio in to 26% with decreasing trend and this is at satisfactory level. Punj Lloyd has ratio decreasing from 24% to 14% over the years which peons that the company owes more to debts which is harmful for its growth.

L&T has good proprietary ratio level maintained of the other two compared.

d. Debt-equity ratio

The standard ratio is 2:1.Hcc has o trend from 4.40:1 to 15.31:1 over the years which indicates that makes its asset financing through debts with higher interests payable which will lead to the of company in the future. L&T has ratio the range of 15:1 which is almost good as it makes its assets the Lloyd has range of 0.8 is allowable for the company.

L&T has maintained almost standard ratio level which makes superior than other companies .

e. Shareholders equity Ratio:

This ratio indicates how much shareholders would receive in the event of a company-wide liquidation. HCC has very poor ratio which is not favorable for the shareholders of the company. L&T has a satisfactory ratio level. Punj Lloyd has ratio level declining making it unacceptable.

L&T has a fair shareholders equity ratio of the three companies.

5.3 Asset Management Ratio

f. Debtors Turnover Ratio:

HCC has the ratio increasing at a steady rate over the years which means the company has efficient credit management policy. L&T has constant and low ratio level which shows that the company has taken any steps to improve it which is not acceptable, Punj Lloyd shows fluctuations in the ratio the which indicates that it is trying to improve the debtor turnover each year with new policies.

HCC has good debtor's turnover as compared to other companies.

g. Stock Inventory Turnover Ratio:

HCC has lower ratio which indicates stock is not movable, blocking of funds and has impact on liquidity of the company so it is dangerous for the company, L&T has maintained a good level of this ratio at a constant level which helps its growth. Punj Lloyd has very poor ratio from 2012 to 2015 but a sudden peaks rise in ratio in 2014 showing an indication of overtrading.

L&T has good stock turnover ratio over the years compared with others.

h. Debtors Collection Period:

HCC has average debtors collection period of 30 days i.e. 1 month which is good for the company and its growth. L&T and Punj Lloyd have this period in the range of 90 to 100 days i.e. 3 months which is high these companies are inefficient in collecting their debts.

HCC with debt collection period of 1 month has best period than L&T, Punj LIoyd.

i. Creditors Turnover:

HCC has this ratio in the range 3 to 5 which means company 3 to 5 times a year, L&T and Puni Lloyd have lower value of ratio which reflects liberal credit terms granted by suppliers HCC has a good creditor's turnover compared to other companies.

j. Creditors Payment Period:

HCC has creditor's payment period about 70 days is optimum for the company. L&T has this period of average which is good. Punj Lloyd has credit period of 180 days which and may affect credit rating of the company.

HCC has satisfying creditor's payment period of the three companies.

k. Fixed Assets Turnover Ratio:

HCC low level ratio which means idle is means idle capacity and this is not satisfactory. L&T has the ratio increasing over the years and is almost acceptable. Punj Lloyd has good ratio with increasing trend which means the company is utilizing its assets.

Punj Lloyd has a good turnover ratio of the three companies.

l. Total Assets Turnover Ratio:

HCC, L&T, Punj Lloyd has lower level of this ratio which capacity and under utilization of available resources, assets.

All the three companies have low level of Total assets turnover ratio

m. Sales to Capital Employed Ratio:

This ratio shows how much sales/revenue is generated for the given capital employed, the more the ratio is better. HCC bas a constant level of ratio which means it has maintained a good balance of both sales and capital employed. L&T has little less level of this ratio which means its capital employed is little more than its sales which means less profit hence should be considered. Punj Lloyd ratio trend shows that it is employing more capital than its revenue generation which may lead to the failure of the company if not improved at immediate concern.

HCC has good sales to capital employed ratio than other two companies.

5.4 Profitability Ratios

n. Net Profit Margin:

HCC has net profit margin negative values which is a very a serious concern for the company and may lead to its bankruptcy L&T has a good profit margin but with a declining trend over the years from 8% to 5%. Pun Lloyd has poor net profit margin with negative values and it is dangerous for the company. L&T has good profit margin as compared to others. o. Gross Profit Margin:

HCC has poor gross profit margin which indicates the company has done over investment and or inefficient utilization of plant and higher costs which is serious concern, L has this ratio trend falling down from 2011 to machinery, resulting in production 2015 by 2% each year but has satisfactory performance. Punj Lloyd have very low ratio value and with lower in 2015 which means it has made wrong decisions while purchasing materials, sold asset at lower prices etc. and this cause of concern for the company. compared with

L&T has a better gross profit margin over the other companies. p. Cash Profit Ratio:

HCC shows variations in cash profit ratio with negative values which means the company has failed to generate cash from its operations resulting in bad performance. L&T has excellent ratio level of 9% which shows the good management policy. Punj Lloyd has low ratio with negative value in the company's poor performance.

L&T has very good level cash profit ratio compared with peers. q. Return on Total Assets:

HCC has not utilized its assets for its revenue generation in a proper way which shows its negative ratio values resulting in inefficiency. L&T has maintained a satisfying level of ratio showing that it uses its assets in a proper and planned manner for revenue generation. Punj Lloyd has very poor ratios which show the company has not used its assets effectively for generating revenues which is concerning factor for the firm.

L&T has best return on assets as compared to other companies. r. Return on Capital Employed:

HCC has negative ratios which clearly show that the management of the company has failed in decision making while doing investments, assets etc. L&T shows a declining trend from 8% to 3% showing decrease in profitability. Punj Lloyd shows variation in the ratios with much of negative values indicating improper managerial decisions.

L&T has satisfying return on capital employed among its peers.

5.5 Operating Ratios

s. Labour Cost Ratio:

HCC has labour cost ratio at a constant level of 11% over the years which mean it spends 11% of its total revenue on employees which is allowable. L&T has also maintained a ratio of 7 to 8% which means efficiency is good and better for the company. Punj Lloyd has a high level of 13% of this ratio which means 13% labour costs is occupied of total revenue which means the company is spending more on employees which indicates inefficiency.

HCC has favorable labour cost ratio than its peers.

t. Material Cost Ratio

HCC has material cost ratio almost less than 1% of total revenue. L&T has 14% of this ratio forming part of the total revenue which is moderate. Punj Lloyd has the highest share of 30% of this ratio of total revenue

which means company has spent a large amount of money on materials, inventories; this is a point of serious concern for the company.

HCC has good material cost ratio compared to others.

VI. CONCLUSION

The ratio analysis of three companies shows following results:

1. L&T has better performance in ratio analysis than its peers HCC and Punj Lloyd.
2. HCC has good debtors, creditors turnover and collection period as compared to other companies. Profitability wise L&T has best performance over the years than its peers.
3. HCC has good operating ratios than other companies

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REFERENCES

[1] HCC annual report from 2012 to 2015

[2] L&T annual report from 2012 to 2015

[3] Punj Lloyd annual report from 2012 to 2015

[4] Ravi Kishore Financial Management, Taxmann's Publications

[5] Prasanna Chandra,"Projects Planning, Financing, Implementation and Review" Tata Mc Graw-Hill, New Delhi, 2002

[6] Mohd Suberi Ab. Halim, Mastura Jaafar, Omar Osman and Md. Shariff Haniff, Financial Ratio Analysis: An Assessment of Malaysian Contracting Firms, Journal of Construction in Developing Countries, Supp. 1,71-78, 2012 c Penerbit Universiti Sains Malaysia, 2012

[7] Hiralal R. Desrani, Comparative Study of Ratio Analysis ofselected Textile Companies of India, International Journal of Research in Humanities and Social Sciences