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Valuation Process and Performance of Combined Ethiopian Companies: (Experience from Sur Construction plc. and Ethio-Rental plc)

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Abstract
The study circulates around the key issues in merger valuation and financial performance of the merged company before and after union . The objective is to analyze the valuation process and evaluate the performance of merged company before and after merger. The data used in the study was obtained from the audited financial statements of the company's and through interview with the executives. The performance 5 years before and after combined are investigated using financial statement analysis. In order to substantiate the result t- test was used for hypothesis testing. The study finding indicates that the major merger motive is enhancing profitability. It is also found that the merger process is simply pooling the audited financial statements of companies going for merger. The study analysis made both by financial statements analysis and the hypothesis testing made shows that performance of firms after combined has declined as compared to the performance of firms before combined.

Introduction

Merger is a tool used by companies for the purpose of expanding their operations often aiming at an increase of their long term profitability. Merger and acquisitions (M&As) continue to be a dominant growth strategy for companies worldwide. Growth continues to dominate the minds of CEOs and their Boards. Merger and acquisitions (M&As) has been one of the favored methods of achieving growth targets and encouraging key stakeholders, vigilant in their goal to increase shareholder value. (McDonald et al, 2005)

In today's competitive world, for any company, it is becoming harder to achieve leadership position and stay on top. Hence, companies tend to focus on external growth rather than internal growth when it decides to expand its existing operations quickly. A firm can grow internally by setting its own units in to new market or new product. But if a firm wants to grow internally it can face certain problems like the size of the existing market may be limited or the existing product may not have growth potential in future or there may be government restriction on capacity enhancement. Also firm may not have specialized knowledge to enter in to new product/ market. It takes a longer period to establish own units and yield positive return. But if a firm proposed to expand its business externally, it can avoid the short comings of internal growth. External growth can be made in several ways by which companies can combine their efforts. They can partner a project, mutually agree to join forces and merge, or one company can completely acquire another company, taking over all its operations, including its holdings and debt, and at times replacing management with their own representatives. (ICFAI Business School Case Development Centre, 2006)

Merger and acquisition can be classified based upon the objective profile of such arrangements as Horizontal, Vertical, and Conglomerate mergers.

A horizontal merger is the combinations of two competing firms belongs to the same industry and are at the same stage of business cycle. These mergers are aimed at achieving economies of Scale in production by eliminating duplication of facilities and operations and broadening the product line, reducing investment in working capital, eliminating competition through product concentration, reducing advertising costs, increasing market segments and exercising better control over the market. It is also an indirect route to achieving technical economies of large scale.

A vertical merger is one where companies at different product or business life cycle combines. It can be backward integration, where company merges with its supplier or forward integration, where it merges with its customer. The basic motive of these sorts of merges is to reduce cost and dependence.

Conglomerate merger is the one where companies belong to different or unrelated lines of business. The basic motive of these mergers is to reduce risk through diversification. It also enhances the overall stability of the acquirer and improves the balances in the company's total portfolio of diverse products and production processes. It also encourages firms to grow by diversifying into other markets. Diversification is a vital strategy for the firm when present market does not have much additional opportunities for growth.

Nowadays, Merger activities in the world rose to unprecedented level. This can be evidenced from J.Fred Weston and Samual C. Weaver; this reflects that merger is the powerful change force in the world economy in the two decades of 1980's and 1990's. In fact this respond to the changes, which took place due to high level of technology changes, reduction in cost of communication and transportation that created international market, increased competition, emergence of new industries; favorable economic and financial environment and deregulation of most of the economies also motivate Mergers. The other factor that gave rise to these activities, relates to efficiency of operations. Economies of scale that reflects in cost reduction by avoiding duplicating works andoperating efficiency, which is the result of combining complementary strength, is the otherreason. Different growth opportunity among different products, birth of new industries, andconcept of value creation through specialization, and under capacity utilization are the otherforces.

Apart from the above stated motives like Synergy effect, Economy of scale, Improved profitability, Market power etc. there are numerous other qualitative and quantitative factors also inspires firms to resort to this route of corporate growth like to limit competition, utilization of underutilized capacity (material and human skills), improved assets turnover, inventory turnover, reduction in consumer surplus, overcome the problem of slow growth and profitability in one's own industry, to establish a transnational bridgehead without excessive startup cost to gain excess to a foreign market, to circumvent government regulations, empire building, to change price to earnings ratio favorably etc. This study examined the merger process, approach and the performance of merged companies in Ethiopia.

This study has conducted on two Ethiopian merged companies i.e. Sur Construction plc and Ethio- Rental Plc. The merger was made in the year 2003/04. These companies are selected for this study because, the merger was made before 5 years, there is sufficient period to compare the performance of companies before and after merger.

Merger and acquisitions are one of the popular issues in today‘s business world, since they characterize the new economy: pressure of global competition, development of technology and disappearance of country boundaries. These actions of companies are in order to get many competitive advantages. The success of a merger or acquisition lies in a lot of issues such as corporate strategy, valuation, risk, and integration...etc. A merger and acquisition can be negotiated for months. But a core questions are;how much you will pay for this merger or acquisition? Is the price appropriate? Are they really necessary?

Merger and acquisitions can fail because of overprice, which results in deteriorated shareholder value. However, in a country like Ethiopia, in which there is no stock market that helps set stock price of companies, determining the value of stock is not an easy task, and so does determining the value of target Company in merger. In contrast to this, countries where there is no well developed capital market, determination of target firm's value is not a difficult task.

Theoretically, it is assumed that Mergers and Acquisition improve the performance of the company because of Synergy effect, increased market power, Operational economy, financial economy, Economy of Scales etc. But, does it really improve the performance in short run as well as long run? Various studies have already been done on this matter. All these studies are related to European countries or US market. Several studies have been done on the relationship between M&A's and performance of the company using a variety of financial measures (e.g. Profit, Stock price) and non-financial measures (e.g. firm's reputation) and time frame (e.g. pre-measurement and post measurement initial market reaction etc.).

Consequently Valuation has a decisive impact on the success of the merger and acquisitions because being over valuations means overstatement of the target company and it has a negative impact in the success of the merged and acquired company. The other common phenomenon in merger and acquisition is that, most merger and acquisitions are ultimately ended up by a failure.

And there is a real question about, do merger and acquisition adds value? In order to understand the outcomes of merger it is necessary to measure the operating and financial performance of merged companies before and after merger.

Therefore, this study tries to assess the valuation process and also tries to analyze the financial performances of merged companies before and after the merger to know whether the merger was necessary or not.

Research Method

The study design is a comparative before and after study design in nature. It is the most appropriate design for measuring the impact or effectiveness of a program (merger). The change has measured by comparing the difference in the phenomenon before and after the merger.

The gathered information have analyzed by descriptive and Analytical analysis methods. In addition in order to measure the operating and financial performance of merged companies' before and after merger various statistical tools have used to arrive in the required goal.

To test the impact of Merger on performance, there are various alternative ways. Like "Event Studies", where we compare stock prices of the firms a certain days before and after the merger or the other way is 'T-test: Paired two samples for mean' which the researcher apply in this paper. I am selecting this test because the data that will be required for this test is available with me. In this study the researcher test the impact of merger on the performance of the company in terms of four parameters .i.e. Return on capital employed, Economies of scale, Operating Synergy and Financial Synergy. In addition to these four indicators financial ratios have computed in areas which are believed to be necessary. Finally, the analyzed information has presented using tables and figures which are appropriate to explain the fact.

Discussion on Findings

The Valuation Process of Sur construction Plc

Sur construction was established with initial capital of Birr 35million. Its main objective was to be one of the biggest 1st class general contractors in the country to provide competent construction services at national levels. Sur construction is one of the companies established under the umbrella of the endowment fund for rehabilitation of Tigray (EFFORT).

Process of the Merger

In the meetings of the company's during 2003, the representatives of the two companies with the board of directors of EFFORT analyze the advantage and disadvantages of merging the companies finally they reached into agreement to merge. Then they started the legalization of the merger by requesting merger approval from Ministry of Trade & Industry. They submitted all the pertinent documents like the respective Audited financial statements of the two companies before merger. Minutes of the meetings of the BOD approved the merger and the necessity of the merger to sustain and add value to the construction industry. After considering all the information the Ministry returned the trading license of the two companies and approved the license of the surviving company (Sur construction Plc). Then, the operation of the merged company has started on July, 1, 2003.

Based on the audited statement of the two firms, the BOD of EFFORT suggested to be merged with the existing Book Value of the accounts of the companies.

Rationale for the Merger of Sur construction Plc

As per the minutes of Sur construction plc the rationale and objective of the merger were initiated since there is a huge gap between the country's demand for Construction Company and the number of construction companies actually exist and to use the unutilized resource of its sister company i.e. Ethio-Rental and to integrate vertically the company to have strategic competitiveness and enhance capital return.

The resources of Ethio-Rental were the major input for Sur construction. So, the idea of merging the companies has been implemented in order to utilize the resources effectively & efficiently.

The Valuation Process of Ethio-Rental Plc

Ethio-Rental plc was established in April, 1995 with a capital of Birr 71 million to hire construction machinery's and also provides other related services to customers. This business type was not well known in the country and there were few individuals who rent the equipment's. The objective of the company was to have a leading role in the construction industry by providing dependable service and there to enhance the development efforts of the country.

Rationale for Merger of Ethio-Rental Plc

The following were the main reasons for the merger:

1. Operating Distress: Ethio-Rental plc was the only company which involve in the rental of construction equipments in the country. Due to the location of the company it was not operating as per the expectation and the major customer of the company was Sur construction plc. Finally they ended up choosing to merge with sur construction.
2. Synergy: is the force that allows for enhanced cost efficiencies of the new business. Synergy takes the form of revenue enhancement and cost savings. By merging, the companies hope to benefit from Economies of scale, improved market reach and industry visibility. The merger of the two allows pooling of capital and expertise together. This accumulation of resources is expected to benefit the emerging company in many ways. The idea of the whole is greater than the sum of its parts was one of the motivating factors for merger- To create a better and financially strong company.

Analysis of the Financial Statements of Sur construction

Ratio Analysis before merger:

I. Ratio analysis of Sur construction before Merger

Ratio \ Year	1999	2000	2001	2002	2003
Return on Equity (ROE)	-0.02101	0.06869	0.06772	0.04113	0.01938
Return on Asset (ROA)	-0.00872	0.02917	0.02680	0.01891	0.00745
Fixed Asset turn over	1.89607	2.23531	2.33756	2.00083	1.53027
Debt to Asset ratio	0.58482	0.57539	0.60422	0.54016	0.61578
Debt to Equity ratio	1.40857	1.35511	1.52668	1.17465	1.60269

As it can be seen from the above table the company's Return on Equity, Return on Asset and fixed asset turnover have increased from (0.021) to 0.069, from (0.009) to 0.029 and from 1.896 to 2.235 respectively in the year 2000, but it has decreases from year 2001 to 2003. While the company's debt to asset have decreased in the year 2000 from 0.585 to0 .575 and in the year 2002 it has decreased from 0.60 to 0.54 and increased in the year 2001 and 2003 from 0.575 to 0.604 and from 0.54 to 0.616 respectively. While debt to Equity ratio falls from 1.408 to 1.355 and from 1.527 to 1.175 in the year 2000 & 2002 respectively and has increased from1.355 to 1.525 & from 1.175 to 1.603 in the year 2001 and 2003 respectively.

II. Ratio analysis of Ethio-Rental plc before Merger

RATIOS \ Year	1999	2000	2001	2002	2003
Return on Equity (ROE)	0.047049	0.128664	0.247229	0.190579	0.106681
Return on Asset (ROA)	0.0271229	0.077451	0.155032	0.1243811	0.069932
Fixed Asset turn over	3.501120	2.974411	0.913232	0.941044	0.850662
Debt to Asset ratio	0.423523	0.398033	0.372922	0.347351	0.344472
Debt to Equity ratio	0.734676	0.661221	0.594699	0.532216	0.525487

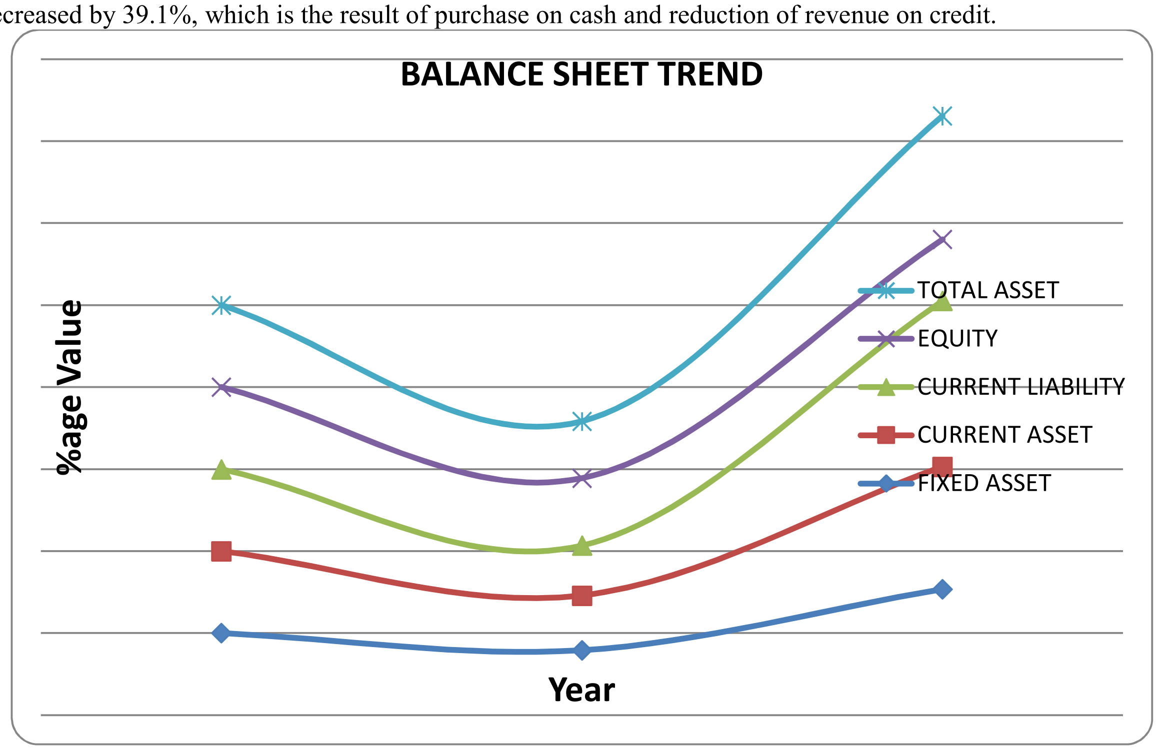
The company's Return on Equity has inclined by 8.2% & 11.8% in the year 2000 & 2001 and falls from 24.7% to 19.1% and from 19.1% to 10.7% in the year 2002 & 2003 respectively. Similarly the Return on Asset has increased from 2.7% to 7.7% and from 7.7% to 15.5% in the year 2000 & 2001 respectively, while it falls by 3.1% & 5.4% respectively in the year 2002 & 2003. As it can be seen from the table above the company's fixed asset turnover, debt to asset and debt to Equity ratios are decreasing from year to year. There is a slight decline in the company's return and turn over.

Performance Analysis of the merged company one year after merger:

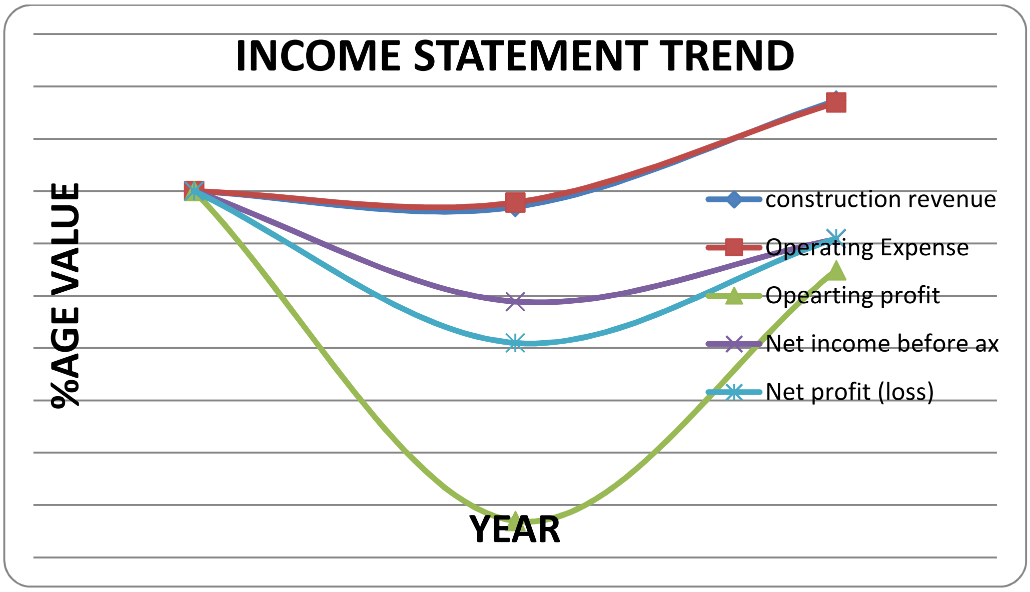
Financial Statements

The results of the conditions & operations of the company before and after merger are analyzed and presented as follows:

Fixed Assets decreased by 20.9%, which shows the company reduced spending on fixed assets and only uses the available fixed assets the change in the fixed asset value is the value of depreciation. Current Assets have also reduced by 33.2% this is due to the settlement of current liabilities and reduction in revenue. Current Liability has decreased by 39.1%, which is the result of purchase on cash and reduction of revenue on credit.



Construction Revenue has decline by 30.23%. This is due to the reduction in revenue from the rental of machineries' and other movable fixed assets. The operating expense also decreased by 21.6% from the merged balance. As a result the merged firm's Operating profit reduced by 430%, which indicates the decline in revenue, affects the operating profit of the merged companies and the company's net profit has decreased by 290%.



The overall performance of 2004 (one year after merger) indicates that the company's operational result have declined.

Ratio Analysis

The company's Return on Equity and Return on Assets have decline from 0.03 to (0.069) and from 0.01214 to (0.0332) respectively one year of the merger. The reason for this, as per the management of the company was the result of the rapid increase of the major Expenses, which doesn't comply with the expanded activities and or construction revenue.

Year / Ratios	Merger	1 Year after	5 years after
Return on Equity (ROE)	0.03001	-0.06944	0.00380
Return on Equity (ROA)	0.01214	-0.03321	0.00076
Fixed Asset turn over	1.45140	1.27955	2.58245
Debt to Asset ratio	0.59530	0.52177	0.79925
Debt to Equity ratio	1.47157	1.09107	3.98132

As it can be seen from the table above fixed asset turn over, debt to asset and debt to Equity ratios have decline from 1.45 to 1.28, from 0.6 to 0.52 and from 1.47 to 1.09 respectively one year after merger. As it can be seen from the table above all ratios are decreased after merger. This indicate that the company's performance as per return on equity, return on asset, asset turnover and other ratio measure after merger does not show any significant increase as compared to before merger.

Performance Evaluation after Five Years of the Merger (2008)

After five years of its operation the company shows an increment in revenue. This was due to the fact it has well known its 1st class general contractor in the country.

After analyzing the financial statement of 5 years after merger the following facts are identified.

The total assets increased by 50.7% from that of 2003(Merged account). Construction Revenue has also increased by 173.4%. This is due to the increment in the construction industry and become more experienced & well equipped. The operating expense also increased by 169.2% from the merged balance. This is due to the result of the rapid increase of the major Expenses, which doesn't comply with the expanded activities and or revenue. Even though the trend of the construction revenue shows an increment, the change in the profit of the company is not as that of the change in its revenue.

The company's Return on Equity, and Return on Assets have been declining from 0.03 to 0.0038 and from 0.01214 to 0.00076 respectively after five years of the merger. Fixed asset turnover ratio increases from 1.4514 to2.58245, debt to equity and debt to total asset ratios have also increased from 0.59540 to0.79925 and from 1.47157 to 3.98132 respectively.

Even though asset, revenue and in terms of ratios Fixed asset turnover, debt to equity and debt to asset ratios are increased but the other ratios ROE & ROA have decrease. Thus it is possible to conclude that the company does not increase its performance after merger.

Strategic and Financial Target of Merger
In this study one of the objectives is to investigate the strategic and financial target of merger. To get the required information interview was made with the executives that helped the researcher to get the necessary information.
Strategic Target of Mergers
According to the literature review (Papadakos, 2000), the driving force concerning the decision for merger, is the pursuit of scale economies, the pursuit of cooperation schemes, the increase of productivity, the reduction of the unit operation cost of the company and upgrading the level of the construction company. As per the interview with the executives the research results agree with the literature data.
Financial Target of Mergers
The most important financial target of the Merger-on long-term timeline was the improvement of corporate growth and profitability of the merged company.
Hypothesis Testing Using T-Test: Paired Two Samples for Mean
To substantiate the result obtained by using ratio analysis hypothesis was tested for the two firms by using T test. The hypothesis to be tested is:
Null hypothesis Ho: There is no significant difference in post-merger and pre merger operating performance for firms.
Alternative hypothesis H1: There is a significant difference in post-merger and pre- merger Operating performance for firms.

To test the impact of Mergers on performance, there are various alternative ways. Like "Event Studies", where we compare stock prices of the firms a certain days before and after the merger. Another way is "Regression Analysis", where we can take after tax rate of return as dependant variable and Size of the firm, rate of increase in capital stock, R&D expenditures etc. as independent variables. Third way is 'T-test: Paired two samples for mean' which the researcher going to use in this study.

In this study the researcher tests the impact of merger on the performance of the company in terms of four parameters. Return on capital employed (ROCE), Economies of scale, Operating Synergy and Financial Synergy.

The T test used is, T test: Paired two samples for means'.

Test of Return on Capital Employed
Here the test is the overall impact of the merger on the performance of the merged. For, ROCE, I take PBIT (Profit before Interest and Tax) minus Tax. And to calculate pre merge ROCE, I used weighted Average. I first calculated weighted average ROCE for each year and then I take simple average of five years weighted Average ROCE.

Similarly I obtained weighted Average ROCE for post merger. Thus I obtained two series of ROCE; one for Pre-merger and one for Post-merger.

When I run the t-test on this series I obtained the following results. Mean (pre) 0.15804 against the Mean (Post) 0.06211. While standard deviations (pre) 0.07498 and 0.04363 (post). I obtained statistic t-value 4.139 against the p-value of 0.014. That shows that we can accept alternative hypothesis at 5% confidence level. The statistical significance shows there is a significance difference between pre and post merger. The mean difference (mean ROCE before merger less mean ROCE after) is 9.4% i.e. ROCE before merger is 9.4% higher than after merger. In other words merger does not improve the performance of the companies under study.

t-Test: Paired Two Sample for Means	ROCE	
	Before merger	After merger
Mean	0.15804	0.06211
Standard deviation	0.07498	0.04363
Observations	5	5
Mean difference due to merger	0.09382	
Standard deviation difference due to merger	0.05224	
95% Confidence Interval of the Difference	0.02895- 0.15869	
Degree of freedom	4	
t-value	4.139	
p-value	0.014	

SPSS output of T test for Return on capital employed
Test of Economies of scale
Economy of scale refers to the cost reduction due to large number of units produced. Because there are various fixed cost involved in the operation and per unit cost component of such cost reduces when a firm produces more units. This economy of scale also arises because merger increases the size of the firm, so new firm become enabling to get better terms and conditions on purchases i.e. raw material cost also decrease. For all these reasons, 'cost of construction per unit' is taken as a measure of economies of scale. But due to unavailability of number of units produced, I selected 'cost of construction to earn per birr construction revenue' as a measure. When I run the t-test on the series (cost of construction / construction revenue for the companies pre-merger and post-merger) I obtained

Mean (pre) 0.68588against the Mean (Post) 0.90795. While standard deviations (pre) 0.06797and 0.09477 (post) and t-statistic -4.220 against the p-value 0.013at 5% confidence level. That shows that we can accept the alternate hypothesis at 5% confidence level. This shows that it is statistically significance. The statistical significance shows a significance difference between pre and post merger. The mean difference (mean Economies of scale before merger less mean Economies of scale after merger) is 22.2% i.e. the Economies of scale before merger is 22.2% lower than after merger. In other words merger does not improve the performance of the companies under study. Which means that the merger does not achieved economies of scale of the companies under study.

Total operating expense/ Revenue		
t-Test: Paired Two Sample for Means	Economies of scale	
	Before merger	After merger
Mean	0.68588	0.90795
Standard deviation	0.06797	0.09477
Observations	5	5
Mean difference due to merger	-0.22207	
Standard deviation difference due to merger	0.11767	
95% Confidence Interval of the Difference	-0.36818- -0.07596	
Degree of freedom	4	
t-value	-4.220	
P-value	.013	

SPSS output of T test for Economies of scale (Computed by the researcher)

Test of Operating Synergy

It is assumed that merger improves the performance of the company, because it helps to avoid the duplication of tasks. This should result in decreasing operating expenses and increasing operating profit. To test this aspect I selected Operating Profit Margin as a criterion and take weighted average of each year and simple average of this weighted Average OPM to calculate pre and post OPM figures.

When I run the t-test on this series, I obtained Mean (pre) 0.27207 against the Mean (Post) -0.07359. While standard deviations (pre) 0.07263and 0.08755 (post) and t-statistic 8.007 against the p-value 0.001 at 5% confidence level. That shows that we can accept the alternate hypothesis at 5% confidence level. This shows that it is statistically significance. The statistical significance shows a significance difference between pre and post merger. The mean difference (mean operating profit margin before merger less mean operating profit margin after merger) is 34.6% i.e. the operating profit margin before merger is 34.6 % higher than after merger. This proves that merger does not contribute in the operating synergy, for the sample under consideration.

Operating profit margin		
t-Test: Paired Two Sample for Means	Operating synergy	
	Before merger	After merger
Mean	0.27207	-0.07359
Standard deviation	0.07263	0.08755
Observations	5	5
Mean difference due to merger	0.34566	
Standard deviation difference due to merger	0.09654	
95% Confidence Interval of the Difference	0.22580 - 0.46553	
Degree of freedom	4	
t-value	8.007	
P-value	.001	

SPSS output of T test for Operating synergy

Conclusions

Based on the analysis made in Chapter Three the following conclusions are made on the importance of merger.

In the merger process of the companies, the merger is initiated because there was idle resource in the companies going for merger. The process is made by pooling the audited financial statements of the merging companies i.e. the book values of the assets and liabilities of the merging firms are added to arrive at values for the combined firm. It can be noted that the company's combination was effected in the manner of statutory consolidation. However, since there is no cash payment at the time of combination and only a fusion of the two companies, rather than take over occurs, we can conclude that the method of financial reporting for consolidation is pooling of interest method at which time it was practical.

It can also be noted from the interview with the executives the strategic intent of companies in merger is the driving force concerning the decision for merger, is the pursuit of scale economies, the pursuit of cooperation schemes, the increase of productivity and the reduction of the unit operation cost of the company and upgrading the level of the construction company.

The most important financial target of the Merger -on long-term timeline was the improvement of profitability of the merged company.

The financial statements of the merged companies 5 years before and 5 years after merger have analyzed using trend analysis and ratio analysis.

It can be understand from the result the Merger has failed to contribute positively in the performance of the company. It neither provides Economies of scale nor synergy effect. When I calculate overall impact (i.e. ROCE), the merger has failed to provide any positive contribution here also.