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A STUDY OF MERGER AND ACQUISITIONONSELECTEDENGINEERING AND CONSTRUCTION COMPANIES OFUNITED STATES OF AMERICA

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Abstract

Merger and Acquisition are the part of Corporate Restructuring and are adopted by thousands of companies as a part of corporate restructuring. In engineering and construction sector also the merger and acquisition activities are adopted to accelerate growth, create synergies, reduce the effect of construction cycle, spread risk, creating values and exploring new market and geographical area and there by increasing the profit and gaining through competitive advantage.

A present research paper is studying the impact of merger and acquisition on U.S engineering and construction companies examining various financial ratios of sample of selected companies for the period of 2013 to 2016. For the purpose of analysis the profitability ratios and the liquidity (current) ratio are used. The study resulted that there was positive impact of merger and acquisition on profitability and liquidity of the selected engineering and construction companies for short run.

Key words: *Merger, Acquisition, Engineering and construction sector, financial ratios*

INTRODUCTION

Merger means the combination of two companies into one large company. Reuters (1992) Glossary of International Economic and Financial terms described a merger as, 'the fusion of two companies or, sometimes an acquisition of one company by another. Acquisition is one company takeover by the other. Reason behind merger and acquisition generally is that two separate companies together create more value compared to being on an individual stand.

Types of merger

Following are the types of mergers**:**

Horizontal Merger: It refers to two firms operating in same industry or producing ideal products combining together. The main objectives of these are to benefit from economies of scale, reduce completion, achieve monopoly status and control market.

Vertical Merger: A vertical merger can happen in two ways. (1) Backward integration: A vertical integration where a company acquires the suppliers of its raw materials. (2) Forward integration: A vertical integration where a company acquires the distribution channels of its products.

Conglomerate Merger: IT refers to the combination of two firms operating in industries unrelated to each other. In this case the business of the target company is entirely different from those of the acquiring company.

Market Extension Merger: A Merger between companies that have same products to offer but the markets are different.

Product Extension Merger: A merger between companies that have different but related products but the markets are same.

Complementary or supplementary Merger: A complementary merger aims at compensating same limitation of the acquiring company. The acquisition of target company may be attempt to strengthen a process or enter a new market is one in which the target company further strengthens the acquiring company. The target may be similar to the acquiring company in this case.

Hostile or friendly Merger: A merger can be hostile or friendly depending on the approval of its directors. If the board of directors and the managers of the company are against the merger, it is a hostile merger. If it is approved by them it is friendly merger.

Arms length merger: This type of a merger is a merger that is approved both by the disinterested directors and by the disinterested stockholders.

Strategic Merger: A merger of a target company with an aim of strategic holding over a longer term. An acquirer may pay a premium to target in this case.

A merger may vary according to the way companies come together or their economic functions.

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Definition of Construction Sector

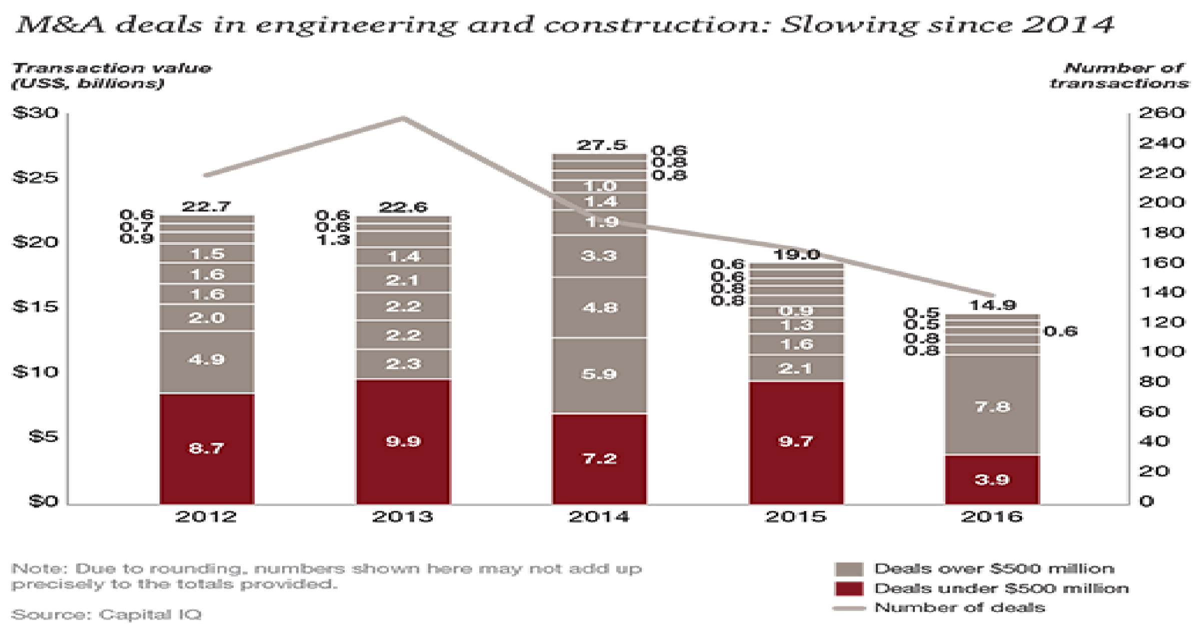
The construction sector is made of six subsectors, Architectural and engineering activities and related technical consultancy, site preparation, building of complete constructions or parts thereof, building installation, building completion and renting of construction or demolition equipment with operator.

History

With expenditures reaching over 1231 billion U.S. dollars, the United States is the one of the largest construction market worldwide. After the recession, construction projects that were once stalled have now accelerated their progress once again. Positive trends in the residential market are the primary drivers of the booming construction industry growth. Within the United States, now construction put into place is among the highest in the South Atlantic and pacific regions. Bechtel is currently one of the largest U.S. based construction firms. The construction and engineering company is headquartered in San Francisco was one of the largest Construction contractors in the United States based on revenues.

In the United states private construction spending reached around 899 billion U.S. dollars in2016. New construction put in place in forecast to reach over 1.4 trillion U.S dollars by 2021. After the collapse of oil prices, the demand in the engineering and construction sector has slowed. Political and policy changes under the new white house government will also inevitably after the construction industry. A downturn in business across the national construction industry will likely see companies focus more heavily on the South and Midwest regions. Aging infrastructure has also become a greater concern in the U.S and a focus on updating infrastructure is expected.

Following graph shows the merger and acquisition deals in Engineering and construction sector from 2012 to 2016.



LITERATURE REVIEW

A brief review of selected studies has been presented as below:

Grace Melissa Akenga and Margaret Akingi Olang (2017) in their study concluded that asset growth, synergy and shareholder value had a significant effect on the financial performance of banks. After merger and acquisition the performance of banks increased which was measured by ROE. Their population was six commercial banks in Kenya which had successfully completed merger and acquisition from the year 2010 to 2016.

"Shareholder's value creation in merger and acquisition –A case of Indian construction Industry" by **Jayanta k mohapatra (2015)** studied all successful merger and acquisition from April 1995 to March 2012. The merger data has been collected from Prowess database of the CMIE and used event study methodology end concluded merger and acquisition represent diversification act. The success of merger is dependent on several factors starting from environmental condition to form specific factors. Similarly the value creation through a merger is dependent on the synergy achievable.

"Impact of merger and acquisition on operating performance: evidence from manufacturing firms in India" by **Ramachandran Azhzgaidh and ThangavelaSathiskumar(2014)** in their research carried out with the objective of studying what shifting in structure is experience especially in operating profit after merger and acquisition in 39 selected acquiring manufacturing firms in India during financial year 2002 -2012. The various tests concluded that the merger and acquisition process has significant effect (improvement positively) in respect of operating performance in the post merger period.

Synergies in merger and acquisition by Sofie Eliasson (2011) The objective of the paper is to analyzed synergies in regards to merger and acquisition in technical trading companies to learn about success factor and suggestion includes the comparison of the acquired companies perceptions before and after the acquisition in a sort and pros and cons deployment, where several parameters could be evaluated and analyzed both in pre and post states. Ultimately this could be used as a sort of benchmarking tool helping the corporate heads to adjust and improve areas where their subsidiaries are less satisfied.

The effect of leadership style on talent retention during M & A integration: Evidence from china by, **Zhang, J. Ahammad, Tarba (2015)** in their study concluded that, as is typical of the case study approach, the generalizability of the findings in this study may be limited because the study involved only one M&A case. Further study using statistical tests to a large sample of M&A deal could give better results.

Michael A Hitt, Rebert E Hoskisson(1991), R duane Ireland and Jeffery S. Harrison in their study on effect of acquisition on R & D inputs and outputs, finds that acquisitions had negative effects on R & D intensity & patent intensity. Further research is required not only to confirm the findings of study but also to test and extend theoretical rationales for the reported outcomes. They used data on R & D expenditure of 191acquisitions completed from 1970 through 1986 of 29 industries.

The paper: impact of merger announcements on shareholders wealth – evidence from Indian private sectors banks" studied by **Manoj Anand and Jagandeepsingh (2008)** analyzed five mergers in the Indian banking sector to understand the shareholders' wealth effects of bank mergers by an event study methodology during the period 1999-2005 and concluded that merger in Indian banking industry has positive and significant shareholders' wealth effect both for the bidder and target banks.

"The effect of merger and acquisition in corporate growth and profitability – evidence from Nigeria" by **Sylvester feviAkinbuli (2013)** used survey method and personal interviews to examine the effect of merger and acquisition on corporate growth and profitability by analyzing the pre banking sector consolidation era and the post banking sector consolidation era of 10 banks over the period 2004-2008. The paper concluded that merger and acquisition served the objective of regulators to cure the banking system of financial distress only on a temporary basis. The permanent solution to financial crisis in banking industry has not been realized.

J choi and J S Russell (2004) studied paper on "Economic gain of the U.S of America around merger and acquisition in construction industry" in their paper concluded that shareholders of construction firms gained almost nothing around the merger and acquisition implementations. Therefore, the research findings of this study are consistent with previous research findings. Indicating that shareholders of acquiring firms are on break even. They used 171 merger and acquisition samples in U.S construction industry from 1980-2002.

M. Conyon, S.Girma, S Thompson & P Wright (2002) in their study seen that both employment and output fall subsequent to an acquisition. It was suggested that this was indicative of high levels of post merger divestment, a much phenomenon much observed among large U.K firms over the period. This paper has provided a systematic empirical analysis of the effect of take over and merger activity on firm employment in U.K during 1967 to1996 with the sample size of 277 companies in U.K.

RESEARCH GAP

Currently available literatures on various merger and acquisitions seem to be adequate. The literature review conducted for the current study makes it clear that very few researches are done on engineering and construction sector in U.S relating to merger and acquisitions Thus, there is scope of further study.

Objective of the study

To study the impact of merger and acquisition on selected U.S engineering and construction companies.

To study the impact on profitability after the merger and acquisition in selected U.S engineering and construction companies.

To study the impact on liquidity after the merger and acquisition in selected U.S engineering and construction companies.

LIMITATION OF THE STUDY

The present study is based on quantitative research on limited companies within limited time period. Thus, there are further scopes for macro level research taking longer duration of study.

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RESEARCH METHODOLOGY

Data collection
The study is based on the secondary data. The data is taken from annual reports of selected companies. Different websites and public reports. With the help of annual reports various ratios are found out.

Sample selection
The study has been carried out on micro level. Two U.S construction companies are selected as sample and their merger or acquisition with another companies are taken into consideration during the period of 2013 to 2016.

Ratio Analysis
Ratio Analysis is a quantitative analysis of information contained in a company's' financial statements. Ratio Analysis is used to evaluate various aspects of a company's operating and financial performance such as its efficiency, liquidity, profitability and solvency.

Here, we are going to measure the profitability ratios and liquidity (current) ratio of the selected U.S engineering and construction companies.

Following are various profitability ratios.

1. **Net Profit**: This ratio measures the overall profitability of company considering all direct as well as indirect cost. A high ratio represents a positive return in the company and better the company is.
2. **Return on Equity (ROE)**: This ratio measures profitability of equity funds invested in the company. It also measures how profitably owners fund have been utilized to generate company's revenues. A high ratio represents better the company is.
3. **Return on Assets (ROA**): This ratio measures the earning per dollar of assets invested in the company. A high ratio represents better the company is.
4. **Earning Per Share(EPS**): This ratio measures profitability from the point of view of the ordinary share holders. A high ratio represent better the company is.
5. **Return on Capital Employed (ROCE**): This ratio computes percentage return in the company on the funds invested in the business by its owners. A high ratio represents better the company is.
6. **Current ratio (liquidity ratio**): Current ratio divides total current assets by total current liabilities. This ratio provides the most basic analysis regarding the coverage level of current debts by current assets.

SAMPLE COMPANIES AND THEIR RATIO ANALYSIS:

a) Probuildinc. acquired by Builders Firstsource

On 4-13-15 Builders Firstsource acquired probuild company. Builders firstsourceinc. – a leading supplier and manufacturer of structural and related building products for residential new construction in the USA acquired probuiled which was one of the largest professional building materials company in USA.

Following table shows different profitability ratios and liquidity (current) ratio obtained from the consolidated financial statements of builders firstsourse and probuild.

Profitability ratio	Before acquisition		After Acquisition	
	2013	**2014**	**2015**	**2016**
1. Net profit ratio	-	1.13%	-	2.27%
2. ROA	-	3.16%	-	4.96%
3. ROE	-	45.15%	-	46.62%
4. EPS(per $)	-	0.19	-	1.30
5. ROCE	-	4.35%	-	7.18%
6. Liquidity ratio(current ratio)	2.62	1.93	1.62	1.61

Analysis: The above table analyzed that in pre-acquisition period the loss is accrued in year 2013 and in year 2014 profitability ratios are positive. While in post- acquisition period in year 2015 the loss is accrued and in year 2016 profitability ratios are positive. If we compare profitability ratios of 2014 and 2016 means one year of pre and then one year of post acquisition we can conclude that the acquisition is successful for the acquirer company. The current ratio is decreased from pre acquisition to post acquisition period which shows good sign of liquidity.

b) WSP and Merger between Parson Brickerhoff

On Date 9-3-14 WSP USA acquired Parson Brickerhoff and formed wsp/parsonBrickerhoff, which is a multinational engineering and design firm. The firm operates in the fields of strategic consulting, planning engineering, Construction management, etc

Following table shows various profitability ratios and liquidity (current) ratio of the WSP/ parson Brinckerhoff Company.

Profitability ratios	2014	2015
Net Profit ratio	2.14%	3.11%
ROA	1.27%	3.06%
ROE	2.89%	6.47%
EPS(per $)	0.98	2.05
ROCE	2.52%	6.23%
Liquidity (current) ratio	1.27	1.26

ANALYSIS

The analysis shows that after merger the company's profitability ratios are increased simultaneously which shows that the merger is successful in terms of profitability. The current ratio is decreased which shows favorable liquidity position of company.

CONCLUSION

The above study is based on the research of two selected US construction companies and their merger and acquisition impact on profitability and liquidity for short period of time. Thus, further study is required for long term investigation on macro level. For short term temporary bases at micro level the impact of merger and acquisition on profitability and liquidity in US construction sector is favorable.

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