The Impact of Mergers on Financial Performance of the Jordanian Industrial Sector

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Abstract

This paper attempts to analyze post-merger impact on financial performance of merger firms in Jordanian industrial sector. Seven industrial companies involved in merger deals between 2000 and 2014 were included in the sample. Two years pre and post-merger data is used to test the significant. Paired sample t-test statistics is applied on financial ratios with the help of statistical software SPSS. The results indicate that Jordanian companies do not differ from the companies in other parts of the world. On the basis of findings, it is concluded that overall financial performance of merger industrial companies improved insignificantly in post-merger period. The profitability, efficiency, liquidity and market prospect performance variables insignificantly improved while the leverage deteriorated in post-merger period. It is concluded that merger impact on different industries of Jordanian industrial sector differently.

Keywords

Merger, Financial Performance, Fnancial Ratios Analysis, Jordan

I. Introduction

Modern technology has contributed a major role emerge of the phenomenon of corporate mergers, because of the progress and rapid technological development to increase a sense of small corporations' inability to realize their hopes if remained alone compete with one another, combination became the only way for these corporations, fearing that eliminate from the large corporations, and grew up cooperation for economic groupings has much capital, and has excellent technical ability and management, enabled it to improve its production and the pursuit of ongoing economic developments. Merger definition, two or more companies joint in another company of the same legal or other form. An acquisition definition is the buy of one company by another in which no new company is formed.

It is important to note that a different merger The American Federal Trade Commission (FTC) has formed a five-fold category system for classifying mergers and acquisitions [1]. They are horizontal, vertical, product extension, market extension and Unrelated. Corporations seeks to merge with same or complementary corporations, either to achieve higher productivity rates and achieve a monopoly in the direct activity practiced, and either to put an end to compete with them, either with a view to reduce costs to reduce the costs of the activity they do and join of production policy and increase credit support economic power of the companies involved in the merger. The disadvantages of a merger focus on the workers and customers rather than the company itself. which leads to a monopoly of the service, and with that the merger leads to emerge powerful companies can develop the production and use of modern technology and compete with foreign companies, but it not without at the same time of defects if companies used this authority for personal interests.

The merger of the companies stipulated in the Jordanian Companies Law No. 22 of 1997 and its amendments in Article (222-a) of the Law stipulates that merger shall be accomplished by any of the following methods, provided that the objectives of the companies wishing to merge are identical or complementary:

1. Through the merger of one company or more with other companies called the (merging company). The company or companies merged therein, and the corporate identity of each, shall no longer exist. The rights and obligations of the merged companies shall be carried over to the merging company.
2. Through the merger of two companies or more to form a new company which will be the result of that merger; the companies that have merged in the new company and the corporate identity of each of them shall no longer exists.
3. Through the merger of the branches and agencies of foreign companies operating in the Kingdom of Jordan, with an existing or new Jordanian company established for this purpose; the said branches and agencies shall expire and the corporate entity of each of them shall no longer exist.

II. Literature review

Several event studies were done all over the world to test the financial performance and determine the impact on profitability, efficiency and other ratios post mergers. The study of [2] investigated the impact of mergers and acquisitions on the firm performance in Australia. The aim of this study is to evaluate whether mergers and acquisitions create synergies. A sample a sample of 36 Australian manufacturing companies engaged in the mergers and acquisitions deals during 1986 to 1991 are chosen for measuring the impact of post-merger performance of acquiring firms. Results of this study show that corporate mergers don't significantly improve the post-merger financial performance of acquiring corporations. In the study of [3] this paper examines empirically the impact of mergers and acquisitions on the operating performance of mergers and acquisitions involved firms in Greece. The researchers use financial and non-financial characteristics in this study. Selected accounting variables (financial characteristics) are introduced to measure operating performance and compare pre- and post-mergers and acquisitions firm performance for three years before and after mergers and acquisitions. The study found decreases in most ratios selected in the sample of 50 Greek companies for the period of 1998-2002. Another study [4] this study analyzed the Impact of mergers on the corporate performance of acquirer and target companies in India. the study is limited to a sample of companies which underwent merger in the same industry for the period of 2002-2005 listed in one of the Indian stock exchange namely Bombay Stock Exchange. It is proposed to compare the liquidity performance of the thirteen sample acquirer and target companies before and after the period of mergers by using ratio analysis and t-test during the study period of three years. The study found that the shareholders of the acquirer companies increased their liquidity performance after the merger event. In the study of [5] the aim of this study is to investigate the impact of mergers and acquisitions deals on the performance of acquirer Turkish companies. 62 companies involved in mergers and acquisitions deals between 2003 and 2007 were included in the sample. The study found that here is a negatively affected by mergers and acquisitions activities. Other researchers [6] this paper investigates

ISSN : 2230-9519 (Online) | ISSN : 2231-2463 (Print)

the impact of acquisitions on company performance in UK-quoted companies and it observed over a long time period. The results show that acquisitions have a detrimental impact on company performance and that company growth through acquisition yields a lower rate of return than growth through internal investment.

From the prior studies there are two approaches to assess the impact of the merger or acquisition on the companies' performance the first is stock market approach and the accounting approach is the second. A stock market study uses the event study method to predict the financial losses and gains resulting from merger. This method assumed that the stock market is efficient and hence abnormal security returns for both the merged or acquired companies, controlling for movements in the market in general and the systematic risk of the company, represent the economic impact of the merger and acquisition event [5]. A major problem with this approach is that changes in market valuations around the time of takeover could reflect not only the benefits of an efficiently operating market for corporate control, but also other factors such as undervaluation due to investors overlooking the stock or an overvaluation by those who acquire the firm [5,8].

Other researchers [9] studied the impact of merger on financial performance of Malaysian companies during the period of 1988-1992. The study found that the financial performances of Malaysian companies have significantly improved post-merger.

Other researchers [10] studied the impact of merger on financial performance of two Jordanian companies. Using financial ratios comparing two companies after merger, the study did not use any statistics tools to test the significant. The study found that the financial performances of the two companies are significantly different post-merger. This paper is different from the study of [10] through two reasons; the first is in the way that we will test the significant effect of merger by paired T-Test, the second is the number of sample size.

Accounting data analysis was used in several studies to assess the economic impact of mergers and acquisitions by comparing pre-merger ratios to post-merger ratios and testing post-merger significant improvement through parametric tests (paired T-Test). To our knowledge this study is the second study in Jordan which measures the performance of Jordanian corporations' mergers pre and post-merger, especially in the industry sector, based on accounting data from the merged industry corporations'. In this study, we will evaluate pre and post-merger the industry corporations' using ratios and testing post-merger significant improvement through parametric tests (paired T-Test). Those ratios are used to analyze the financial statements; five groups of ratios used to achieve the study objectives:

1. Market Prospect Ratio
2. Profitability Ratios
3. Leverage Ratios
4. Efficiency Ratios
5. Liquidity Ratios

III. Objectives of the Study

The first objective of this study is to investigate effects of mergers on the profitability, efficiency liquidity, leverage and market prospect performance indicators of Jordan industrial companies going through mergers in Jordan industry sector. The second objective of this study is to examine and evaluate what extent mergers and business takeovers influences on profitability, efficiency, liquidity, leverage and market prospect performance of the selected companies in industry sector of Jordan, such as Chemical Industries, Engineering and Construction, Pharmaceutical and Medical Industries, Tobacco and Cigarettes.

IV. Statement of Hypothesis

The objective of this study is to investigate whether the performance of Jordanian industrial companies is significantly affected by merger. Therefore, we formulate the following hypotheses:

H1: Mergers has a significant effect on market prospect ratios of industrial sector in Jordan.

H2: Mergers has a significant effect on profitability ratios of industrial sector in Jordan.

H3: Mergers has a significant effect on financial leverage ratios of industrial sector in Jordan.

H4: Mergers has a significant effect on efficiency ratios of industrial sector in Jordan.

H5: Mergers has a significant effect on Liquidity ratios of industrial sector in Jordan.

H6: Merger has a same effect on the Jordanian industrial sector.

V. Research Methodology

A. Variables of Study

The dependent variable is the merger of firms and independent variables are profitability, efficiency, liquidity, leverage and market prospect performance. This study is based on the secondary data. The data relating to the selected companies under study is obtained from annual reports of the selected companies.

B. Population

The population of this study consists of all manufacturing companies involved in the mergers during 2000 - 2014.

C. Sampling Method and Sample Size

The sample is constructed by examining the merged companies' data available on Amman Stock Exchange for incidences of mergers between industrial companies firms during 2000-2014. The final sample consists of seven mergers; Two Chemical Industries, two Engineering and Construction, two pharmaceutical and Medical Industries and one Tobacco and Cigarettes industry.

D. Statistical Method

A paired t-test is used to compare two population means where you have two samples in which observations in one sample can be paired with observations in the other sample [11]. Examples of where this might occur are:

1. Before-and-after observations on the same subjects.
2. A comparison of two different methods of measurement or two different treatments where the measurements/treatments are applied to the same subjects.

VI. Analysis and Interpretation

Analysis of Financial Performance: pre and post-Merger average financial ratios are computed of each industrial company included in sample. Each group of financial performance (market prospect ratio, profitability, liquidity, efficiency and leverage ratios) is separately analyzed in the pre and post-merger of seven companies.

Table 1 shows earnings per share of five companies improved while two sample companies working capital deteriorated. Out of five companies' improved earnings per share only one company earnings per share is statistically significant improved. At the same time out of two companies deteriorated earnings per share none of companies' earnings per share is statistically significant deteriorated. Price earnings ratio of six companies improved while one sample company price earnings ratio deteriorated. Out of six companies' improved price earnings ratio only two companies' price earnings ratio is statistically significant improved. At the same time out of four companies deteriorated price earnings ratio only one company price earnings ratio is statistically significant deteriorated. as a whole by comparing the improvements and deterioration in market prospect ratios it is decided that market prospect ratios of merger companies is better than before but insignificant. The results are consistent with the results achieved by [2, 4, and 7]. Based on the findings the first hypothesis is rejected in other words merger has no significant effect on post-merger market prospect ratios of merged companies.

Table 2 shows gross margin of all companies improved. Out of seven companies improved gross margin only one company gross margin is statistically significant. At the other hand, Out of five companies improved margin before interest and tax ratio none of companies' margin before interest and tax ratio statistically significantly improved. Margin before interest and tax ratio of two companies deteriorated insignificant. Out of five companies improved profit margin ratio none of companies' profit margin ratio statistically significant improved. At the other hand, out of two companies deteriorated profit margin ratio only one company profit margin ratio statistically significantly deteriorated. Return on assets ratio of five companies improved while two sample companies return on assets ratio deteriorated. Out of five companies improved return on assets ratio only two companies return on assets ratio is statistically significant. At the same time out of two companies deteriorated return on assets ratio only two companies' return on assets ratio is statistically significant. Return on equity ratio of five companies improved while two sample companies return on equity ratio deteriorated. Out of five companies improved return on equity ratio only two companies Return on equity ratio is statistically significant. At the same time out of two companies deteriorated return on equity ratio only one company return on equity ratio is statistically significant. As a whole by comparing the improvements and deterioration in profitability ratios it is decided that profitability ratios of merger companies is better than before but insignificant. The results are consistent with the results achieved by [2, 7]. Based on the findings the second hypothesis is rejected which means that merger has no significant effect on after-merger profitability ratios of merged companies. A company with lower ratio also has lower overall debt and that usually implies a more stable business with the potential of longevity because each industry has its own benchmarks for debt, but the ratio must be under 50% to be reasonable ratio. Table 3 shows debit ratio of five companies increased while two sample companies Debit ratio deteriorated. Out of five companies increased debit ratio none of companies' debit ratio is statistically significant increased or deteriorated which means these companies still have stable business with the potential of longevity. At the same time out of two companies deteriorated debit ratio which means that companies has twice as many assets as liabilities. Equity ratio complements the debt ratio; in other word the ratio must be over 50% to be reasonable ratio.

Table 3 shows equity ratio of five companies decreased while two sample companies equity ratio increased. Out of five companies decreased equity ratio none of companies' equity ratio is statistically significant increased or deteriorated. as a whole by comparing the improvements and deterioration in leverage ratios it is decided that leverage ratios of merger companies is better than before but insignificant. The results are consistent with the results achieved by [3, 7]. Based on the findings the third hypothesis is rejected in merger has no significant effect on post-merger leverage ratios.

Table 1: Market Prospect Ratios

	Merger Company Name	Earnings Per Share (JD)			Price Earnings Ratio (Times)		
		pre	post	Sig. (2-tailed)	pre	post	Sig. (2-tailed)
1	Intermediate Petrochemicals Industries	-0.05	0.01	0.44	-0.05	0.01	0.91
2	Rum- Aladdin For Engineering Industries	0.02	-0.01	0.09	11.39	57.12	0.65
3	The Industrial Commercial & Agricultural	0.06	0.10	0.16	29.18	29.83	0.79
4	The Jordanian Pharmaceutical Manufacturing	-0.15	0.12	0.001*	-2.38	17.41	0.01*
5	The Arab Pharmaceutical Manufacturing	0.36	0.27	0.11	7.98	23.18	0.02*
6	Union Tobacco & cigarette Industries	0.05	0.12	0.83	-4.98	2490.53	0.49
7	Jordan International Industries	-0.09	-0.03	0.21	-0.49	-44.21	0.02*

Table 2: Profitability Ratios

Sr.	Merger Company Name	Gross Margin %			Margin Before Interest and Tax %			Profit Margin %			Return on Assets %			Return on Equity %		
		pre	post	Sig.	pre	post	Sig.	pre	post	Sig.	pre	post	Sig.	pre	post	Sig.
1	Intermediate Petrochemicals Industries	3.18	14.30	0.05*	-5.59	4.86	0.35	-8.37	0.33	0.43	-1.86	2.03	0.35	-3.83	0.46	0.43
2	Rum- Aladdin For Engineering Industries	10.54	18.72	0.54	2.83	1.85	0.64	1.69	-0.94	0.03*	1.04	-0.47	0.11	1.76	-1.02	0.03*
3	The Industrial Commercial & Agricultural	8.09	9.99	0.10	2.69	5.97	0.12	2.49	5.33	0.16	4.35	4.79	0.73	6.64	8.01	0.26
4	The Jordanian Pharmaceutical Manufacturing	-49.99	51.92	0.13	-273.27	19.56	0.25	-429.18	14.27	0.22	-12.62	5.77	0.02*	-24.08	7.18	0.01*

5	The Arab Pharmaceutical Manufacturing	42.44	45.59	0.53	23.47	20.22	0.18	22.64	18.44	0.17	12.95	8.36	0.04*	14.13	9.53	0.09
6	Union Tobacco & cigarette Industries	10.68	14.40	0.34	3.39	6.17	0.73	1.15	3.22	0.82	2.58	3.40	0.88	1.91	4.03	0.85
7	Jordan International Industries	-4521.85	60.91	0.36	-5703.17	-504.73	0.45	-8488.64	-516.08	0.41	-7.97	-1.80	0.04*	-12.48	-2.81	0.04*

Table 3: Leverage ratio

Serial	Merger Company Name	Debit Ratio %			Equity Ratio %		
		pre	post	Sig. (2-tailed)	pre	post	Sig. (2-tailed)
1	Intermediate Petrochemicals Industries	23.41	29.31	0.49	76.59	70.69	0.49
2	Rum- Aladdin For Engineering Industries	41.32	48.54	0.25	58.68	51.46	0.25
3	The Industrial Commercial & Agricultural	39.07	40.08	0.96	60.93	59.92	0.96
4	The Jordanian Pharmaceutical Manufacturing	47.63	38.90	0.08	52.37	61.10	0.08
5	The Arab Pharmaceutical Manufacturing	8.35	13.03	0.29	91.65	86.97	0.29
6	Union Tobacco & cigarette Industries	42.21	57.15	0.14	57.79	42.85	0.14
7	Jordan International Industries	36.09	21.14	0.25	63.91	78.86	0.25

Table 4: Efficiency ratios

Serial	Merger Company Name	Total Assets Turnover (Times)			Fixed Assets Turnover (Times)			Working Capital Turnover (Times)		
		pre	post	Sig.	pre	post	Sig	pre	post	Sig
1	Intermediate Petrochemicals Industries	0.35	0.42	0.50	0.50	0.78	0.44	9.10	3.02	0.37
2	Rum- Aladdin For Engineering Industries	0.31	0.52	0.61	0.97	1.59	0.64	1.12	2.59	0.49
3	The Industrial Commercial & Agricultural	1.62	0.86	0.36	4.30	2.21	0.24	4.04	3.20	0.58
4	The Jordanian Pharmaceutical Manufacturing	0.03	0.31	0.04*	0.04	0.84	0.09	-0.16	1.10	0.12
5	The Arab Pharmaceutical Manufacturing	0.57	0.45	0.08	2.67	1.66	0.02*	0.82	0.84	0.50
6	Union Tobacco & cigarette Industries	0.72	0.57	0.34	1.94	2.19	0.79	8.61	-12.36	0.58
7	Jordan International Industries	0.00	0.07	0.50	0.00	11.17	0.49	-0.01	0.10	0.44

Table 5: Liquidity ratios

Serial	Merger Company Name	Current Ratio (Times)			Working Capital (JD)		
		pre	post	Sig. (2-tailed)	pre	post	Sig. (2-tailed)
1	Intermediate Petrochemicals Industries	1.24	1.53	0.03*	416,951	1,691,870	0.23
2	Rum- Aladdin For Engineering Industries	1.67	1.44	0.23	3,075,841	2,618,498	0.24
3	The Industrial Commercial & Agricultural	2.82	1.86	0.14	5,896,256	8,487,999	0.22
4	The Jordanian Pharmaceutical Manufacturing	0.32	2.67	0.18	3,121,769-	4,283,641	0.13
5	The Arab Pharmaceutical Manufacturing	10.08	5.13	0.32	34,837,677	35,089,502	0.22
6	Union Tobacco & cigarette Industries	1.26	1.03	0.01*	5,568,311	1,872,908	0.26
7	Jordan International Industries	0.29	4.80	0.11	171,634-	9,325,583	0.01*

Table 4 shows total assets turnover ratio of four companies improved while three sample companies total assets turnover ratio deteriorated. Out of four companies' improved total assets turnover ratio only one company total assets turnover ratio is statistically significant improved. At the same time out of three companies deteriorated total assets turnover ratio none of companies' total assets turnover ratio is statistically significant deteriorated. Fixed assets turnover ratio of five companies improved while two sample companies fixed assets turnover ratio deteriorated. Out of five companies improved fixed assets turnover ratio none of companies' fixed assets turnover ratio statistically significant improved. Fixed assets turnover ratio of two companies deteriorated only one company fixed assets turnover ratio is statistically significant deteriorated. Working capital turnover ratio of four companies improved while three sample companies working capital turnover ratio deteriorated. Out of four companies' improved working capital turnover ratio none of companies' working capital turnover ratio is statistically significant improved. At the same time out of three companies deteriorated working capital turnover ratio none of companies' working capital turnover ratio is statistically significant deteriorated. As a whole by comparing the improvements and deterioration in efficiency ratios it is decided that efficiency ratios of merger companies is better than before but insignificant. The results are consistent with the results achieved by [2, 4, and 7]. Based on the findings the fourth hypothesis is rejected in merger has no significant effect on post-merger efficiency ratios of merged companies.

Table 5 shows current ratio of three companies improved while four sample companies current ratio deteriorated. Out of three companies' improved current ratio only one company current ratio is statistically significant improved. At the same time out of four companies deteriorated current ratio only one company current ratio is statistically significant deteriorated. Working capital of five companies improved while two sample companies working capital deteriorated. Out of five companies' improved working capital only one company working capital is statistically significant improved. At the same time out of two companies deteriorated working capital none of companies' working capital is statistically significant deteriorated. As a whole by comparing the improvements and deterioration in liquidity ratios it is decided that liquidity ratios of merger companies is better than before but insignificant. The results are consistent with the results achieved by [2, 4, and 7]. Based on the findings the fifth hypothesis is rejected in other words merger has an insignificant effect on post-merger liquidity ratios of merged companies.

VII. Conclusion

This study examines the post-merger operating and financial performance of merger firms who have undergone merger process. In this study, the impact of merger on profitability, efficiency, liquidity, leverage and market prospect variables is measured by using paired sample t-statistics. The results of first aim show that post-merger profitability, efficiency, market prospect ratios, leverage and liquidity (except current ratio) variables insignificantly improved Jordanian industry sector. The result of second aim of this study show that chemical industries after- merger profitability, liquidity and market prospect performance indicators improves but insignificantly while after-merger efficiency and leverage decline insignificantly. A merger has positive impact on chemical industries. Pharmaceuticals and medical industries after- merger profitability, efficiency, market prospect performance indicators improves significantly while post-merger leverage and liquidity decline insignificantly. A merger has positive impact on pharmaceuticals and medical industries. Engineering and construction industries after- merger profitability, efficiency, liquidity performance indicators improve insignificantly, while leverage and market prospect performance indicators deteriorated but insignificantly. A merger has mixed (positive and negative) impact on engineering and construction industries. Tobacco and Cigarettes industry after- merger profitability and market prospect performance indicators improve insignificantly while efficiency, liquidity and leverage deteriorated insignificantly. A merger has mixed (positive and negative) impact on Tobacco and Cigarettes industry. It is finally concluded that merger impact on different industries of Jordanian industrial sector differently.

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