

# **Investors' to Reaction to Marketing and Financial Announcements in the Telecommunication Sector**

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## **Abstract**

This article investigates the reaction of investors in the Bahrain Bourse toward two types of signals from the telecommunication sector: Marketing and financial announcements made by corporate management. Using an event study, six events that were announced over the period of 2011-2014 by Batelco, the only listed Telecommunication Company in the Bahrain Bourse, have been thoroughly analyzed. Results highlight that, regardless of the type of signal, investors exhibited significant reactions to all the announcements. Investors reacted positively to the announcement of additions to investments, Batelco winning the award for best investor relations and slashing the broadband rates and negatively to change of management. Investors generated positive cumulative abnormal returns (CARs) on the event days as well as on the 21<sup>st</sup> days of four of these announced events, and generated negative abnormal returns in reaction to two of these events. This could be indicative that the Bahrain Bourse is inefficient in the semi-strong form in the telecommunication sector.

**JEL classification numbers:** M11

**Keywords:** Bahrain Bourse, Batelco, Cumulative Abnormal Returns, Event Study, Telecommunication Sector

## **1 Introduction**

This event study analyzes the changes in the equity value of firms (here measured by abnormal returns) that have resulted from the occurrence of several unexpected events. The changes in the equity value may be negative or positive, depending on the reaction of the stock market to the event under investigation. The key assumption of the event study is that the market is efficient; meaning the effects of the event will be reflected immediately in the equity value of the company. Assuming that the market is efficient in

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its weakest form, the technique of the event study we used was to test market efficiency in a semi-strong form, when the market is one level above its weakest functioning form.

Literature indicates that event study methodology is used widely in the corporate finance world because it is crucial for firms to realize the impact of policies (announcements) on the value of a firm over a relatively short period of time. The significance of event studies spans beyond providing knowledge about how security is likely to react to a given event, and can be used to predict the reaction of other securities to different events by generating accurate statistics that can be used as models for future predictions. Generally, there are three types of event studies (Event Study Matrix, 2014). The first type is called “corporate events”, which examines the impact of firm-related events such as change of CEO, expansion, merger and acquisition, sponsorship of an important event, etc. The second type is “announcements of macroeconomic events”, and includes events such as credit ratings of countries, unemployment figures, change in price of oil, etc. The third type, “regulatory events”, refers to business-related rules and regulations such as Bankruptcy Acts, Bribery Acts, etc. Corporate events are the form most widely-used by scholars, and are used in this study.

This study uses a sample of corporate events to examine the general impact of certain event-types on the stock prices of the Bahraini telecommunication company Batelco. We have opted to work with a telecommunications company as telecommunications provide stamina for the growth of any economy. Batelco was the natural choice, as the company is considered to be a leader in the creation of the national and international knowledge hubs linking Bahrain to the rest of the world. Peter Kaliaropoulos, Batelco’s CEO, stated that the fixed and wireless advanced infrastructure which the company built has subsequently allowed Bahrain to showcase global events such as the Formula 1, and has linked Bahrain, the financial capital of the Middle East, to significant global banking, insurance and financial hubs.

The following section highlights the outstanding achievements, performance and services driving our choice of Batelco for this study. But our decision was made based on three main factors: (1) Batelco is the only telecommunication company listed in the Bahrain Bourse; (2) it has provided service throughout Bahrain for an extended period of time, and it was the only telecommunication company in Bahrain until 2002, when competitors such as ZAIN and VIVA entered the market; and (3) Batelco has fostered an admirable image through its work with various corporate social responsibility programs that provide services such as sponsorship and fiscal support for health, education, cultural and sports initiatives.

## **2 Telecommunication in Bahrain and Batelco**

Batelco was founded in 1981 as a Bahraini Public Joint Stock Company, with an authorized share capital of BD200 million (US\$531 million). By that time Bahrain had 45,627 telephone lines in use, a number which increased to 50,000 in 1982. In 1985, Bahrain installed the first fiber cable, and by 1999 the company had approximately 100,000 mobile contracts. Batelco flourished as a monopoly in the telecommunications sector for two decades. In 2002, under pressure from international bodies, Bahrain implemented a telecommunications law which included the establishment of an independent Telecommunications Regulatory Authority (TRA). In 2003, Batelco’s

monopoly over the sector ended when the TRA awarded a license to MTC Vodafone, which later re-branded itself as Zain.

In January 2010, VIVA (a subsidiary of STC) started operations in Bahrain, intensifying the competition. In addition to expanding the buying power of consumers, this healthy rivalry has helped Batelco to improve its services through continuous innovation. Batelco constantly strives to distinguish itself from its competitors, which stimulates creativity within the company and results in diversified products and services. Batelco promises delivery of the most up-to-date products and services, and continues to invest in emerging technologies to assure development of the economy. CEO Peter Kaliaropoulos stated: "Competition get things done better, faster, cheaper, for the consumer and the company." Batelco continues to hold its title of leading integrated communications provider in the Kingdom of Bahrain, serving the consumer, corporate, and wholesale markets, and is a significant force among the region's key telecommunication players. Batelco is listed in the Bahrain Bourse, and its major shareholders include Government of Bahrain entities (including Mumtalakat Holding Company, Amber Holding Company and Social Insurance Organization), various financial and commercial organizations, private Bahraini investors, Gulf Cooperation Council countries (GCC) and international investors. In 2013, Batelco Group evolved from being a regional Middle Eastern operation to become a major communications company with direct and indirect investments across 14 countries, and in recognition of this achievement, the Group was recognized by three prestigious organizations, winning the CommsMEA Award for Telecom Deal of the Year, TMT Finance 2013 MENA Award for Deal of the Year, and Telecom World Middle East (TWME) 2013 – Best Mergers & Acquisition Award. It currently operates across 16 markets in the MENA region and internationally, and delivers cutting-edge fixed and wireless telecommunication services to its customers in Jordan, Kuwait, Saudi Arabia, Yemen, Egypt, Guernsey, Jersey, Isle of Man, Maldives, Diego Garcia, St. Helena, Ascension Islands, and Falklands. It aims to continue its overseas expansion by creating a company of reference in the MENA region, possibly in India and/or East Asia.

Innovation, excellence and efficiency are the core focus of Bahrain's telecommunication industry. In 2013, the number of mobile subscribers in Bahrain increased by 24%, reaching 868,000 subscribers. With regard to mobile broadband subscribers, the year also saw positive results, with a year-over-year growth increase of 69%, and an 11% increase in the last quarter alone. These positive numbers reflect a focus on delivering top-quality products and services while offering best value prices, special offers and prize-winning promotions throughout the year. In line with its commitment to continually enhancing its networks, Batelco launched a super-fast 4G LTE service in February 2013, becoming the first telecom to launch this much-awaited service in the Kingdom of Bahrain. Already credited with a long list of firsts to its name, Batelco was also first to launch 4G LTE Mobile Broadband for home use, and the first to present 4G LTE Mobile Internet service for prepaid customers. Subsequently, Batelco was very pleased to announce the enhancement of its 4G LTE service, increasing network speed from 100 Mbps to 150 Mbps as part of its ongoing efforts to provide an optimal experience along with the telecom industry's latest technologies and innovations to its valued customers. Batelco's excellent reputation is founded in its ethical commitments, both to its customers and to society at large. The company values its customers' privacy and security, and in 2013 it expanded its security activities in departments that handle customer data. In line with this initiative, Batelco was presented with three new ISO Certificates in Information Security

(ISO 27001) for its e-Services, Retail Operations and Data Centre. This certification assures customers that Batelco applies global Information Security standards in implementing its daily transactions. In addition, Batelco's commitment to Corporate Social Responsibility continues to make a profound difference. In 2013 alone, Batelco donated more than BD1.5 million to sports, social, health and education related initiatives and charitable organizations in the Kingdom of Bahrain.

### 3 Literature Review

Event study literature indicates that prior researchers have studied the impact of unexpected events on the stock market extensively in areas such as accounting, finance, and marketing. Duso et al (2010) studied the impact of merger events on the stock values of 482 firms, and found that the correlation between the two is positive and highly significant. Other studies have attempted to assess the impact of merger events by comparing pre- and post-profits of merging firms with a control group of non-merging firms (Ravenscraft and Scherer, 1987; Gugler et al., 2003). Moreover, Duso et al. (2010) found that the correlation between an announced event and company performance seems to be positive and more significant when long windows of 25 or 50 days before the announcement date are used. Literature reveals that many event studies using a broad variety of sample mergers discovered a positive and significant correlation between ex-ante stock market returns and firms' ex-post performance (Schwart, 1996; Healy et al., 1992; Kaplan and Weisbach, 1992; Sirower and O'Byrne, 1998; Moeller et al., 2005; Mueller and Yurtoglu, 2007).

Simoies et al. (2012) investigated the relationship between the announcement of mergers and acquisitions and the abnormal returns for shares of firms in Argentina, Brazil and Chile. In general, they found that merger and acquisition news does signal value in the case of all three countries, with statistically significant results at a 95% level. Other studies found that the magnitude of the impact of mergers on company performance depends on the degree of interdependence between the merged firms. The higher the degree of interdependence, the greater the impact of the merger on a firm's performance (Contractor and Lorange, 1998; Nohria and Garcia-pont, 1991; Macedo-Soares and Mendonca, 2010), and such a positive performance is likely to be reflected in the firms' stock prices (Swaminathan and Moorman, 2009; Brito et al., 2005; Brooke and Oliver, 2005). Other studies considered de-merger (spin-off) as an event, and investigated its impact on firms' overall wealth. Veld and Veld-Merkoulova (2009) studied this issue, and reported that a significantly positive average abnormal return is found within the spin-off event window. They also found that returns are higher for larger spin-offs, for divestments that are tax friendly, and for spin-offs that lead to an improvement in industrial focus. Another relevant event study example is one conducted by Dua et al. (2010), which examined the impact of buyback of shares on share prices in India. This study found that buyback of shares did not generate any significant impact on the security price of the sample companies. Chen et al. (2009) examined managerial responses to initial market reactions on share repurchases and reported the following finding: "When a repurchase announcement of abnormal returns is low, the manager tends to buy more shares, in comparison with the purchase announced ratio. In addition, the long-term abnormal returns would be higher if the high repurchase completion ratio is accompanied by low repurchase announcement return". The announcement of dividend and its impact

on firms' stock prices has also been widely-investigated in finance literature. Most studies report a significant positive relationship between the two (e.g. Ali and Chowdhury, 2010; Arahony and Swary, 1980; Woolridge, 1982; Eades, 1982; Kwan, 1981; Gordon, 1962; Walter, 1963; Ryan et al., 2000; Barclay and Litzenberger, 1988; Collins and Warner, 1984; Lang and Litzenberger, 1989; Perfect and Wiles, 1994; Ross, 1989; Kang and Diltz, 2000; Lyroudi et al., 2007; Al-Malkawi et al., 2010; Mandal and Rao, 2010).

A significant number of studies have considered the ethical behavior of a firm as an event, and have subsequently examined its impact on the financial performance/stock values of the firms. For example, Zeltin (1991) compared fifteen Fortune 500 companies that adhered to written ethical principles over 20 years with the rest of the Fortune 500 companies over 30 years and found that the profits of the former grew twice as fast as the profits of the latter. Stoffman (1991) studied 60 Canadian firms and found that those firms that rate high on ethics and social responsibility show more profitability over the long run. This result was supported by Smith (1992), who reported that a company's reputation has a significant effect on its stock value. Positive association between ethics and return was also found in a study by Sabbaghi and Xu (2013), who examined the return performance of US companies exhibiting high rating for ethics and corporate social responsibility (CSR according to the Best 100 Corporate Citizens List of 2010 in *Corporate Responsibility* magazine. Similarly, Flammer (2013) conducted an event study related to announcements of environmental news for all US public companies from 1980 to 2009, and found that companies reported to behave responsibly toward the environment saw a significant increase in their stock prices, whereas firms that behaved irresponsibly suffered a significant decrease in stock value.

Videen (2011) tested the impact of positive and negative environmental announcements on firms' stock values using a set of companies listed in the Dow Jones Industrial average from 1998 to 2008. The study found that the abnormal returns of positive environmental announcements had no statistical significance. This indicates that bad news may have more impact than good news, a hypothesis that Shen and Chih (2011) confirmed in a study that found that the release of bad news about Taiwanese companies had a negative impact on their stock returns. Rao (1996) investigated the effects of published reports of environmental pollution on stock prices. He reported that unethical conduct of firms, in terms of environmental pollution, had a negative impact on the value of their stock for an appreciable period of time. Such a positive relationship between environmental corporate social responsibility and stock prices has been reported by many studies, for example: Hamilton (1995); Klassen and McLaughlin (1996); Berchicci and King (2007); Etzion (2007); Shane and Spicer (1983). The positive relationship between environmental behavior and firms' financial performance has been encouraging companies to go green (Flammer, 2013) through various sustainability policies. For example, several companies have achieved significant financial benefits by leveraging waste management (Rusinko, 2007; Russo and Harrison, 2005; Clelland et al., 2000). Other companies have followed different paths, such as integrating environmental awareness into their product design (e.g. Lenox et al., 2000; Waages, 2007), pursuing environmental management systems (e.g. Melnyk et al., 2003; Sroufe, 2003), and developing an environmentally-friendly supply chain (e.g. Linton et al., 2007). Although a noticeable number of studies have reported a positive association between firms' ethical behavior and their financial performance (Rao, 1996; Nations' Business, 1993; Reidenbac and robin, 1989; Smith, 1991; Miles, 1993; Dillon, 1991), such a connection cannot be a simple one because the

effects of ethical/unethical behavior can occur both internally and externally (Wood, 1994).

Adopting new technologies is another important event that influences the financial performance of firms. Blundell et al. (1999) found that announcements about implementing a new technology have a positive effect on the market shares of a firm, thus leading to an increase in the abnormal return of its stock values. Event study literature shows that some studies examined firms' performance in reaction to announcements related to the appointment/change of top management positions, such as CEO. "Stock price reaction at announcement of a management change can indicate whether the capital market considers the event significant" (Warner et al., 1988). In this respect, Coughlan and Schmidt (1985) tested a sample of 249 firms and found that a change in a firm's CEO is inversely related to abnormal stock price performance. Bonnier and Brumer (1989) examined all firms listed on the New York Stock Exchange from 1969 to 1983, from which they selected a sample of firms that financially underperformed and then witnessed a management change. They found that announcement of a change in top management following poor performance resulted in a positive reaction by shareholders, which is reflected in the increase in the firms' stock values. The positive association between management-change announcement and stock return is further corroborated by Furtado and Rozeff (1987) and Weisbach (1988). On the other hand, some studies found that top management change led to a drop in stock values (e.g. Warner et al., 1988; Reinganum, 1985; Borstad, 1985, Beatty and Zajac, 1987). Cascio et al (1997) looked at the issue from a different angle, and using data from companies listed in the Standard and Poor's 500 between 1980 and 1994, examined 5,479 instances of changes in employment and their effect on return of assets and return on stock. They found that companies which solely downsized the employment did not show significant changes in their abnormal returns, while companies that combined employment downsizing with asset restructuring generated higher returns on both assets and stock.

From the above literature, it can be inferred that unexpected events are generally good signals to the markets, through which it is possible to identify changes in firms' stock values, hence generating abnormal returns during the event window and into the future.

#### **4 Methodology**

The sample of this study includes six events announced by Batelco during the period 3 November 2011 to 26 April 2014, as detailed in Table 1. These six events were selected after a careful investigation ensuring that no other simultaneous events occurred during the same period or during the event window ( $\pm 21$  days of the event, which we extended to  $\pm 30$  days). The six events have been classified under one of two categories: marketing or financial. Marketing events include announcements with a promotional nature, such as winning awards and reducing rates, while financial events include announcements such as change of top management and increase in investment. Given that the chosen six events occurred at different time periods, it was necessary to analyze each separately to identify the individual impact of each on the shares value of Batelco. The analysis of the sample events would then reveal whether investors react to marketing and financial announcements, or not. If the investors' reaction was positive, it was left to determine whether they react to all announcement types equally, and whether their reactions do, indeed, generate some abnormal returns. On the other hand, if the investors showed no

reaction to the announcements, then the telecommunications sector of the Bahrain market could be deemed efficient in the semi-strong form. The stock market reaction is captured by the *abnormal returns (AR)* and the *cumulative abnormal returns (CARs)* during the “event window” of -21 to +21 days of the event, where said event is day 0. The 21-day window is long enough to show the effect of the announcements.

Table 1: Marketing and Financial Events

Event	The event	Category	Event nature	Date of announcement
1	Batelco Group named best company for investor relations in Bahrain at 3rd Annual Middle East Investor Relations Society Awards	Marketing	Promotion	3 Nov 2011
2	Batelco slashes business broadband rates	Marketing	Promotion	22 Sep 2012
3	Batelco digital annual report wins four prestigious awards	Marketing	Promotion	1 Dec 2013
4	Batelco group further strengthens commitment to Jordanian telecom market JD 50 million in Umnia 3G license	Financial	New investment	23 Jan 2012
5	Batelco group announces appointment of supervisor committee and chief operating officer lead Batleco group	Financial	Top management appointment	21 May 2013
6	Batelco to provide complete ICI infrastructure for al Baraka Banking Group	Financial	New project	26 April 2014

Bahrain’s daily All-Share Index and Batelco’s closing daily share prices were collected from the Bahrain Bourse Factset for the period of 2010 to 2014. Actual returns for Batelco were calculated by the change in prices plus the dividend yield for a specific period of time as follows:

$$R_t = \frac{(P_t - P_{t-1})}{P_{t-1}} + D_t \quad (1)$$

Where  $R_t$  is the actual return for the period  $t$ ,  $P_t$  is the current market price for Batelco and  $P_{t-1}$  is the price for the previous day. The expected returns are calculated using the security market line capital asset pricing model (CAPM) as follows:

$$\hat{R}_t = \alpha + \beta \times Rm_t + \varepsilon_t \quad (2)$$

Where,  $\hat{R}_t$  is the expected returns for time  $t$ ,  $\alpha$  and  $\beta$  are ordinary least square (OLS) regression coefficients for the market model parameters,  $Rm_t$ , are market returns for period  $t$ , and  $\varepsilon_t$  is the error in the model.

For this study, parameters ( $\alpha$  and  $\beta$ ) were estimated using a time period of 180 days, i.e. -210 day to -31 day before the announcement day of the first event (event 1), where  $t = 0$  was used to indicate the announcement date. These coefficients were estimated and used for all six events. Ryan et al. (2000) used 90 two-day periods from  $t = -261$  to  $t = -82$  to estimate the market model parameters, while Suwanna (2012) estimated the return parameters by defining an estimation window period of 100 days. He estimated the market model using data  $t = -120$  to  $t = -21$ . Videen (2011) used regression within the window period of 200 days, ending 50 days before the event date, to estimate the coefficients for the CAPM. The abnormal returns were then determined by the difference between the actual returns and the expected returns calculated above. Once ARs were determined in time  $t$ , CARs were calculated for each event as follows:

$$CAR_t = AR_t + CAR_{t-1} \quad (3)$$

Where, CAR for time  $t$  is the summation of AR for time  $t$  and CAR for the previous day.

For each event, the AR and the CARs were computed over the 43 days covering the event day (day 0),  $\pm 21$  days before and after the event. The null hypothesis ( $H_0$ ) used in this case was:  $CAR = 0$  against the alternative  $H_a$ :  $CAR \neq 0$ . Therefore, to test whether CARs are significantly different from zero or not, the following formula for t-test will be used:

$$t = \frac{CAR_t}{s/\sqrt{n}} \quad (4)$$

Where,  $n$  is the number of observations and  $s$  is the standard deviation of the CARs and is computed as follows:

$$S = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (CAR_i - \overline{CAR})^2} \quad (5)$$

## 5 Findings

Before analyzing and testing the six events, it is helpful to observe the movements of the Bahrain Bourse All-Share Index during the period of the study. Figure 1 shows that the index dropped during 2011, then gradually increased from 2012 to 2014. This boom in the Bahrain Bourse could be attributed to the outstanding performances of the listed companies, including Batelco.



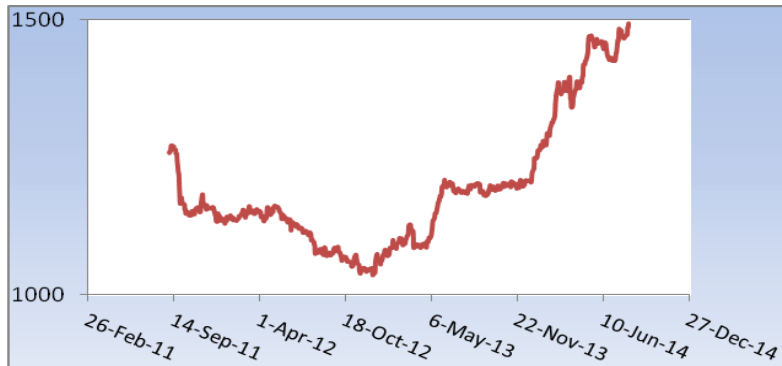


Figure 1: All-Share Index for Bahrain Bourse from Sept 2011 - June 2014

Table 2 summarizes the individual outcomes of the event study for each of the three marketing events. The first event is related to the announcement of Batelco Group being awarded the title of best company for investor relations in Bahrain. This announcement on day-0 affected the market positively, resulting in a shareholder gain of 0.28% AR and 1.62% CARs. Going back 21 days before the announcement, CARs were negative from day -21 to -17. From day -16 onward, it began to increase in gradual increments, finally reaching 1.62% on the event day. The T-test shows that CARs were significantly different from zero on the event day at 1% level. Furthermore, this increase in CARs continued until it reached 3.07% on day 21 with 1% level of significance. Since this announcement is directly-related to Batelco being the best company for investor's relations, it can be reasonably inferred that continuing positive and strong relationships will motivate investors to stay with the company and retain their shares. In addition, it may also encourage them to increase their investment in the company by purchasing more shares. All these factors may be positively reflected in Batelco's share values. This positive movement of the AR and CARs over the 43 days is also shown in Figure 2. Table 2 also shows that investors respond positively to event two, slashes in business broadband rates. It is expected that a reduction in broadband rates will lead to an increase in demand for Batelco's broadband which, in turn, may lead to an increase in the company's profit, which would result in boosting the value and price of Batelco's stock. A positive relationship between the event and investor reactions would indicate that investors consider this news as a good signal for wealth creation. Such a scenario can deduced from the appearance of positive CARs on day 9 through day 0, when CARs reached 0.58% with 1% level of significance. This positive reaction increased steadily until day 21, when CARs peaked at 6.69%.

Table 2: Abnormal and Cumulative Abnormal Returns for 'Marketing Events'

Days	Event 1		Event 2		Event 3	
	AR	CARs	AR	CARs	AR	CARs
-21	-0.0037	-0.0037	-0.0102	-0.0102***	0.0007	0.0007**
-20	0.0007	-0.0030	-0.0003	-0.0105**	-0.0057	-0.0050**
-19	0.0014	-0.0016	0.0180	0.0075***	0.0012	-0.0039**
-18	-0.0051	-0.0067***	0.0003	0.0077	-0.0007	-0.0046
-17	0.0000	-0.0067	-0.0159	-0.0082***	0.0129	0.0083***
-16	0.0093	0.0026***	-0.0032	-0.0113***	0.0024	0.0107***
-15	0.0048	0.0073***	0.0048	-0.0065***	-0.0106	0.0002***
-14	0.0003	0.0077	-0.0020	-0.0085***	0.0026	0.0028***
-13	0.0018	0.0095*	-0.0034	-0.0119**	0.0019	0.0047***
-12	0.0009	0.0105	-0.0002	-0.0121**	-0.0059	-0.0012**
-11	0.0010	0.0115	0.0103	-0.0018***	0.0010	-0.0002**
-10	0.0019	0.0134**	0.0002	-0.0015	-0.0028	-0.0030
-9	0.0005	0.0140	0.0047	0.0032***	0.0000	-0.0030
-8	-0.0042	0.0100***	0.0075	0.0107***	-0.0052	-0.0082*
-7	0.0007	0.0105	-0.0040	0.0067***	0.0031	-0.0051***
-6	0.0077	0.0182***	0.0011	0.0077	-0.0028	-0.0079
-5	-0.0035	0.0146***	0.0092	0.0169***	-0.0102	-0.0180***
-4	0.0007	0.0154	-0.0097	0.072***	0.0023	-0.0158***
-3	0.0018	0.0172*	0.0010	0.0082	-0.0380	-0.0538***
-2	-0.0038	0.0134***	0.0007	0.0089	-0.0252	-0.0790***
-1	0.0000	0.0134	-0.0025	0.0063***	0.0294	-0.0495***
<b>0</b>	<b>0.0028</b>	<b>0.0162***</b>	<b>-0.0005</b>	<b>0.0058**</b>	<b>-0.0048</b>	<b>-0.0543</b>
1	-0.0010	0.0152***	0.0036	0.0094**	0.0025	-0.0518***
2	0.0029	0.0181***	0.0028	0.0122	-0.0172	-0.0690***
3	0.0007	0.0188	-0.0016	0.0106***	0.0012	-0.0677**
4	-0.0026	0.0162***	-0.0009	0.0097***	0.0004	-0.0673**
5	0.0056	0.0218***	-0.0011	0.0087***	-0.0004	-0.0677
6	-0.0029	0.0189***	0.0046	0.0133***	-0.0017	-0.0693
7	-0.0032	0.0158***	0.0005	0.0137	-0.0065	-0.0759**
8	-0.0053	0.0104***	0.0018	0.0156	0.0004	-0.0754*
9	0.0069	0.0173***	0.0003	0.0159	0.0014	-0.0740**
10	0.0007	0.0181	0.0089	0.0248***	0.0004	-0.0736*
11	0.0035	0.0215***	0.0069	0.0317***	0.0006	-0.0730**
12	0.0007	0.0223	0.0083	0.0401***	0.0013	-0.0717**
13	0.0017	0.0240*	0.0046	0.0447***	-0.0059	-0.0776**
14	-0.0078	0.0162***	0.0047	0.0494***	-0.0052	-0.0827*
15	0.0127	0.0289***	0.0085	0.0579***	-0.0070	-0.0898***
16	0.0031	0.0320***	0.0021	0.0600	0.0034	-0.0864***
17	-0.0041	0.0279***	0.0007	0.0607	0.0051	-0.0813***
18	-0.0048	0.0231***	0.0047	0.0654***	-0.0013	-0.0826
19	0.0008	0.0240	0.0015	0.0669	-0.0064	-0.0890**
20	0.0011	0.0250	-0.0021	0.0649***	0.0064	-0.0827***
21	0.0057	0.0307***	0.0020	0.0669	-0.0189	-0.1016***

\*\*\* 1% level of significance, \*\* 5% level of significance, \* 10% level of significance

Despite the positive relationship between the announcement of event two and investors' reactions, results in Table 2 indicate a negative reaction at the beginning of the announcement, from day -21 until day -10. This gradual movement from negative to

positive reaction might be due to the historical trend evident in Bahrain's telecommunication market, in which one company's successful campaign incites its competitors to retaliate with an even more ambitious strategy intended not only to keep their current customers but to attract new customers and even lure customers away from other competitors. In the current case, it is quite possible that when Batelco slashed the rates of its broadband, investors anticipated a strong reaction from its competitors. Based on such an assumption, the investors might have considered the announcement as negative news at the beginning and then, as time went by and the competitors failed to exhibit strong, reactionary behavior, investors began to react positively to the news. This finding is also highlighted in Figure 2 in the movements of the CARs over the 43-day period.

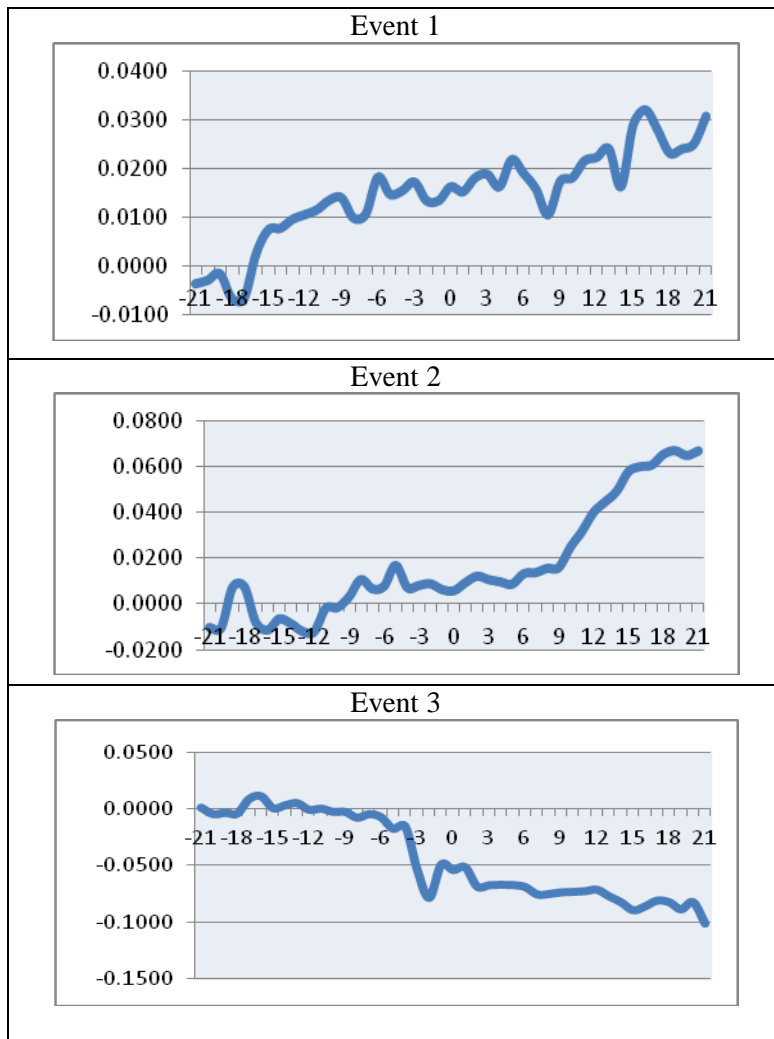


Figure 2: Cumulative Abnormal Returns for Marketing Announcements

Surprisingly, when Batelco won an award for its digital annual report (event three), it was interpreted negatively by investors. As shown over the 43 days, CARs fell into a severe negative range from day -12 (0.12%) onward, and reaches -5.43% on the event day,

day-0, and continuing to decline down to -10.16% on day 21. At 1% level, t-values are highly significant for most of the CARs, but are insignificant on the event day. Figure 3 exhibits the CARs continual decline through day 21. The negative response to event three indicates that investors did not consider such event to be indicative of Batelco's wealth, profitability, or healthy position. In this respect, although both events one and three are promotion-oriented and related to winning awards, investors reacted positively to event one because it is related to something of interest to them, i.e. investors relations.

Table 3 summarizes the results regarding the corporate management announcement of financial events. Event four, depicted in Table 3, reports the AR and the CARs that were generated by the announcement of new investment by Batelco. This investment was Batelco's commitment to the Jordanian telecom market for JD50 million in Umnia 3G license. On the event day, the ARs were positive and equaled 0.08% while the CARs were 1.68%. From days -21 to -16, CARs were negative, rising to 0.7% on day -15, rising to 1.68% on the event day, and reaching their zenith on day 21 when investors managed to gain 5.15% on abnormal returns. The t-test shows that most of the ARs and CARs were statistically significant at 1% level, therefore proving null the hypothesis that the CARs equal zero.

Figure 3 highlights this sharp positive increase in CARs over the 43-day event window, and this drastic positive increase imply that new investments are indicators of a company's health and secure position, as well as the management's commitment to a positive vision of the future. When companies express the intention to expand their investments and enter into new projects, people are encouraged to invest and buy shares. When a company expands their investments, investors feel more confident in the company and its management. Top management appointment has the opposite result, and seems to trigger a decline in the confidence of a company's health and stability. Table 3 exhibits negative investor response to event five. During the window period, most of the ARs and CARs were negative. On day -21, prior to the event, CARs were positive at 0.3%, but dropped into the negative range on day -20, plummeting to -1.56% on day 0, event day. The negative CARs were at -0.4% on day 21 with 5% level of significance. Figure 3 highlights this behavior. Although this period exhibits some positive ARs, all the CARs were negative. This indicates that investors consider change of management to be negative news, based on the assumption that top management was changed because of weaknesses and/or poor decisions. Comparing the CARs over time, it shows that they improved slightly after hitting a bottom of -1.56% on day 0 to -0.4% on day 21, but still failed to enter the positive range. One interpretation could be that it takes a long time for investors to understand, trust and accept the change in top management. The negative relationship in changes of top management to abnormal returns is supported by the work of Coughlan and Schmidt (1985); Warner et al. (1988); Reinganum (1985); Borstad (1985) and Bently and Zajac (1987).

Table 3: Abnormal and Cumulative Abnormal Returns for 'Financial Events'

Days	Event 4		Event 5		Event 6	
	AR	CAR	AR	CAR	AR	CARs
-21	-0.0004	-0.0004***	0.0030	0.0030***	0.0058	0.0058
-20	0.0009	0.0005	-0.0154	-0.0124***	-0.0065	-0.0007***
-19	-0.0056	-0.0051***	0.0072	-0.0052***	0.0266	0.0259***
-18	0.0022	-0.0029**	0.0007	-0.0045	-0.0241	0.0018***
-17	0.0056	0.0027***	-0.0044	-0.0089***	-0.0007	0.0011
-16	-0.0038	-0.0011***	0.0015	-0.0074*	0.0056	0.0067
-15	0.0081	0.0070***	-0.0017	-0.0091*	0.0105	0.0172***
-14	0.0024	0.0094**	-0.0006	-0.0097	-0.0058	0.0113***
-13	0.0001	0.0095**	0.0124	0.0026***	0.0035	0.0149
-12	0.0000	0.0095**	-0.0019	0.0007**	0.0112	0.0261***
-11	0.0007	0.0102	-0.0012	-0.0005	0.0088	0.0349***
-10	0.0019	0.0122	-0.0024	-0.0029**	0.0014	0.0363
-9	0.0009	0.0131	-0.0036	-0.0065***	0.0012	0.0375
-8	0.0030	0.0160***	-0.0065	-0.0131***	-0.0040	0.0335***
-7	-0.0008	0.0153***	-0.0012	-0.0143	-0.0007	0.0328
-6	-0.0001	0.0152**	-0.0008	-0.0151	-0.0025	0.0303**
-5	-0.0026	0.0127***	-0.0019	-0.0170**	0.0195	0.0498***
-4	-0.0027	0.0099***	0.0170	0.0001***	-0.0074	0.0424***
-3	0.0011	0.0110	0.0010	0.0011	0.0107	0.0531***
-2	-0.0011	0.0100***	-0.0198	-0.0187***	0.0002	0.0533
-1	0.0059	0.0159***	0.0043	-0.0144***	-0.0063	0.0470***
<b>0</b>	<b>0.0008</b>	<b>0.0168</b>	<b>-0.0011</b>	<b>-0.0156</b>	<b>0.0122</b>	<b>0.0592***</b>
1	-0.0007	0.0161***	0.0000	-0.0155	-0.0071	0.0521***
2	0.0022	0.0183**	0.0055	-0.0100***	0.0006	0.0527
3	0.0021	0.0203*	-0.0034	-0.0135***	0.0001	0.0528
4	0.0002	0.0205**	0.0018	-0.0117**	0.0251	0.0779***
5	0.0023	0.0228**	-0.0011	-0.0128	0.0620	0.1399***
6	-0.0011	0.0217**	0.0005	-0.0123	-0.0030	0.1369**
7	0.0020	0.0237*	0.0004	-0.0119	-0.0158	0.1210***
8	0.0008	0.0246	-0.0002	-0.0120	-0.0051	0.1159***
9	0.0011	0.0256	0.0006	-0.0114	0.0022	0.1182
10	0.0013	0.0270	0.0000	-0.0114	-0.0064	0.1117***
11	0.0001	0.0270**	-0.0028	-0.0142**	-0.0087	0.1030***
12	0.0004	0.0273*	0.0039	-0.0102***	0.0008	0.1038
13	-0.0001	0.0273**	0.0032	-0.0071***	-0.0140	0.0898***
14	-0.0011	0.0262***	-0.0102	-0.0173***	-0.0046	0.0852***
15	0.0010	0.0272	-0.0008	-0.0180	0.0035	0.0887
16	0.0007	0.0279	0.0047	-0.0133***	0.0022	0.0910
17	0.0002	0.0281**	0.0026	-0.0108***	0.0058	0.0967*
18	0.0042	0.0323***	0.0007	-0.0101	-0.0073	0.0894***
19	0.0048	0.0371***	0.0033	-0.0068***	-0.0014	0.0880*
20	0.0126	0.0497***	0.0012	-0.0056	-0.0022	0.0859**
21	0.0018	0.0515	0.0016	-0.0040**	0.0119	0.0977***

\*\*\* 1% level of significance, \*\* 5% level of significance, \* 10% level of significance

Looking at the last event, event six, results indicate that investors trust Batelco's management in making decisions about a new project. Examining the 21 days prior to the event day, all exhibited positive CARs, with the exception of day -20. ARs started at

0.58% and ended up with 5.92% CARs on day 0. These positive CARs continued through day 21, reaching an outstanding 9.77%, the highest CARs gained by investors throughout the entire event window. Using the t-test, we found that most of the CARs were highly significant at above 1% level. This sharp increase in the CARs is clearly shown in Figure 3 from the event day onward.

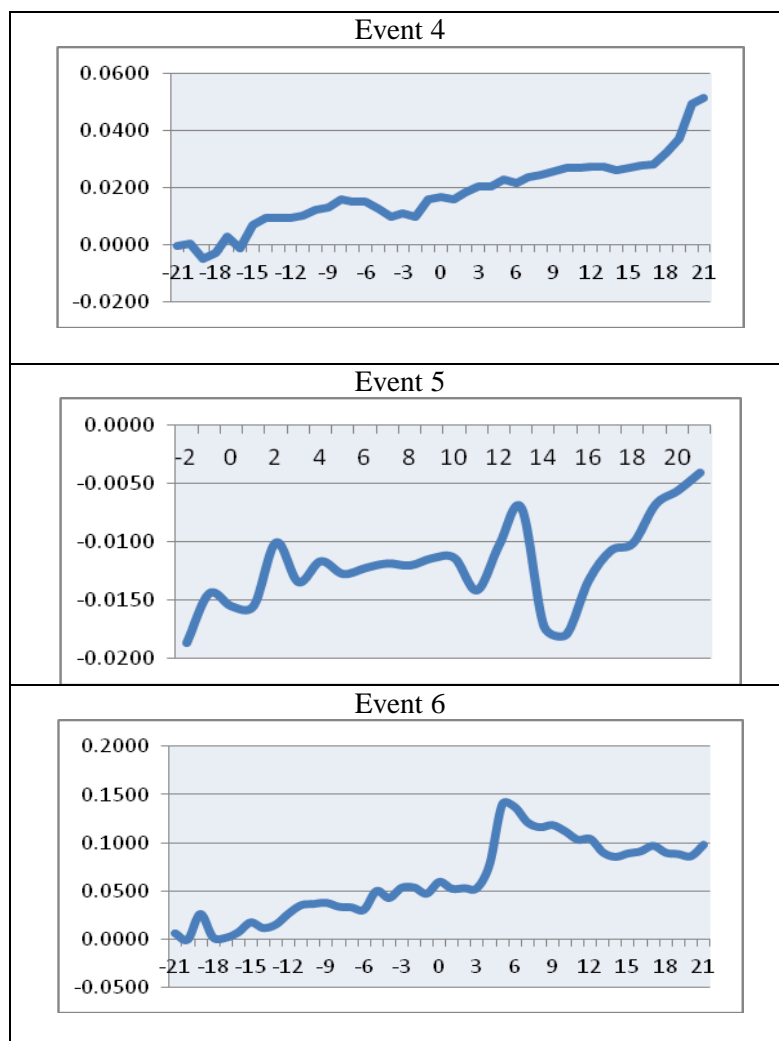


Figure 3: Cumulative Abnormal Returns for Financial Announcements

The overall summary of the analysis has been compiled and reported in Table 4, which shows the CARs for each event on day -21, event day and day +21. The direction of each event is presented as it was obtained by the available data for Batelco. The maximum CARs occurred in response to event six, the investment in ICI infrastructure for al Baraka Banking Group, wherein investors achieved 9.77% in positive CARs. Surprisingly, the maximum loss of -10.16% occurred in response to Batelco's winning four prestigious awards for its digital annual reports (event 3).

Table 4: Concluding summary of the results

Events	Type	Description	Cumulative Abnormal Returns (CARs)			Effect Direction
			-21 day	Day 0	+21 day	
1	Marketing	Batelco named best company for investor relations in Bahrain	-0.37%	1.62%***	3.07%***	Positive
2	Marketing	Batelco slashes business broadband rates	-1.02%***	0.58%**	6.69	Positive
3	Marketing	Batelco digital annual reports wins four prestigious awards	0.07%**	-5.43%	-10.16%***	Negative
4	Finance	Batelco strengthens commitment to Jordanian telecom market in Umnia 3G	-0.04%***	1.68%	5.15%	Positive
5	Finance	Batelco announced appointment supervisor committee and chief operating officer	0.3%***	-1.56%	-0.4%	Negative
6	Finance	Batelco to provide complete ICI infrastructure for al Baraka Banking Group	0.58%	5.92%***	9.77%	Positive

\*\*\* 1% level of significance, \*\* 5% level of significance

## 6 Conclusion

This paper investigated the effect of marketing and financial announcements of corporate management in the telecommunication sector of the Bahrain Bourse. Six such announcements made by Batelco during the period of 2011 to 2014 were tested using event study methodology. Overall, results show that regardless of the type of announcement or unexpected event, investors do react to this type of news, either negatively or positively. This is evident in the changes in the CARs exhibited on the event day and throughout the window period of the event. Results reveal that investors gain abnormal returns mainly from the announcement of increased investment in projects, as Batelco's announcement that it had taken steps to provide complete ICI infrastructure for al Baraka Banking Group (event 6) cause CARs to rise to 5.92% on announcement day, increasing steadily through day 21, when it reached 9.77%. Similarly, when Batelco strengthened its commitment to the Jordanian telecom market in Umnia 3G (event 4), the CARs earned on the announcement day amounted to 1.68%, then increased to 5.15% on day 21. Yet investors felt neither happy nor confident when the company announced the appointment of a new supervisor committee and chief operating officer (event 5), and reacted negatively to this announcement. On the marketing end, when Batelco slashed its rates for the business broadband (event 2), investor reactions were positive, and generated 0.58% CARs on the event day, which increased to 6.69%. Furthermore, it was found that award winning for investor relations gives a positive signal (event 1) while award winning for digital annual reports (event 3) was interpreted as a negative signal by investors. The six events used in this sample highlight the fact that the Bahrain Bourse is not efficient in the semi-strong form, and therefore, investors can systematically make abnormal returns. This conclusion supports the signaling theory, which states that corporate management can send significant signals to the market by taking certain actions and publicly announcing events.

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## Appendix

### Regression coefficients using a period of -260 to -30 days before the events

Days	AR	CAR	AR	CAR	AR	CAR	AR	CAR	AR	CAR	AR	CAR
-21	-0.305	-0.305	0.325	0.325	-0.687	-0.687	0.508	0.5087	0.0770	0.077	1.338	1.338
-20	0.082	-0.223	0.120	0.446	-0.114	-0.801	-1.521	-1.0126	-0.5950	-0.518	-0.741	0.596
-19	0.206	-0.016	-1.103	-0.657	2.027	1.225	0.817	-0.1957	0.1712	-0.346	2.273	2.870
-18	-0.111	-0.128	0.367	-0.289	0.000	1.225	0.091	-0.1038	-0.1799	-0.526	-2.501	0.368
-17	-0.046	-0.174	0.549	0.260	-1.743	-0.517	-0.880	-0.9842	1.3003	0.773	-0.177	0.191
-16	1.243	1.068	-0.311	-0.051	-0.645	-1.163	0.237	-0.7466	0.4042	1.177	0.470	0.661
-15	0.404	1.472	1.014	0.963	0.858	-0.304	-0.367	-1.1144	-0.9759	0.201	0.862	1.524
-14	0.013	1.486	0.403	1.366	0.007	-0.297	-0.168	-1.2830	-0.0901	0.111	-0.618	0.905
-13	0.296	1.782	-0.030	1.336	-0.253	-0.550	1.312	0.0291	0.3056	0.417	0.090	0.996
-12	0.128	1.910	-0.044	1.292	-0.077	-0.628	-0.413	-0.3841	-0.6283	-0.210	1.014	2.011
-11	0.142	2.052	0.088	1.380	1.012	0.384	-0.277	-0.6612	0.1472	-0.063	1.091	3.102
-10	0.313	2.366	0.315	1.696	-0.005	0.378	-0.497	-1.1589	-0.0473	-0.111	0.206	3.309
-9	0.049	2.416	0.123	1.819	0.395	0.773	-0.723	-1.8825	-0.0458	-0.156	0.175	3.484
-8	-0.389	2.027	0.508	2.327	0.936	1.710	-0.800	-2.6826	-0.4852	-0.642	-0.287	3.196
-7	0.090	2.117	-0.191	2.136	-0.372	1.337	-0.270	-2.9530	0.5383	-0.103	-0.181	3.015
-6	0.496	2.613	-0.061	2.074	0.150	1.487	-0.199	-3.1526	-0.5684	-0.672	-0.512	2.502
-5	-0.269	2.344	-0.527	1.546	0.809	2.297	-0.405	-3.5581	-0.8785	-1.550	2.064	4.567
-4	0.088	2.432	-0.113	1.433	-1.018	1.278	1.716	-1.8416	0.3776	-1.172	-0.928	3.638
-3	0.288	2.721	0.159	1.592	0.132	1.411	0.138	-1.7027	-3.8962	-5.069	0.938	4.577
-2	-0.317	2.403	-0.248	1.344	0.080	1.492	-2.358	-4.0606	-2.4928	-7.561	-0.008	4.568
-1	-0.050	2.353	0.620	1.964	-0.524	0.967	0.277	-3.7833	2.5561	-5.005	-1.235	3.333
<b>0</b>	<b>0.038</b>	<b>2.391</b>	<b>0.110</b>	<b>2.074</b>	<b>-0.144</b>	<b>0.823</b>	<b>-0.255</b>	<b>-4.0385</b>	<b>-0.3902</b>	<b>-5.396</b>	<b>1.231</b>	<b>4.565</b>
1	-0.240	2.151	-0.171	1.903	0.626	1.449	-0.043	-4.0815	0.4267	-4.969	-0.888	3.676
2	0.488	2.640	0.355	2.258	0.043	1.493	0.508	-3.5728	-1.5606	-6.529	0.064	3.741
3	0.088	2.729	0.339	2.598	0.086	1.580	-0.691	-4.2647	0.1798	-6.350	-0.021	3.719
4	-0.090	2.638	-0.019	2.578	-0.220	1.360	0.290	-3.9746	0.0347	-6.315	2.162	5.881
5	0.553	3.191	0.388	2.966	-0.247	1.112	-0.256	-4.2310	-0.1156	-6.431	5.733	11.615
6	-0.587	2.603	-0.257	2.709	0.816	1.928	0.047	-4.1837	-0.3625	-6.793	-0.616	10.998
7	-0.640	1.963	0.330	3.040	0.039	1.967	-0.443	-4.6275	-0.6949	-7.488	-1.645	9.353
8	-1.044	0.919	0.107	3.148	0.292	2.260	-0.082	-4.7095	0.0291	-7.459	-0.544	8.808
9	1.242	2.162	0.149	3.297	0.016	2.277	0.068	-4.6409	0.2208	-7.238	0.367	9.176
10	0.088	2.250	0.200	3.497	1.190	3.468	-0.045	-4.6866	0.0283	-7.210	-0.786	8.390
11	0.600	2.851	-0.038	3.458	0.821	4.289	-0.572	-5.2586	0.0679	-7.142	-0.750	7.640
12	0.088	2.939	0.020	3.479	1.089	5.378	0.688	-4.5698	0.1866	-6.955	0.104	7.744
13	0.277	3.217	-0.064	3.414	0.390	5.769	0.550	-4.0194	-0.5698	-7.525	-1.257	6.486
14	-0.615	2.602	-0.262	3.152	0.404	6.173	-1.029	-5.0488	-0.4303	-7.955	-0.429	6.056
15	0.983	3.585	0.143	3.295	0.705	6.878	-0.189	-5.2385	-0.7764	-8.732	0.615	6.672
16	0.530	4.116	0.088	3.383	0.348	7.227	0.355	-4.8829	-0.0041	-8.736	0.365	7.038
17	-0.374	3.741	-0.019	3.364	0.083	7.310	0.439	-4.4439	0.3179	-8.418	0.546	7.584
18	-0.504	3.236	0.302	3.667	0.419	7.729	0.073	-4.3700	-0.3000	-8.718	-0.936	6.647
19	0.109	3.346	0.417	4.084	0.238	7.967	0.105	-4.2643	-0.6582	-9.376	-0.308	6.338
20	0.151	3.498	1.426	5.511	-0.022	7.945	0.178	-4.0859	-0.0390	-9.415	0.029	6.368
21	0.564	4.062	-0.155	5.356	0.324	8.270	0.242	-3.8433	-1.8468	-11.262	1.206	7.574

Where OLS coefficients is based on -260 days to -30 days from the event day