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Abnormal Returns to Shareholders of M&A Participating Firms: Evidence from the Kuwaiti Stock Market

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Abstract

Mergers and Acquisitions (M&A) continue to occur in the world of business, albeit in waves similar to cycles. As such, M&A have remained a research interest for academics as well as practitioners.

While there is convergence among researchers toward finding positive abnormal returns accrued to target firm shareholders, returns to shareholders of acquiring firms remain a question of debate and conflicting evidence. This study attempts to examine the wealth effects of acquisitions in the Kuwaiti economy for the shareholders of both, acquiring and target firms, during the period of 2004-2009. The event study methodology is used to examine whether there were positive or negative returns accruing to the shareholders of the participating firms around the announcement of the acquisition in the cases of 43 acquiring firms and 30 target firms.

Keywords: Mergers and acquisitions; Abnormal returns; M&A; Finance; Kuwait; Event study methodology

Introduction

The number of mergers and acquisitions is rapidly growing worldwide, in part due to their value as a growth strategy for companies. Moreover, companies seek M&A to diversify their activities or in hopes of realizing economies of scale and economies of scope. Greater efficiency in the face of mounting pressures to cut costs has always been a key promise of M&A incidences.

Regardless of the reasons, managers have to sell M&A deals to their shareholders, in order to move forward. Consequently, returns to shareholders resulting from M&A deals have been subject to extensive practical and academic research and studies. In one dimension of the issue, interest revolves around the creation of shareholder wealth resulting abnormal returns associated with M&A.

Need for the study and research issue

Companies have been seeking M&A in various countries, markets, and industries for a number of reasons, chief among which are growth strategy, economies of scale, economies of scope and diversification. One important aspect of any M&A incidence is return to shareholders of both acquiring and target firms.

While research converge around the conclusion that positive abnormal returns accrue to shareholders of target firms, returns to shareholders of acquiring firms is still subject to question and conflicting evidence. Consequently, this warrants further research, in hopes that advancing our knowledge of this issue influences the business case of M&A.

Accordingly, the primary issue of this study is to examine M&A returns for the shareholders of participating firms, in the context of the Kuwaiti economy, during the period 2004-2009. It is noteworthy here that Kuwait is a single-source developing economy, and as such, it is contextually different from other economies already studied.

Literature Review

Our review of research and literature on M&A allows for categorization of studies done along three lines: wealth creation, returns to shareholders of target firms and returns to shareholders of acquiring firms.

Wealth creation

Research about the impact of M&A on the wealth creation of participating firms is plenty. Rani et al. [1] studied a sample of 623 Indian incidences between 2003 and 2008 and found significant short-term wealth creation impact. Subeniotis et al. [2] studies M&A wealth effects in the US stock market during 2005 and found 10% abnormal returns for target firms and insignificant returns for acquiring firms. Jensen and Ruback reviewed some of the major scientific evidence in the field of mergers and acquisitions and concluded that acquirers earned zero or negative returns as opposed to targets that earned significant positive returns. Consistent with Jensen and Ruback study, were those of Rhoades and Mueller [3,4]. Rhoades concluded that efficiency gains eluded the newly integrated firms despite the pre-merger efficiency, and Mueller observed that the anticipated profitability from the merger did not materialize.

Target firms

Most studies conducted on the returns of target firms show positive abnormal returns on the day of the announcement of the event. Langetieg [5] found that target firms earn significantly positive abnormal returns averaging 10.7% over the time interval t_{-6} through t_{-1}. Dodd [6] analyzed 151 merger proposals that took place between 1970-1977. Using a market model, the researcher reported large positive abnormal returns accruing to target firm shareholders on the day of the merger, and the day before. Dodd and Ruback [7] found that target firm shareholders earn statistically significant positive abnormal returns in the month of the first announcement. These abnormal returns averaged 20.58% for successful mergers and 18.96% for unsuccessful

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merger proposals. Consistent with the reported previous measures and Using 399 takeovers that occurred in the United States from 1975 to 1984, Frank et al. [8] reported that targets experience announcement gains up to 28%.

Acquiring firms

While there is convergence in the field that target firm shareholders earn statistically positive abnormal returns during the period around the announcement, returns to shareholders of acquiring firms remain debatable.

Chaudary and Sarwar [9] examined returns to shareholders of acquiring firms in the US pharmaceutical industry during the period 2003-2008 and found no significant abnormal returns. Another study done by Karamanos et al. [10] on Greek bank M&A during the period 1996-2013 reveals insignificant abnormal returns for the shareholders of acquiring firms and 7.44% positive abnormal returns for target firm's shareholders. Yet the results of a study on Indian M&A during the period 2003-2008 "indicate that M&A generate statistically significant abnormal returns on the announcement as well as higher post M&A returns for shareholders of the acquiring firms" [11]. In their study of 10 emerging markets, Ma et al. [12] report that stock markets expected cumulative positive abnormal returns for acquiring firm's shareholders in three different event windows: a two-day (0,1) window, a three-day (-1,+1) window, and a five-day (-2,+2) window. Tsai [13] also reported, "Cumulative abnormal announcement returns of the bidders are significantly positive for mergers where the target is a private firm and cash is used as the exchange medium."

As we go back to earlier research, we observe that conflicting evidence continue to prevail. Dodd and Ruback [7] found significant positive abnormal returns to acquiring firm shareholders in the twelve months prior to the tender offer. Langetieg [5] found cumulative excess returns over the time interval t_{-72} through t_{-7}; however, the researcher reported that the post-merger performance is not statistically significant from that of a control group. Frank et al. [8] suggested negative post-merger abnormal returns using equally weighted index, but positive post-merger performance using a value-weighted index. Jensen and Ruback found positive abnormal returns to successful tender offers, and negative abnormal returns to unsuccessful mergers and tender offers. Using data from 1955 to 1987 and a model adjusted for firm size effect and beta risk, Agrawal et al. [14] found that stockholders of acquiring firms suffer statistically significant negative returns of -10%. Loughran and Vijh [15] found evidence suggesting that mergers underperform matching firms, whereas tender offers outperform merging firms. The average return difference between mergers and matching firms was -15.9% with -2.36 t statistics, while the average mean difference between tender offers and matching firms was 40.3% with t statistics of 1.67.

M&A in the context of the Kuwaiti economy

As the literature review above reflects on the results of studies done in different countries and markets, one has to bear in mind that we cannot generalize the results due to differences in regulatory frameworks and characteristics of financial systems. In Kuwait for instance, mergers and acquisitions are a last resort to avoid due to the ownership structures of companies, and the nature of the managerial boards. However, the global financial crisis is changing these practices. The central bank is forcing companies to consider restructuring through mergers and acquisitions. In a statement issued by the central bank of Kuwait (2008), Governor Sheikh Salem Abdul-Aziz Al-Sabah regarded mergers and acquisitions "a choice that is becoming increasingly necessary, given the challenges that have emerged with the global economic crisis and its impact on companies, not only in Kuwait, but also at the regional and international efforts."

The Kuwaiti economy represents an interesting case to study due to its special characteristics as a developing country. The economy is mainly a one-source economy in which oil revenues constitute 90 percent of state revenues. This in return led to structural imbalances in which the public sector highly dominated the private sector. With government owning half of the countries shareholding companies' investors had no choice but to invest their surplus funds in the local real estate market or abroad [16]. However, with financial liberalization and privatization, the private sector grew larger and began to play a bigger role. In 1970, the government formed a committee to regulate the stock market, and the number of listed companies and in turn trading volume increased rapidly. Due to speculative trading and the wide spread growth of new companies by the use of posted dated checks; Kuwait witnessed its first stock market crash [16]. In response to the crisis, the government banned the establishment of new shareholding companies, and highly restricted the use of postdated checks. In addition, the government also compensated losing traders by buying their shares. This act on behalf of the government, and the announcement that it will protect shareholders' rights and safeguard the financial position of companies in Kuwait led to a prevailing impression on the part of the private sector that the government would support the sector in times of need. As this impression persists, business firms developed a moral hazard behavior to exploit the situation. Business firms engage in aggressive growth strategies, hold a lot of debt, engage in risky transactions and expect the government to support them in difficult times. The recent financial crisis intensified the prevailing intuition, as the credit and liquidity crisis continued, and to safeguard the financial system, the parliament approved in 2009 to buy all consumer credit from business firms. Previous literature in the fields of merger and acquisitions confirmed that acquirers perceive targets with high level of equity as attractive, and are willing to pay higher premium to obtain equity. This study, however, proposes that acquirers, acting as risk takers and expecting to free ride credit crisis at the expense of the government, will engage in mergers and acquisitions with targets that finance their aggressive growth strategies with debt as an exceptional case of the Modigliani and Miller propositions that firms with less leverage are more susceptible to acquisition.

As a response to the recurrent crisis in the Kuwaiti economy, such as the stock market crash, the Iran-Iraq war, followed by the Iraqi invasion of Kuwait and the recent financial crisis, the central bank of Kuwait has been pursuing a strategy of encouraging mergers and acquisitions since 1989, advising Kuwaiti companies to seriously look at available opportunities for restructuring through mergers and acquisitions. However, several factors caused weakness in Kuwait's mergers. For instance, as local investments were limited, local firms and banks succeeded in pursuing international and regional acquisitions. Consequently, authorities amended legislation to allow companies to merge and restructure before resorting to liquidation or bankruptcy, as well as legislation regulating the privatization of many public services. The most prominent factor remains the fact that owners and top stakeholders still view this matter negatively and find that it deprives them of certain incentives. As shareholders continue to view mergers and acquisitions as value destroying investment that decreases their wealth, we should expect merger and acquisition activities taken by management of Kuwaiti firms associated with negative revaluation of acquiring firm shares, and consequently, negative abnormal rates of returns.

Research Methodology

The study employed three statistical techniques: The Event Study Methodology, the Pearson correlation test, and multiple regression analysis to test the following two hypotheses:

1. Null Hypothesis: There are no abnormal returns for acquiring firm shareholders in the event of a merger or acquisition

2. Null Hypothesis: There are no abnormal returns for target firm shareholders in the event of a merger or acquisition

The event study methodology

First adopted by Fama et al. [17], the event study methodology is a widely recognized statistical technique, which aims at investigating the impact of an event on stock returns. The process of applications of the event study methodology starts by defining the date on which the information event happened, then observing actual stock returns for a previously defined period around the event date. The third step involves calculating the expected rates of return for the impacted firm over the period of study, followed by measuring the excess or abnormal returns for the firm as the difference between actual returns and expected returns [18].

More specifically, we are using this methodology in our study as prescribed below.

1. The study used the official announcement of the merger or acquisition plan as an event date.

2. The event windows were divided into two 20-day periods: the 20-day before and 20-day after the event.

3. The logarithmic normal function was used to compute the daily actual rate of return for each stock as follows:

$$\mathbf{K_t = LN\ (P_t/Pt_{-1})*100}$$

Where

K_t=the daily stock return in percentage

P_t=the stock price on day t

$P_{t-1=}$the stock price on day t_{-1}

4. The market model was applied to estimate the expected return for each company as follows:

$$\mathbf{K_{jt} = \alpha_j + \beta_j K_{mt} + \varepsilon_{jt}}$$

Where

$K_{jt=}$the rate of return on security j for date t

K_{mt}=the rate of return on the market index, the Kuwait stock exchange all market index was used for the study

α_j and β_j=estimated parameters that vary from one security to another. This study estimated the parameters utilizing a 200-day estimation period, which ranges from days -220 to -21 relative to the event date

ε_{jt}=the stochastic error term of security j in period t, which meets the assumption of the linear regression model

5. Once the parameters were obtained, the expected return for each firm was calculated using the following equation:

$$\mathbf{\hat{K}_{jt=} \hat{\alpha} + \hat{\beta}' K_{mt}}$$

For each company, we calculated the expected return for two 20-day event windows. The first period covered the 20-days before the event window ranging from day -21 through one day (-1) prior to the event date. The second period covered the 20-days after the event window ranging from day +1 through day +21 or 21 days after the event date.

6. The abnormal returns (AK) were generated as follows:

$$\mathbf{AK_{jt=} K_{jt} - \hat{K}_{jt}}$$

Where

AK_{jt}=the abnormal return for firm j, date t

K_{jt}=the actual return on firm j, date t

$\hat{K}_{jt}$=the expected return derived from the market model on firm j, date t

7. The average abnormal for the whole sample on day t, was derived using the following equation:

$$\mathbf{AK_t = \frac{1}{n} \sum_{j=1}^{n} AK_{jt}}$$

Where

$AK_{t=}$the average abnormal return for the sample, date t

$AK_{jt=}$the abnormal return derived from the market model on firm j, date t

N=the number of acquiring firms in the sample group

8. The cumulative abnormal returns (CAK) were obtained from the following equation:

$$\mathbf{CAK_t = \sum_{t=-20}^{+20} AK_t}$$

Where

CAK_t is the summation of the average abnormal return for the sample over the event time, day t_{-20} through day t_{+20}

9. Finally, the student t-test was used to examine whether AK_t and CAK_t were significantly different from zero during the t_{-20} days through t_{+20} day period. Since the population standard deviation is not 100% known, and that the distribution in relatively large (n>30) with a tendency to be normally distributed, the t statistic is an appropriate test to be used. The shape of the sampling distribution is essentially influenced by (n-1) degrees of freedom.

Data selection and description

The study analyzed acquiring and target firms listed on the Kuwaiti stock exchange during the period 2004 through 2009. The final sample consisted of 43 acquiring firms, and 30 targets. A firm or a merger case was excluded from the research if the available data was insufficient or not reliable. In addition, if the same company participated in several acquisitions, or was termed as a "frequent acquirer" the firm was counted separately for each merger case. However, if a firm was involved in more than one merger or acquisition in a year, only the first case was utilized because the second one would be highly affected by the effects of the first case, which might exacerbate the returns and deviate the actual effect of the event.

Data sources included Alcara database, Noor financial fund database, public newspapers, and annual reports. The announcement date for firm mergers and acquisitions that fit the criteria for this study

was cross-referenced with the four data sources and these data sources were found to be consistent. Figures on daily stock returns and market price movements were extracted from the Kuwaiti stock exchange database. The Kuwait stock market index prices were referenced as the basis for determining abnormal returns. To meet the criteria of firms to be included in this study, the business firms would have had to possess the following set of characteristics:

1. Be headquartered in Kuwait, or belonging to a Kuwaiti holding company.
2. Listed on the Kuwait stock exchange
3. The merger or the acquisition must have been officially announced in the newspaper or some other official publication.
4. Contained a minimum of 150 observations of daily stock prices for estimation purposes.
5. Only mergers and acquisitions that took place between 2004 and 2009 were included in the sampling frame.

Findings

Abnormal returns for acquiring firm's shareholders

Hypothesis 1 is formulated to test the effect of mergers and acquisitions on wealth creation of acquiring firm shareholders. The null hypothesis 1 states that there are no abnormal returns for acquiring firm shareholders in the event of a merger or acquisition. To test this hypothesis, the event study methodology was utilized to examine whether shareholders of acquiring firms realized any abnormal returns or cumulative abnormal returns around the announcement of the acquisition or merger.

Table 1 illustrates daily average abnormal returns (AAAK) for 43 acquirers during the period t_{-20} through t_{+20} relative to the event date ($t_{=0}$), the date on which the acquiring firm officially announced the merger or acquisition t-statistic and P-value for each day were also calculated and presented. The results revealed that acquiring firm shareholders experienced significant (0.05 level) positive abnormal returns of 0.6682% with a t-statistic of 2.067 on the event date. In the pre-event period from t_{-20} through t_{-1}, acquiring firm shareholders experienced significant (0.01 level) negative abnormal returns on day t_{-7} of -0.9808 % with a t-statistic of -2.954, and significant negative abnormal return on days t_{-19} (0.1 level) and t_{-4} (0.05 level) with t statistics of -1.759 and -2.382 respectively. In the post event period, ranging from t_{+1} through t_{+20}, acquiring firm shareholders witnessed significant (0.05 level) negative abnormal returns of -0.5217 % with a t-statistic of -2.107 on day t_{+7}.

Table 2 contains the cumulative abnormal returns (ACAK) for the acquiring firm shareholders associated with the t-statistic and P-values for each day during the event window period. The results point to the fact that acquiring firm shareholders consistently realized negative cumulative abnormal returns over the entire event window. These cumulative abnormal returns ranged from positive +0.0117% at the beginning of the study period to negative -3.0013% percent on day t_{+20}. The cumulative abnormal return for the entire event window, day t_{-20} through day t_{+20} was -3.0013% with a t-statistic of -1.652.

There is considerable evidence that acquiring firms realize negative abnormal returns around the official announcement date, as can be seen from the frequency of negative abnormal returns shown in Tables 1 and 2. Wherever t-statistics are negative and significant at the 5% level, the event affected returns in a negative manner. Around the official announcement date of t_{-1}, t_0 and t_{+1}, positive excess returns averaged around statistically insignificant 0.1738% (0.467), 0.6682% (2.067) with a 5% significance level, and statistically insignificant -0.0104% (-0.030). t -statistics are given in the accompanying brackets. In addition, Table 2 reveals that average cumulative abnormal returns for acquirers for the days around the merger announcement period reported consistently significant negative abnormal period for the entire week before the announcement period. On the day of announcement, cumulative abnormal returns reported negative -1.7168% with a t-statistic of -1.408. clearly and consistent with other research findings in the field of mergers and acquisitions literature, acquirers do not earn positive abnormal returns, and as this study shown, may even realize negative abnormal returns.

Figures 1 and 2 provide a graphical representation of the movements of average abnormal returns and cumulative average abnormal return

Days	AAK	t-Statistic	p-Value
-20	0.0117	0.034	0.973
-19	-0.5867	-1.759	0.086*
-18	-0.5407	-1.575	0.123
-17	0.093	0.241	0.81
-16	0.1671	0.445	0.659
-15	-0.055	-0.195	0.847
-14	0.1769	0.586	0.561
-13	0.1858	0.515	0.609
-12	0.32	1.012	0.317
-11	0.32	1.103	0.276
-10	-0.0295	-0.114	0.91
-9	0.1471	0.507	0.615
-8	0.1486	0.427	0.671
-7	-0.9808	-2.954	0.005***
-6	-0.1826	-0.561	0.578
-5	-0.3677	-1.154	0.255
-4	-1.0952	-2.382	0.022**
-3	-0.0235	-0.056	0.956
-2	-0.2673	-0.774	0.443
-1	0.1738	0.467	0.643
0	0.6682	2.067	0.045**
1	-0.0104	-0.03	0.976
2	0.2337	0.66	0.513
3	-0.1157	-0.321	0.75
4	-0.5271	-1.497	0.142
5	-0.0452	-0.103	0.918
6	0.1186	0.348	0.729
7	-0.5217	-2.107	0.041**
8	0.1498	0.512	0.611
9	-0.008	-0.033	0.974
10	-0.044	-0.148	0.883
11	0.111	0.369	0.714
12	-0.0989	-0.323	0.749
13	0.4184	1.274	0.21
14	-0.078	-0.273	0.787
15	-0.213	-0.866	0.391
16	-0.119	-0.367	0.716
17	0.2971	1.053	0.298
18	-0.179	-0.625	0.535
19	-0.4772	-1.476	0.148
20	-0.1761	-0.613	0.543

*, **, *** Indicates 10, 5, and 1 %, levels of significance, respectively.

Table 1: Average abnormal returns for acquiring firm's shareholders (AAAK).

Days	CAAK	t-Statistic	p-Value
-20	0.0117	0.034	0.973
-19	-0.5749	-1.375	0.176
-18	-1.1157	-2.743	0.009***
-17	-1.0226	-1.943	0.059*
-16	-0.8556	-1.544	0.13
-15	-0.9105	-1.592	0.119
-14	-0.7337	-1.186	0.242
-13	-0.5478	-0.945	0.35
-12	-0.2278	-0.372	0.711
-11	0.0921	0.133	0.895
-10	0.0626	0.09	0.929
-9	0.2097	0.277	0.783
-8	0.3583	0.455	0.651
-7	-0.6225	-0.832	0.41
-6	-0.8051	-0.916	0.365
-5	-1.1728	-1.141	0.26
-4	-2.268	-1.993	0.053*
-3	-2.2915	-1.793	0.080*
-2	-2.5587	-1.781	0.082*
-1	-2.3849	-1.764	0.085*
0	-1.7168	-1.408	0.167
1	-1.7272	-1.426	0.161
2	-1.4935	-1.136	0.262
3	-1.6091	-1.246	0.22
4	-2.1362	-1.487	0.144
5	-2.1814	-1.432	0.16
6	-2.0627	-1.363	0.18
7	-2.5844	-1.72	0.093*
8	-2.4347	-1.658	0.105
9	-2.4427	-1.684	0.1
10	-2.4867	-1.668	0.103
11	-2.3757	-1.524	0.135
12	-2.4745	-1.521	0.136
13	-2.0562	-1.238	0.222
14	-2.1341	-1.325	0.192
15	-2.3471	-1.426	0.161
16	-2.4661	-1.569	0.124
17	-2.169	-1.302	0.2
18	-2.348	-1.387	0.173
19	-2.8252	-1.622	0.112
20	-3.0013	-1.652	0.106

*, **, *** Indicates 10, 5, and 1 %, levels of significance, respectively.

Table 2: Cumulative Abnormal Returns for Acquiring Firm's Shareholders (ACAK).

of acquirers over the 41-day event window. A cursory look at Figures 1 and 2 reveals an initial period of increasing returns, which declines sharply a few days before the official announcement event day. Such a downward trend is particularly indicative in the week preceding the merger or acquisition announcement. This swift downward shift in average and cumulative average abnormal returns over the events measurement period suggests that the market did not reward the acquirer shareholders in mergers and acquisitions. In reality, it could be argued that acquirers as a group lost economic value as reflected by the average cumulative abnormal returns (ACAK) which was negative at the beginning of the period, then increasing until it was positive during the period t_{-11} through t_{-7}, to take negative values again for the rest of the entire test period.

Figure 1 reveals that the average abnormal returns fluctuated around zero for the entire event window, particularly interesting was the sharp decline in returns during the week previous to the event day (t_{-7} throughout t_{-2}), it is believed that this is the period in which the announcement of the merger or acquisition started to leak into the market. Another noticeable observation is the positive reaction of the market on announcement date. Thus, Figure 1 does not give a clear indication that acquirers realize significant negative abnormal returns around the official announcement date.

Table 3 shows that 37.2% of the firms reported negative returns on event date and around 62.8% of the acquirers realize abnormal returns between below 1%. Although there is a slight positive market reaction on the day of the announcement, the analysis of the entire study period emanating from this data indicates that the null hypothesis can be supported, which predicts that acquirers in case of a merger or acquisition do not realize any excess returns. The results of this study is consistent with the recent research findings of other research efforts in the field of merger and acquisitions reporting similar results that acquirers, realize significant negative abnormal returns or insignificant slight positive abnormal returns in best case scenario.

Abnormal returns for target firm's shareholders

Hypothesis 2 is formulated to test the effect of mergers and acquisitions on wealth creation of target firm shareholders. The null hypothesis 2 states that there are no abnormal returns for target firm shareholders in the event of a merger or acquisition. To test this hypothesis, the event study methodology was utilized to examine whether shareholders of target firms realized any abnormal returns or cumulative abnormal returns around the announcement of the acquisition or merger.

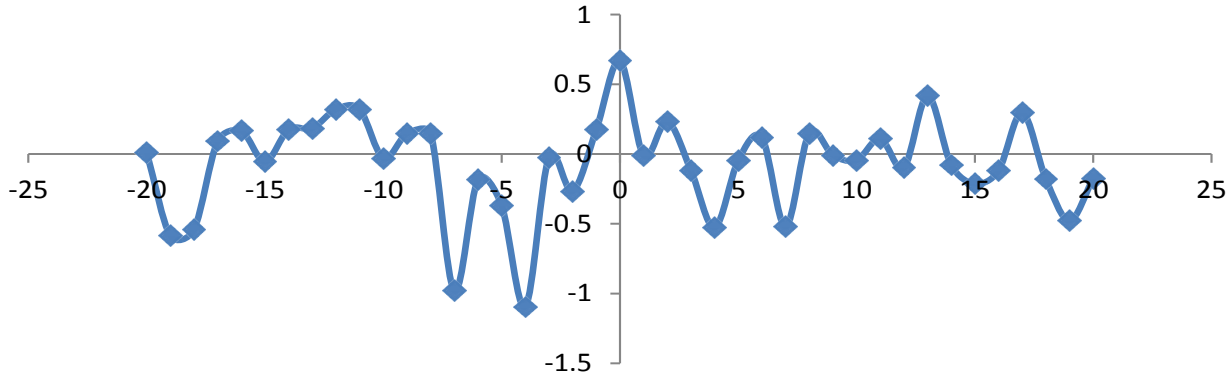

Figure 1: Average abnormal returns for acquiring firm shareholders (AAAK).

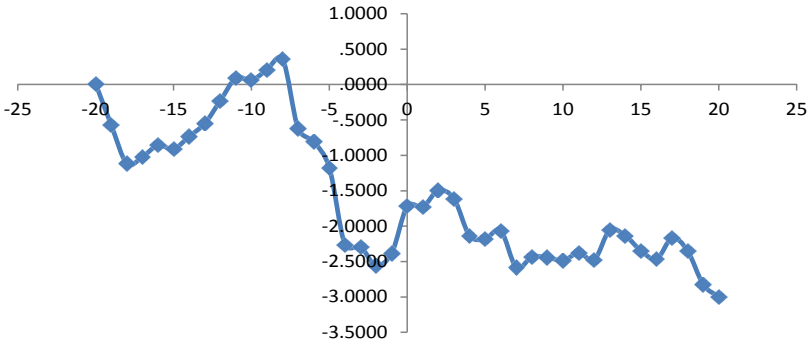

Figure 2: Cumulative abnormal returns for acquiring firm shareholders (ACAK).

Classes	Frequency	Frequency %	Cumulative frequency	Cumulative %
(-4, -3)	1	2.33	1	2.3
(-3, -2)	1	2.33	2	4.7
(-2, -1)	8	18.6	10	23.3
(-1, 0)	6	13.95	16	37.2
(0, 1)	11	25.58	27	62.8
(1, 2)	8	18.6	35	81.4
(2, 3)	2	4.65	37	86
(3, 4)	2	4.65	39	90.7
(4, 5)	1	2.33	40	93
(5, 6)	2	4.65	42	97.7
(6 ,7)	1	2.33	43	100

Table 3: Event day abnormal returns frequency distribution of acquirers.

Table 4 illustrates daily average abnormal returns (TAAK) for 30 targets during the period t_{-20} through t_{+20} relative to the event date ($t_{=0}$), the official announcement date of the merger or acquisition t-statistic and P-value for each day were also calculated and presented. On the event day, target firm shareholders gained statistically significant (1% level) abnormal returns of 1.5912% with a t-statistic of 3.598. For the 20-day-period before the event day, average abnormal returns reported statistically significant (5% level) positive 1.1272% on day t_{-15} with a t-statistic of 2.639. Moreover, during this pre-event period, target firm shareholders reported 5 negative values of average abnormal returns with only one value being statistically significant at the 10% level on day t_{-5} with an average of -0.673% and a t-statistic -1.751. All other negative average abnormal returns for target firm shareholders were small and statistically insignificant.

For the 20-day-period after the event date, the average abnormal returns for target firms reported only statistically significant (5% level) negative value of -1.726% on day t_{+4} with a t-statistic of -2.524. Worth noting at this level is that none of the average abnormal returns during this period were statistically significant and different from zero.

Table 5 contains the cumulative abnormal returns (TCAK) for the target firm shareholders associated with the t-statistic and P-values for each day during the event window period. The Table shows that target firm shareholders earned positive cumulative abnormal returns (1% and 5 % level) starting of t_{-15} throughout day t_{+3}. The event day return reported significant positive cumulative average positive return of 4.7525% with a t-statistic of 3.044 (0.01 significance level). The highest level of cumulative positive abnormal return occurred on day t_{+1} of 4.8286% with a t-statistic of 2.974 (1% significance level). There was no reported negative cumulative abnormal return. The cumulative

Days	TAAK	t-Statistic	p-Value
-20	0.033	0.124	0.903
-19	0.5666	1.069	0.294
-18	0.4861	1.39	0.175
-17	0.363	0.863	0.395
-16	0.1691	0.402	0.69
-15	1.1272	2.639	0.013**
-14	0.1226	0.322	0.75
-13	0.4181	0.974	0.338
-12	0.4428	0.922	0.364
-11	0.191	0.481	0.634
-10	-0.5047	-1.464	0.154
-9	0.589	1.542	0.134
-8	0.1293	0.252	0.803
-7	0.1312	0.305	0.763
-6	0.2259	0.572	0.572
-5	-0.673	-1.751	0.091*
-4	-0.2094	-0.562	0.579
-3	-0.3973	-1.101	0.28
-2	0.4915	1.193	0.243
-1	-0.5406	-1.097	0.282
0	1.5912	3.598	0.001***
1	0.076	0.174	0.863
2	-0.5202	-1.292	0.206
3	-0.32	-0.647	0.523
4	-1.726	-2.524	0.017**
5	-0.9773	-1.285	0.209
6	0.205	0.424	0.675
7	0.3984	0.96	0.345
8	0.0667	0.159	0.875
9	-0.5077	-1.19	0.244
10	0.2231	0.611	0.546
11	0.2612	0.64	0.527
12	-0.1223	-0.251	0.803
13	0.2927	0.711	0.483
14	-0.1778	-0.468	0.643
15	-0.71	-1.662	0.107
16	-0.1801	-0.585	0.563
17	-0.2015	-0.678	0.503
18	-0.0041	-0.01	0.992
19	0.4501	1.299	0.204
20	-0.4356	-0.979	0.336

*, **, *** Indicates 10, 5, and 1 %, levels of significance, respectively.

Table 4: Average abnormal returns for Target Firm Shareholders (TAAK).

abnormal return for the entire event window, day t_{-20} through day t_{+20}, was statistically insignificant 0.8431% with a t-statistic of 0.286.

Days	TAAK	t-Statistic	p-Value
-20	0.033	0.124	0.903
-19	0.5996	1.082	0.288
-18	1.0858	1.656	0.108
-17	1.4487	1.73	0.094*
-16	1.6179	1.684	0.103
-15	2.745	2.99	0.006***
-14	2.8677	3.132	0.004***
-13	3.2858	3.515	0.001***
-12	3.7286	3.386	0.002***
-11	3.9195	3.882	0.001***
-10	3.4148	3.441	0.002***
-9	4.0038	3.641	0.001***
-8	4.1331	3.661	0.001***
-7	4.2643	3.622	0.001***
-6	4.4902	3.722	0.001***
-5	3.8172	3.014	0.005***
-4	3.6077	2.945	0.006***
-3	3.2104	2.535	0.017**
-2	3.7019	2.804	0.009***
-1	3.1613	2.152	0.040**
0	4.7525	3.044	0.005***
1	4.8286	2.974	0.006***
2	4.3084	2.536	0.017**
3	3.9884	2.198	0.036**
4	2.2625	1.083	0.288
5	1.2852	0.536	0.596
6	1.4902	0.663	0.513
7	1.8886	0.894	0.378
8	1.9553	0.9	0.375
9	1.4475	0.614	0.544
10	1.6706	0.675	0.505
11	1.9318	0.724	0.475
12	1.8095	0.623	0.538
13	2.1022	0.694	0.493
14	1.9244	0.666	0.511
15	1.2144	0.441	0.662
16	1.0343	0.375	0.71
17	0.8327	0.3	0.766
18	0.8286	0.294	0.771
19	1.2787	0.453	0.654
20	0.8431	0.286	0.777

*, **, *** Indicates 10, 5, and 1%, levels of significance, respectively.

Table 5: Cumulative Abnormal Returns for Target Firm Shareholders (TCAK).

Figure 3 provides the graph of average abnormal returns of the 30 target firms for day t_{-20} through day t_{+20} relative to the event day. Similar to that of acquiring firms, the movement of average abnormal returns of target firms was up and down around zero. The largest average abnormal return was 1.5912% on the event day, and the smallest average abnormal return was -0.673% on day t_{+5}.

Figure 4 presents the daily movements of the cumulative average abnormal returns of target firm shareholders. As illustrated in the graph, there is a swift upward drift of cumulative abnormal returns during the pre-event period. However, the cumulative abnormal returns decline rapidly on the post event week to stabilize by the end of the event window. Consistent with other research efforts on returns of target firm shareholders, evident in this study, the premium paid to target firm shareholders increases the abnormal returns which then declines again and disappears towards the end of the study period.

Table 6 presents the frequency distribution of event day abnormal returns of target firms. Event day returns which ranges from around -4% to 7% were divided into 11 equal intervals. The cumulative frequency distribution reports that only 30% of the firms reported negative abnormal returns on the event day while the remaining 70% reported positive values. Clearly, it can be seen that target firm shareholders have earned cumulative positive abnormal returns on the days leading to the event date, however earned statistically insignificant abnormal returns over the entire test period.

Internal validity analysis

The researchers were vigilant about internal validity threats of the model being tested, and statistical methods were employed to ensure that errors were kept at a minimum.

Non-normalcy condition

Non-normalcy condition suggests that the distribution of the data points do not reveal the typical bell shaped distribution curve. Figures 5 and 6 present a graphical representation of the scatter and shape of the data points for the sample of mergers and acquisitions adopted in the study.

Figures 5a and 5b plot the frequency distribution of the data points representing event day abnormal returns for acquirers and targets in the study sample. The histogram drawn represents the number of occurrences for given demarcated values for the given sample distribution. The coordinates plotted in Figures 5a and 5b tended towards a fairly and seemingly normally distributed set of data points for acquirers and targets.

The cumulative frequency distribution plots the frequencies in

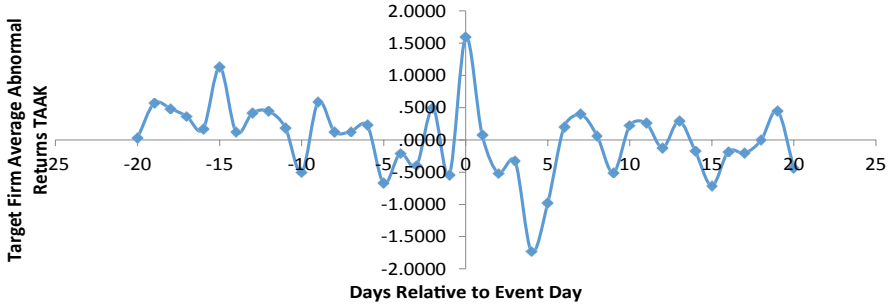

Figure 3: Average abnormal returns for target firm shareholders (TAAK).

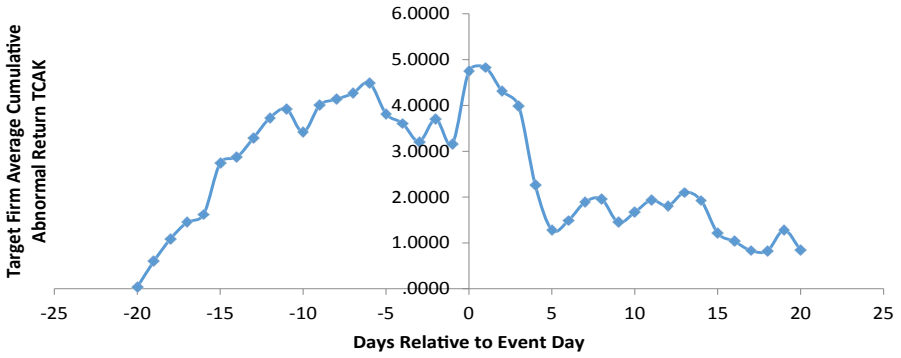

Figure 4: Cumulative abnormal returns for target firm shareholders (TCAK).

Classes	Frequency	Frequency %	Cumulative Frequency	Cumulative %
(-4, -3)	1	3.33	1	3.33
(-3, -2)	2	6.67	3	10
(-2, -1)	2	6.67	5	16.67
(-1, 0)	2	6.67	7	23.33
(0, 1)	2	6.67	9	30
(1, 2)	8	26.67	17	56.67
(2, 3)	6	20	23	76.67
(3, 4)	2	6.67	25	83.33
(4, 5)	3	10	28	93.33
(5, 6)	1	3.33	29	96.67
(6, 7)	1	3.33	30	100

Table 6: Event day abnormal returns frequency distribution of targets.

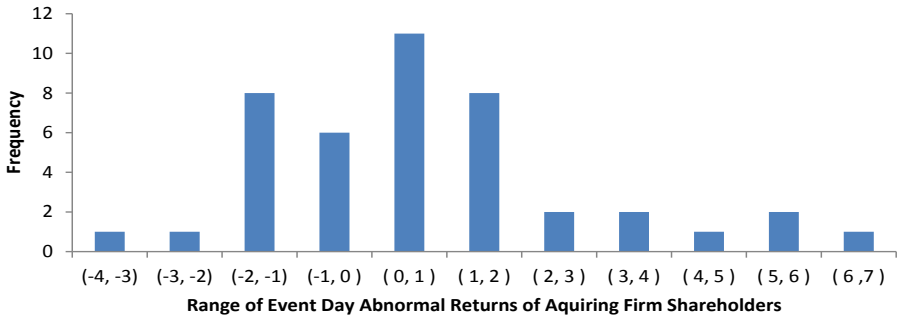

Figure 5a: Bar chart of frequency distribution of event day abnormal returns of acquiring firm shareholders.

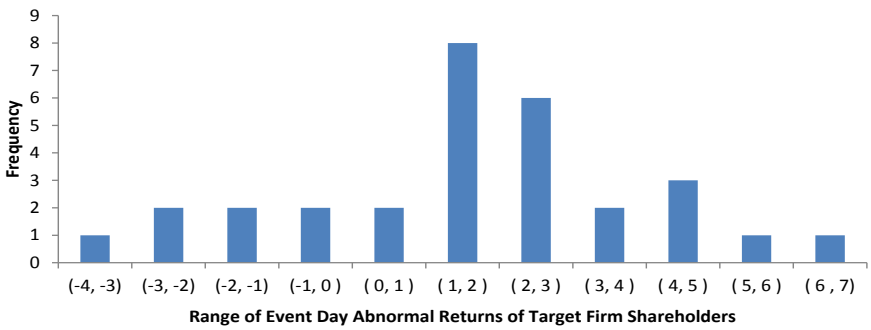

Figure 5b: Bar chart of frequency distribution of event day abnormal returns of target firm shareholders.

progressive fashion for the number of occurrences of given values in the data set. The cumulative frequency distribution captures the percentage of scores between the lowest bound and the given bound being examined. The cumulative frequency curve plotted in Figures 6a and 6b

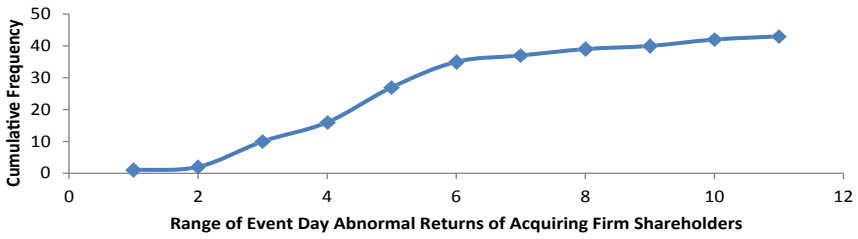

Figure 6a: Graph of cumulative frequency distribution of event day abnormal returns of acquiring firm shareholders.

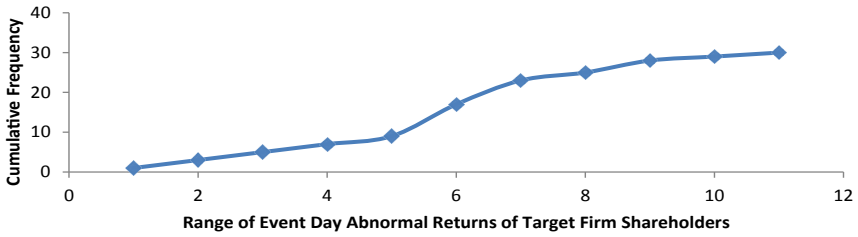

Figure 6b: Graph of cumulative frequency distribution of event day abnormal returns of target firm shareholders.

approximates that of a normally distributed set of data points.

Sequencing of variables

This study hypothesized that the official announcement of a merger or acquisition triggers a response in the stock prices of the acquiring or target firm resulting in positive or negative abnormal returns. Such a conjectured relationship rests on the premises that the event, or the official announcement of the merger, is directly associated with the dependent variable, abnormal returns. Granger posits that the future is affected by the present, or the past. Accordingly, this study postulated, that since the independent variable, or the official announcement of the event, preceded that the dependent variable, abnormal stock returns, it stands to reason that the dependent could not have caused the independent variable. It is more realistic to state that the independent variable preceded and caused or influenced, the latter event, abnormal stock returns.

Rival explanation

Occurrences of major events in the acquiring and target firms may significantly affect abnormal returns. Major events such as earning announcements, business risk behavior shifts, or restructuring might be competitors to merger and acquisition announcements in analyzing the abnormal return in a given period. For the 43 merger and acquisition cases in the acquiring firm study samples, and 30 cases of targets, none of the elements in the set of data points recorded an event significant enough to rival the merger or acquisition announcement in the explanation of the hypothesis being tested. Some of the merger cases in both samples were excluded due to unavailable or unreliable dataset.

The researchers did a careful search for possible rival explanations that could have contributed to the event of abnormal stock price reactions during the period around the announcement of the merger and specifically in day's t_{-1}, t_0, and t_{+1}. The groups of firms that composed the sample study of this research effort did not appear to have any significant major event that could rival the announcement of the merger or acquisition in explaining the stock price changes over the 41-day event window.

Conclusion

This study examined the effect of M&A on returns to shareholders of participating firms, in the Kuwaiti economy, during the period 2004-2009. A brief summary of the research findings from the statistical analysis conducted in this study are:

1– During the event period, which ranged from 20 days before the announcement date to 20 days after the event or announcement date, the shareholders of acquiring firms obtained statistically significant negative abnormal returns from the acquisition despite the noticeable positive reaction of the market on the event date.

2– During the event window period, which ranged from 20 days before the event date, through 20 days after the event date, the shareholders of target firms obtained statistically significant positive cumulative abnormal returns in the period preceding the event date through few days in the post event period, but declined afterwards.

The empirical evidence of this study lends support and extends the literature available in mergers and acquisitions. The practical and theoretical implications of this study are consistent with previous integration debates suggesting that target firm shareholders earn significant abnormal returns, while bidders realize negative rates of return. Despite the overwhelming evidence that mergers and acquisitions are not value creating, the ongoing process of mergers worldwide presents a conundrum to academics, regulators, and financial analysts.

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