

Financial Management Assessment of Projects in Civil Engineering Firms by Analysis Technique

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ABSTRACT : Financial management is considered to be the most important part in any construction firm. For success of the construction projects as well as firms, financial management plays a vital role, therefore it is a prime necessity to have an effective management of finance while undertaking the project. Management of finance refers to proper utilization of money in the firms. Various techniques have been developed for proper financial management. Out of which financial ratio analysis can be considered to be the most successful one for helping in the management process. In the paper the financial data have been analyzed, outcome and results are obtained, which will be helpful for construction firms.

Money related administration is the fundamental factor in the advancement of any development organization in any part. The organizations identified with development part have numerous variables both outer and interior that impact the development of the organization. The outer components like financing cost, expansion rate, demand supply ratio in the market, changes parents in law and guidelines by the legislature as far as land charges and so on the inward factors like the exhibition of the administration of the organization, arrangements embraced, dynamic and so on. Every one of these variables have incredible effect on the organization's development. So as to have control on all the segments of the organization the board needs an apparatus is proportion examination. Proportion investigation includes dissecting different proportions like liquidity proportions, gainfulness proportions, influence proportion, working proportions, advertise based proportions, resource the executives proportions and so on by breaking down these proportions for the still present the administration will get a precise situation of the situation of the organization. The proportions may assist with realizing whether organization's choice is going on the correct way or not and the other hand it will assist the administration with studying these proportions and afterward design and choose an objective for the element development of the company's. on the off chance that all the proportions are kept up at their specific standard level like liquidity, obligation turnover proportions and so forth the organization can conquer such a circumstances that may emerge in the element. The yearly reports of the organization type of monetary record, benefit – misfortune account, income explanations and so forth proportions mirror the wellbeing of the organization. Accordingly, proportion investigation is a device that can support the presentation of an organization whenever utilized in a more intelligent manner.

KEY WORDS: Financial Management, Analysis technique

I. INTRODUCTION

Financial management is the most important part in every construction project and also for every construction firm, which is responsible on a large scale in the success of the firm. It is thus necessary to have a proper way, technique for effective management of finance. For initiating any project finance is necessary and for its success, financial management is necessary.

1.1 Financial Management Concept's Study and Methodology of Project

Deals with the study of the concept of financial management. It includes basic terminology, theoretical contents, basic of comparison, meaning and importance of ratio analysis, classification of ratio analysis, objectives, Understanding the concept of various types of ratios in detail. It also includes the research methodology adopted for carrying out the project work.



1.2 Theoretical Contents and Basic Terminology

A proportion is a straightforward arithmetical articulation of the relationship of one number to another. It might be characterized as the showed remainder of two scientific articulations. Proportion examination is a method of investigation and understanding of budget report. It is the way toward building up and translation different proportions for aiding in settling on specific choices.

The gainfulness of the business can be estimated by ascertaining gross benefit, net benefit, costs and other factors. Analysis method helps in knowing the present moment and long haul monetary situation of the business by ascertaining different proportions. Current and fluid proportion demonstrates momentary budgetary position, though obligation value proportion, fixed resource proportion and restrictive proportion shows long haul monetary positions.

The focal point of monetary investigation is on key figure in the budget reports and the huge relationship that exist between them. The investigation of budget summaries is procedure of assessing the connection between segments portions of fiscal report to get a superior comprehension of the uncompromising stance and execution. The primary errand of the budgetary investigation is to choose the data applicable to the choice viable structure the absolute data contained in the fiscal summaries. The subsequent advance is to organize the data in a manner to feature critical connections. The last advance is understanding and making of inductions and determinations. In a nutshell, money related examination is the procedure of choice, connection and assessment.

Proportion investigation the general term utilized for money related examination. It tends to be utilized to think about the hazard and return relationship of firm of various sizes. It is characterize as the precise utilization of proportion to decipher the budget summaries so the qualities and shortcomings of a firm just as chronicled execution and current budgetary condition can be resolved. The term ratio analysis shows the numerical or quantitative connection between two things/factors. This relationship can be communicated as rates, state; net benefits are 25 percent of deals (ii) Fraction (iii) extent of numbers. These elective strategies for communicating things which are identified with one another are, for motivation behind monetary examination, alluded to as a proportion investigation. It ought to be noticed that registering the proportions doesn't include any data not effectively characteristic in the above figures of benefits and deals. What the ratio does is that they uncover the relationship in an increasingly significant manner in order to empower value financial specialists; the executives and loan specialists settle on better venture and credit choices.

II.OBJECTIVES

- (1) To study the concept of financial analysis for effective management of finance in any project of construction firm.
- (2) To collect the data for project from minimum four construction firms for carrying out further financial analysis of projects.
- (3) To carry out the analysis of finance on the basis of data collected using analysis technique by evaluating ratios, capitals, assets and compare the results and access the financial position and earning capacity.
- (4) Finally give the outcome from the analysis and provide suggestions for improving the overall finance performance of construction projects in selective companies.

III.METHODOLOGY OF PROJECT IN BRIEF

Methodology consists of firstly studying the concept of financial management, various important terms related to financial management, as given below

- Study concept of financial ratio analysis which emerges to be the most important tool of study.
- Study of data collection methods and overview of financial analysis.
- Studying various types of researches especially analytical research which will be adopted in the project.
- Study of concepts such as balance sheets, income statements, profit loss statements and other secondary.
- Financial analysis models.

All the above studies will be done by analyzing the data from various studies of national and international research papers and journals, which will thus help in understanding the concept and for carrying further research work.

Table -1: Schedule of Project

Work Task	I	II	III	IV	V	VI
Information Gathering - Literature Survey.						
Finalization of the Aims and Objectives or Title.						
Development Experimental Set						



Up and Instrumentation or Case Study					
Data Collection					
Initial Report Writing and Publication					
Formulation of Model / Analysis of Data					
Critical Analysis of the Formulated Model / Optimization and Sensitivity Analysis					
Final Report Writing and Publication					

4. COLLECTION OF DATA FOR ANALYSIS

Deals with the collection of data required for analysis work. Data has been collected from site of four different construction firms. Required data thus collected mostly include the detailed required information of the firm, yearly balance sheets, profit and loss account sheets etc. and other required secondary data which is tabulated below.

Table 2 Detail Profile of First Firm

Sr No	Title	Description
1	Name of assessee	Shree Ashtavinayak Developers
2	Pan No	ABUFS5638K
3	Office Address	Office no. 122, A-Wing, Jay Ganesh Samrajya, Pune Nasik Road, Panjarpol, Bhosari, Pune, Maharashtra-411039
4	Status:	Construction Firm
5	D.O.I	13/09/2010
6	E-mail Address	shree.ashtavinayak@rediffmail.com
7	Nature of business	Construction of residential complex
8	Stock Valuation	Stock in progress Method
9	Method of accounting	Mercantile
10	Accounting Name of Bank	Cosmos Co-operative Bank

4.1 Flow chart comprising project methodology

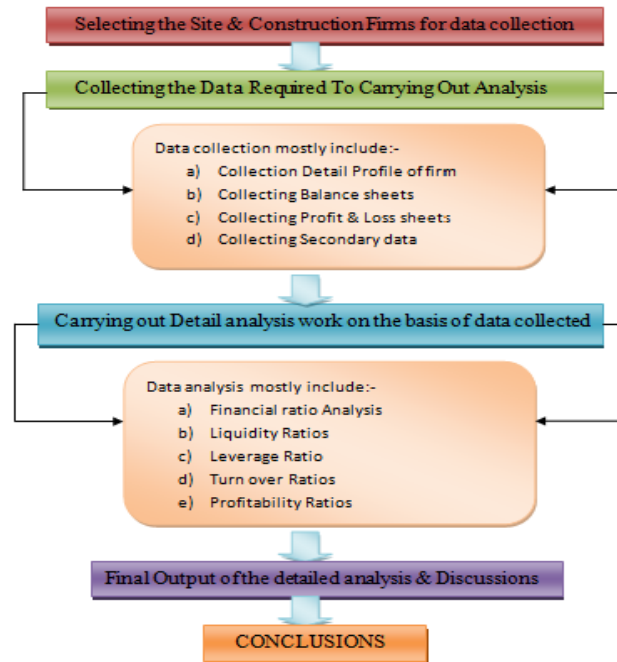


Chart -1: Flow Chart of Methodology

5. DATA ANALYSIS

5.1 Current Ratio:-

(i) Shree Ashtavinayak Developers

Table 3 Current ratios of First Firm

Year	2013-2014	2014-2015	2015-2016
Current Assets (In Lakh)	15897605.87	6673276.87	6606821.25
Current Liabilities (In Lakh)	431882.80	217938.50	150786
Ratio	36.81	30.62	43.81

(ii) Sai Ashtavinayak Venture

Table 4 Current ratios of second Firm

Year	2013-2014	2014-2015	2015-2016
Current Assets (In Lakh)	203309208	181535284.5	20129917.49
Current Liabilities (In Lakh)	6727637.62	6834912.82	5538748.71
Ratio	30.22	26.56	36.34

(iii) Shree Ashtavinayak Associates

Table 5 Current ratios of Third Firm

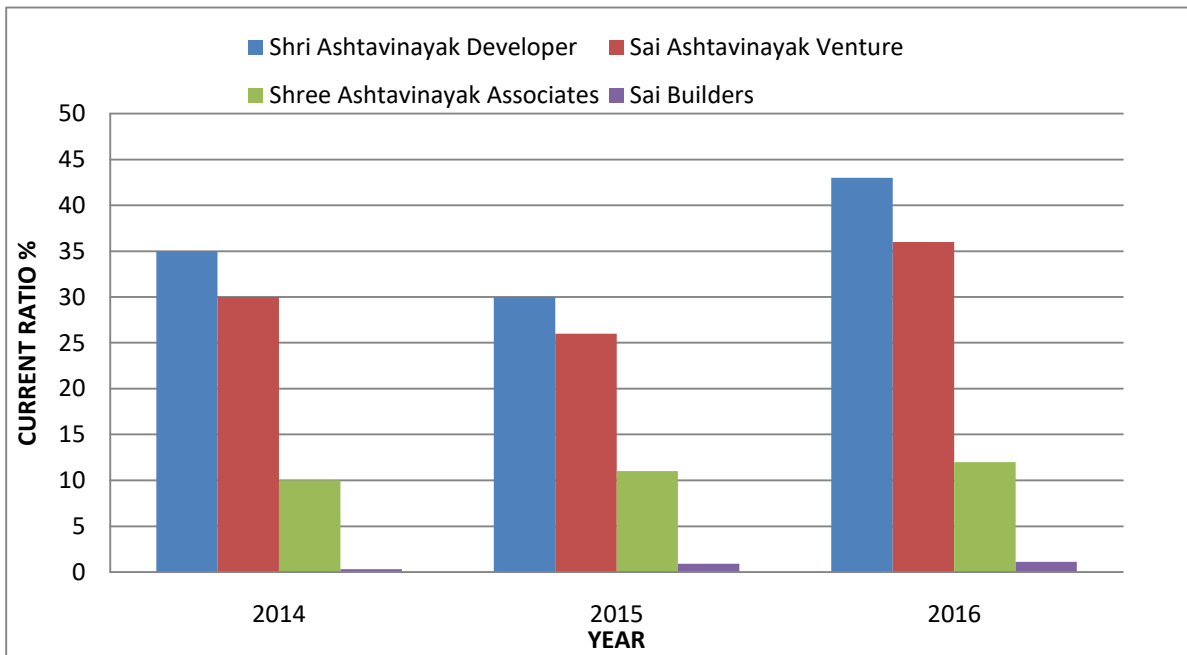
Year	2013-2014	2014-2015	2015-2016
Current Assets (In Lakh)	2389752.365	22821296.77	15964316.28
Current Liabilities (In Lakh)	238736.50	1982736.47	1273847
Ratio	10.01	11.51	12.53



iii) Sai Builders

Table 6 Current ratios of Fourth Firm

Year	2013-2014	2014-2015	2015-2016
Current Assets (In Lakh)	52842648	142530536.30	115567145
Current Liabilities (In Lakh)	165133275	154924496	113813385
Ratio	0.32	0.92	1.015



Graph. 1 Current ratio comparison of four firms

Above figure shows the graphical representation of current ratio in Percentage on Y-Axis and Financial year on X-axis. This graph represents the comparison of current ratios of all the four construction firms. By overlooking the graph, it can be concluded that the current ratio of Shri Ashtavinayak Developer is highest of all the four firms, similarly the current ratio of Sai builders is lowest of all the remaining firms.

5.2 Quick Ratio

i) Shree Ashtavinayak Developers

Table 7 Quick ratios of First Firm

Year	2013-2014	2014-2015	2015-2016
Inventory-Current assets (In Lakh)	7851629.30	6673276.87	6022757.05
Current liabilities (In Lakh)	431882.80	217938.50	150786
Ratio	18.18	28.23	39.94

ii) Sai Ashtavinayak Venture

Table 8 Quick ratios of Second Firm

Year	2013-2014	2014-2015	2015-2016
Inventory-Current assets (In Lakh)	7659994.27	14695062.56	13644177
Current liabilities (In Lakh)	6227637.62	6834912.82	5538748.71
Ratio	1.23	2.15	0.77



iii) Shree Ashtavinayak Associates

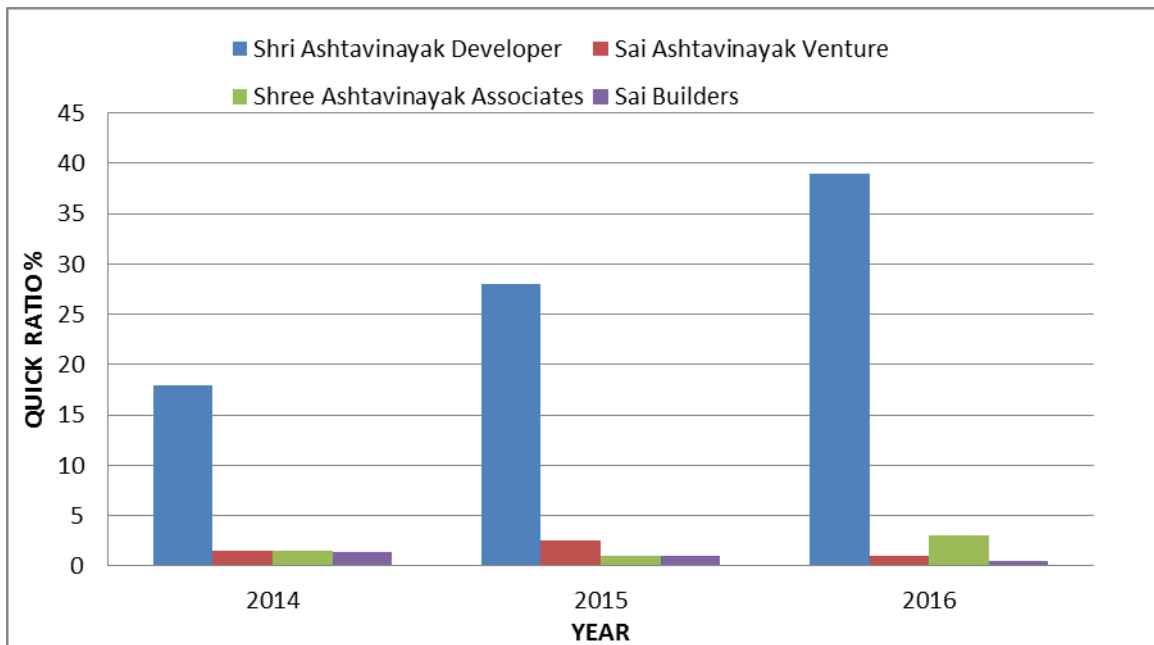
Table 9 Quick ratios of Third Firm

Year	2013-2014	2014-2015	2015-2016
Inventory-Current assets (In Lakh)	324681.64	1843944.91	3650776.2
Current liabilities(In Lakh)	238736.50	1982736.47	1273847
Ratio	1.36	0.93	2.86

iv) Sai Builders

Table 10 Quick ratios of Fourth Firm

Year	2013-2014	2014-2015	2015-2016
Inventory-Current assets (In Lakh)	224581254	127038086.7	47199588
Current liabilities (In Lakh)	165133275	154924496	113813385
Ratio	1.36	0.82	0.41



Graph 2 Quick ratio comparisons of four firms

Above figure shows the graphical representation of Quick ratio in Percentage on Y-Axis and Financial year on X-axis. This graph represents the comparison of quick ratios of all the four construction firms. By overlooking the graph, it can be concluded that the quick ratio of Shri Ashtavinayak Developer is highest of all the four firms, Company should maintain this ratio. Similarly the quick ratio of Sai builders is lowest of all the remaining firms. Company should notice these things.

In addition to the ratios calculated above, other ratios such as Debt-equity ratio, Inventory turnover ratio, Debtor's Turnover ratio, Fixed assets Turnover ratio, Total assets, profitability, Gross profit, Net profit, Return on Net worth, Debt Coverage values are also found out to get the detailed information regarding the current financial condition of the firms.

VI. RESULTS

Table 11 Outcome from the data analysis

RATIO ANALYSIS OF SELECTIVE CONSTRUCTION COMPANIES					
SR. NO.	RATIO'S	COMPANY	2014	2015	2016
Liquidity and Solvency Ratios					
1	Current Ratio	Shree Ashtavinayak Developers	36.81	30.62	43.81
		Sai Ashtavinayak Venture	30.22	26.56	36.34
		Shree Ashtavinayak Associates	10.01	11.51	12.53
		Sai Builders	0.32	0.92	1.015
2	Quick ratio	Shree Ashtavinayak Developers	18.18	28.23	39.94
		Sai Ashtavinayak Venture	1.23	2.15	0.77
		Shree Ashtavinayak Associates	1.36	0.93	2.86
		Sai Builders	1.36	0.82	0.41
3	Debt Equity Ratio	Shree Ashtavinayak Developers	1.42	2.23	0.42
		Sai Ashtavinayak Venture	1.23	2.22	0.4
		Shree Ashtavinayak Associates	0.22	0.1	0.619
		Sai Builders	2.22	1.12	0.75
Management Efficiency Ratio					
4	Inventory Turnover Ratio	Shree Ashtavinayak Developers	2.92	1.61	3.22
		Sai Ashtavinayak Venture	0.98	1.32	2.82
		Shree Ashtavinayak Associates	0.62	3.62	2.258
		Sai Builders	28.28	40.02	30.45
5	Debtors turnover Ratio	Shree Ashtavinayak Developers	30.36	40.32	53.40
		Sai Ashtavinayak Venture	2.02	1.32	3.03
		Shree Ashtavinayak Associates	17.68	15.36	20.95
		Sai Builders	2.13	0.63	1.23
6	Fixed Assets Turnover Ratio	Shree Ashtavinayak Developers	15.32	8.56	9.52
		Sai Ashtavinayak Venture	99.23	168.02	152.89
		Shree Ashtavinayak Associates	503.32	601.12	709.37
		Sai Builders	32.32	48.13	64.95
7	Total Assets Turnover Ratio	Shree Ashtavinayak Developers	0.33	2.02	1.51
		Sai Ashtavinayak Venture	1.99	1.92	1.85

		Shree Ashtavinayak Associates	1.36	3.36	2.95
		Sai Builders	1.32	0.68	0.32
Profitability ratio					
8	Operating Profit Margin	Shree Ashtavinayak Developers	38.37	58.27	66.01
		Sai Ashtavinayak Venture	16.96	27.12	33.12
		Shree Ashtavinayak Associates	42.12	30.18	62.31
		Sai Builders	70.73	122.22	169.97
9	Gross Profit Margin	Shree Ashtavinayak Developers	6.65	8.3	12.63
		Sai Ashtavinayak Venture	33.33	20.2	22.79
		Shree Ashtavinayak Associates	18.92	25.26	27.61
		Sai Builders	16.81	10.13	11.86
10	Net profit Margin	Shree Ashtavinayak Developers	0.32	0.28	1.84
		Sai Ashtavinayak Venture	1.86	3.2	2.5
		Shree Ashtavinayak Associates	3.32	1.8	2.56
		Sai Builders	0.98	0.32	Loss
11	Return on net Worth	Shree Ashtavinayak Developers	0.09	0.1	0.03
		Sai Ashtavinayak Venture	0.32	0.22	0.12
		Shree Ashtavinayak Associates	0.72	0.76	0.13
		Sai Builders	0.23	0.05	Loss
Debt Coverage Ratio					
12	Interest Coverage Ratio	Shree Ashtavinayak Developers	32.63	34.43	49.86
		Sai Ashtavinayak Venture	65.53	40.34	72.75
		Shree Ashtavinayak Associates	32.31	25.39	40.56
		Sai Builders	34.13	26.89	Loss

Final outcome of all the ratios relating to the four construction firms is found out from the detailed analysis of data in the form of graphs and charts. It is found that some companies are good in financial position, some represent the satisfactory results, and some require proper financial management practices for improving their financial conditions.

VII. CONCLUSIONS

1. By studying the concept, it can be concluded that financial management finds to be the most important tool in any construction firm. The ratio analysis technique proves to be most efficient method to determine the financial position of construction firms, which also helps to develop the good financial management techniques for construction firms.
2. The reviews made by various authors in their literatures are studied, and on the basis of this further findings in the field are made by selecting ratio analysis technique for study.
3. Data is collected from construction firms which include the last three year financial data of four construction firms and then it is analyzed to calculate various financial ratios.
4. These construction firms are selected for data collection so that the live data of actual construction works will be utilized for analysis work and thus, this will help in improving the financial management practices of other developing construction firms.
5. On the basis of data collected, analysis of collected data relating to financial field is done using the ratio analysis technique to compare the various ratios among the four construction firms.
6. Financial positions of shree Ashtavinayak Developers, Sai Ashtavinayak Venture and Shree Ashtavinayak Associates are very better.



7. The Operating Ratio of Sai Builders has continuously improved in one year. The Net Profit of Sai Builders has continuously decreased as compared to other firms. In third year the firm was in loss.
8. The accomplishment of Shree Ashtavinayak Associates for all three years is satisfactory as compared to other three firms.
9. Hence we conclude that ratio analysis technique is unique method for finding the current financial position of construction firms in the market, further is also efficient for suggesting the improvements for improving the financial management practices in firms, to gain success in various construction projects.

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