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Chen, Dylan Siong-Yain and Liew, Venus Khim-Sen

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Dylan Siong-Yain Chen
RHB Bank Berhad, No. 9 & 11, 1ˢᵗ Floor, Jalan sutera, Taman Sentosa, 80150 Johore Bahru, Johor, Malaysia. chen.siong.yain@rhbgroup.com

Venus Khim-Sen Liew[1]
Faculty of Economics & Business, Universiti Malaysia Sarawak, Jalan Datuk Mohammad Musa, 94300 Kota Samarahan, Sarawak, Malaysia. ksliew@unimas.my

Abstract

This study examines the effect of Unusual Market Activity (UMA) announcement on stock return in Malaysian market with a sample of 62 companies listed on the ACE market at Bursa Malaysia for the period of 2007-2015. This study employs event study methodology to show that there were few days in which the average abnormal return (AAR) and cumulative average abnormal return (CAAR) are statistically significant. In addition, this study also further investigates the abnormal return (AR) and cumulative abnormal return (CAR) for individual companies. It was found that majority of the stocks returns fell significantly 30 days after the UMA announcement. The magnitude of the fall in returns ranges from 4% to 234%. Hence, it is not advisable for investors to buy stock after UMA announcement.

Key Words: Unusual Market Activity; Ace Market; Stock Return; Bursa Malaysia

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[1] Corresponding author: Faculty of Economics & Business, Universiti Malaysia Sarawak, Jalan Datuk Mohammad Musa, 94300 Kota Samarahan, Sarawak, Malaysia. Tel: +6082584291. Email: ksliew@unimas.my

1   Introduction

The announcements of Unusual Market Activities (UMA) by Bursa Malaysia are increasing over the years. UMA signals a high probability that the stocks announced are being manipulated. Hence, UMA announcement brings a similar definition and acts as a proxy for market manipulation. Huang, Chen and Cheng (n.d) asserted that manipulation can be happened in a many ways, from insiders taking actions that stimulus stock price to the proclamation of incorrect news or rumours in the internet. Stock manipulation of false news was spread out, causing investors to sell or buy based on inaccurate information. The manipulators then traded in the opposite direction to gain profit. Now, with the advancement of internet creation, false news could spread faster and wider using internet message board and other social media. The efficiency of internet with faster and wider spread of false news hence brings a larger effect to the investors (Leinweber & Madhavan, 2001).

The possibility that the markets can be manipulated is an imperative issue for both the efficiency of the market and the regulation of trading. Particularly securities in many Asian stock markets are thinly traded and thus they are more vulnerable to manipulation. This is because legal enforcement is weak, manipulation is still rampant in many emerging markets (Huang, Chen & Cheng, n.d). Manipulation of stock is illegal and it is impermissible under the regulations of the Securities and Exchange Commission (SEC) to protect investors.

On the other aspect, there is debatable that market misconduct such as price manipulation can be utilised to gain profit. Arbitrageurs may quickly take advantage of any mispricing if the market is efficient, moving prices into equilibrium conditions. However, very limited researches have been discussed on the announcement of unusual market activity, although numerous researches had been carried out on the wealth effect from corporate announcement. Hence, this study is motivated by the importance of market efficiency on unusual market activity and scarce literature available in this particular issue in Malaysia.

To the best of the authors' knowledge, no empirical study on UMA announcement is detected in Malaysia. It is unknown as of whether there is any profitable finding opportunity for investors after UMA announcement. Therefore, it is interesting to find out the impact of UMA announcement to the underlying stock return in Malaysia. Notably, out of the 225 UMAs announced from 2007 to 2015, 64 happened in the ACE market. ACE market involves smaller capital stocks, which increases chances of manipulation (Hanafi, 2010). Besides, Zhao (2014) stated that "pump-and-dump" scheme where the stock price, trading volume and price volatility surges significantly, often happen for small-cap stocks because of its low selling and buying interest and short sale constraints. As such, samples from ACE market are analysed in this study. Results are believed to be beneficial to researchers, investors and market regulators.

2   Literature Review

Studies on the impact of UMA on stock return are relatively rare compared to corporate announcement studies. Two studies on UMA are worth mentioning. Firstly, Hanafi (2010) investigated price and trading behaviour of stocks involved in the announcement of unusual market activity in Indonesia market. It is found that abnormal returns and trading activities increase on the days leading to positive unusual market activity announcement. Conversely, abnormal returns and trading activities decrease on the days leading to negative unusual market activity announcement. Besides, it is also told that trading characteristic of unusual

market activity stocks are varying from those of matched stocks but alike to those of abnormal-return-matched stocks.

The second study of UMA announcement study was conducted by Yanuarti and Mulyono (2012). They examined the effect of unusual moving activity announcement on stock return and trading volume in Indonesia stock exchange. They noted that stock returns are different before and after the UMA Announcement. Stock return is greater before UMA than after UMA. Moreover, in their finding, trading volume activity is not statistically affected by UMA announcement. It is the same before and after the announcement.

Other than UMA announcement, Huang et al. (n.d) conducted a research on stock manipulation and its effect on market quality in Taiwan. They documented abnormal return of the manipulated stocks are more than 70 percent, which is very high in the developed markets but similar to emerging market circumstances. Subsequently, they inferred stock manipulation create market inefficiency which lead to both abnormally high trading volume and volatility, worsen the market depth, and thus impact on market quality. Khwaja and Mian (2005) explored price manipulation on the Pakistan stock market. They found that brokers could earn annual rates of return in between 50-90% higher than outside investors. Furthermore, they found convincing evidence for a specific trade-based ''pump and dump'' price manipulation scheme. Colluding brokers trade among themselves when prices are low to artificially raise prices and attract positive-feedback traders. Then they exit once prices have risen and leave the latter to suffer the following price fall. On the other hand, Rhode and Strumpf (2007) conducted a study on manipulating political stock markets. They pointed out that prices are initially moved by the speculative attack, but these changes were undone quickly and prices returned close to previous levels. They also found little evidence that political stock markets could be analytically manipulated beyond short time periods. Azzam and Karlquist (2008) examined the market reactions to announcements of allegations of corporate misconduct on Swedish market. They made a conclusion that firms being sued for violation experienced a significant negative wealth loss of 1.39% followed with the announcement of the illegality. Moreover, Kaltchev (2009) studied the impact of securities litigation to stock returns in the U.S. market. It is observed that stock react significantly negative to litigation but not overwhelming. Nevertheless, positive reaction to lawsuits can be observed sometimes but negative reaction is twice as common as positive reaction to lawsuits. Recently, Gerace et al. (2014) analysed stock market manipulation on the Hong Kong Stock Exchange. They claimed that manipulation has negative impact on market efficiency measures such as the bid-ask spread and volatility due to information asymmetry.

3   Data and Methodology

This study uses data collected from several sources which includes the stock price and the UMA announcement date for each company. The initial searches of companies are from July 2007 to January 2015 through the Bursa Malaysia. Over this sample period, a total of 64 UMAs from ACE market were announced. The UMAs are mainly due to unusual sharp change in price and sharp increase in trading volume. Nevertheless, this study only consists of 62 unusual market activity announcements from ACE market whereas 2 announcements have been excluded due to insufficient data during the period of study. Stock price daily data are obtained from Yahoo Finance website while information of UMA announcements are collected from Bursa Malaysia. According to Huang et al. (n.d) and Perry and Fontnouvelle (2005), the prices are all adjusted to account for dividends and other splits.

The market model adopted in this study assumes a linear relationship between the return of any stocks to the return on the market portfolio, which is mathematically expressed as Equation (1):

$$\hat{R}_{it} = \alpha_i + \beta_i R_{mt} + \mu_i \tag{1}$$

where, $\hat{R}_{it}$ = the expected return on stock i stock on any given day t;
    α_i = the constant term;
    β_i = the sensitivity of company i stock to the market returns R_{mt};
    α_i and β_i are also known as market model parameters or regression parameters.
    R_{mt} = the market's rate of return during a given period t, whereby the KLCI has been employed as the market index; and
    μ_i = the random error term.

In order to calculate the actual returns of each stock, the following formula is computed:

$$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}} \tag{2}$$

where, R_{it} = the actual returns on company i stock on any given day t;
    P_{it} = the closing price of stock i on any given day t;
    P_{it-1} = the closing price of stock i on previous day t-1.

In the same manner, the market returns are calculated using the following formula:

$$R_{mt} = \frac{KLCI_t - KLCI_{t-1}}{KLCI_{t-1}} \tag{3}$$

where, R_{mt} = the market returns on any given day t;
    $KLCI_t$ = the KLCI index value on any given day t;
    $KLCI_t$ = the KLCI index value of the previous day t-1.

The market model of expected stock return is written as follows:

$$E(R_{it}) = \alpha_i + \beta_i(R_{mt}) \tag{4}$$

The actual returns are compared with the market model expected returns in order to examine if UMA announcement induces any abnormal returns for each stock on each day in the event period. The coefficient α_i is the intercept and β_i is the slope of the market model, respectively, which are estimated over 90 days prior to the event window. The event period consists of 61 days around the UMA announcement date (t=-30 to +30). Next, abnormal returns (AR) are calculated on each of the 61 days for each stock by using the following formula:

$$AR_{it} = R_{it} - E(R_{it}) \text{ or } AR_{it} = R_{it} - [\alpha_i + \beta_i(R_{mt})] \tag{5}$$

where, AR_{it} = the abnormal return on company i stock on any given day t;
    R_{it} = the actual returns on company i stock on any given day t;
    α_i, β_i = Ordinary least square estimations over the estimation window,

The abnormal return is the difference between the actual and the expected return. The AR_{it} can be analyzed separately for each security, but this may not be very informative as "a lot of stock price movements are caused by information unrelated to the event under study" (Jong, 2007). The data used for estimation had to be sufficiently separated in time from the event in question so that the parameters are not affected by event-period abnormal stock return. Therefore, the average abnormal returns over the sample companies for each of the 61 days must be considered using the following formula:

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{it} \ , t = -30, \dots \dots, +30 \qquad (6)$$

where, AAR_t = the average abnormal returns on a given day and N is the number of announcement made by the sample companies which is 62 companies.

To determine the statistical significance of the AAR_t, most studies often take this into account by summing all the AR_{it} over the time period of interest to find the cumulative abnormal returns (CAR). The CAR is a better indicator of the total impact of information release (Bodie et al., 2009). The average of CAR is known as the cumulative average abnormal return ($CAAR_t$) and is considered over the sample companies, N, at each trading day. $CAAR_t$ is calculated using the following Equation (7):

$$CAAR_t = \sum_{t=t_1}^{t_2} AAR_t \qquad (7)$$

where, t_1 and t_2 represent researchers' specified time windows to investigate the cumulative effect of UMA announcements on stock returns.

Subsequently, the AAR_t and $CAAR_t$ have to be tested on their statistical significance. The simple t-test for AAR_t is the ratio of AAR_t to its estimated standard deviation, $\hat{\sigma}(AAR_t)$. The standard deviation has to be estimated from the time series of AAR_t in the parameter estimation period to ensure its stability and reliability. Following Patell (1976), a lot of researches applied e a standardized abnormal return (SAAR) where each abnormal security return is normalized by its estimation period standard deviation as follows:

$$SAAR = \frac{AAR_t}{\hat{\sigma}(AAR_t)} \qquad (8)$$

The standard deviation $\hat{\sigma}(AAR_t)$ of each average abnormal return is further explained as:

$$\hat{\sigma}(AAR_t) = \sqrt{\frac{1}{t_0-1}\sum_{t=1}^{t_0} AAR_{it}^2} \qquad (9)$$

where, t_0 is the number of days in the estimation period. Thus, the day 0 of the standardized t-test is

$$\hat{\sigma}_1 = \frac{1}{\sqrt{N}}\sum_{i=1}^{N} SAAR_i \qquad (10)$$

For the $CAAR$ shown in Equation (7), the test statistic is simply:

$$t(CAAR) = \frac{CAAR(t_1,t_2)}{\hat{\sigma}(t_1,t_2)} \qquad (11)$$

where,

$$\hat{\sigma}(t_1, t_2) = \sqrt{l\hat{\sigma}(\overline{AAR_t})} \tag{12}$$

The estimation of standard deviation for $CAAR_t$ is applied in many studies (Khotari & Warner, 2006; Rao, 1997; Shaheen, 2006; Voon et al., 2008). l is the horizon length of the event period which can be calculated from $t_2 - t_1 + 1$. In this study, the l is 61 trading days. It must also be noted that, in the estimation of $\hat{\sigma}(AAR_t)$, the degree of freedom, N-1, is taken into account to eliminate the bias of taking deviations from the sample arithmetic average, AAR_t, instead of the unknown, true expected value, $E(AAR_t)$ (Bodie et al., 2009). Once the critical value has been determined at 5% level of significance, if t is less than the critical value, the null hypothesis of no negative abnormal return is rejected, and vice versa.

A common practice in the event study is to employed event window that consists of 60 days surrounding the warrants listing day, which is 30 days before ($t = $-30) and 30 days after ($t = $+30), whereby ($t = 0$) is the UMA announced date. The t refers to the number of days. This is to fully capture the effects of the event of interest (Liew & Puah, 2011). However, a wider event window allows for the effects of absorption by the market of more complex disclosures (Dumay & Tull, 2007). As such, a lot of researches denoted that the longer the estimation period, the more stable the slope β, or beta (Ray, 2010). Hence, a maximum of 151 daily return observations, starting at day -120 and ending at day +30, is collected for this study (see Figure 1). The earliest 90 observations are then used to estimate the regression parameters α and slope β for each individual security in order to eliminate bias for the impact of the event.

Figure 1: Event Study Window
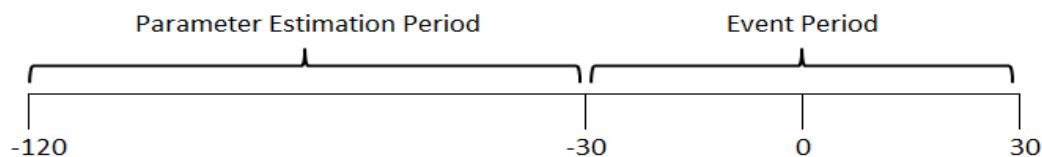
4 Empirical Results and Discussion
This study attempts to contribute to the stock market study by investigating the effect of unusual market activity on Malaysia ACE stock market before, during and after announcement. The results are presented and discussed below.

4.1 Event Study of effect of UMA announcement on stock return
Figure 2 portrays a graph of AARs on the y-axis against the trading day on the x-axis. The 0 on x-axis indicates the unusual market activity announcement date. The observed AAR ranged between 7% and -5% over the event window. AAR on the day-30 is about -2.2% and it fluctuates in the range of -2.2% and 3%. Then it started to climb and reached about 3.5% on day-2, 5% on day-1 and eventually reached the peak of 7% on day0, which is the announcement day. This indicates that insider trading might occur during these 3 days before the announcement. However, AAR began to drop drastically to -2% on day1 and fell to the lowest -5% on day2 after the announcement being made by Bursa Malaysia. Nevertheless, ARR recovered at day3 but it wandered around 0% and negative 3%. This result brings the meaning of unusual price movement contain information rather than

market manipulation (Hanafi, 2010). Besides, Jiang, Mahoney and Mei (2005) implied that in this case, stock pools carry confirmation such as insider trading rather than pure or noisy price manipulation.

Figure 2: Graph of AAR against Trading Day
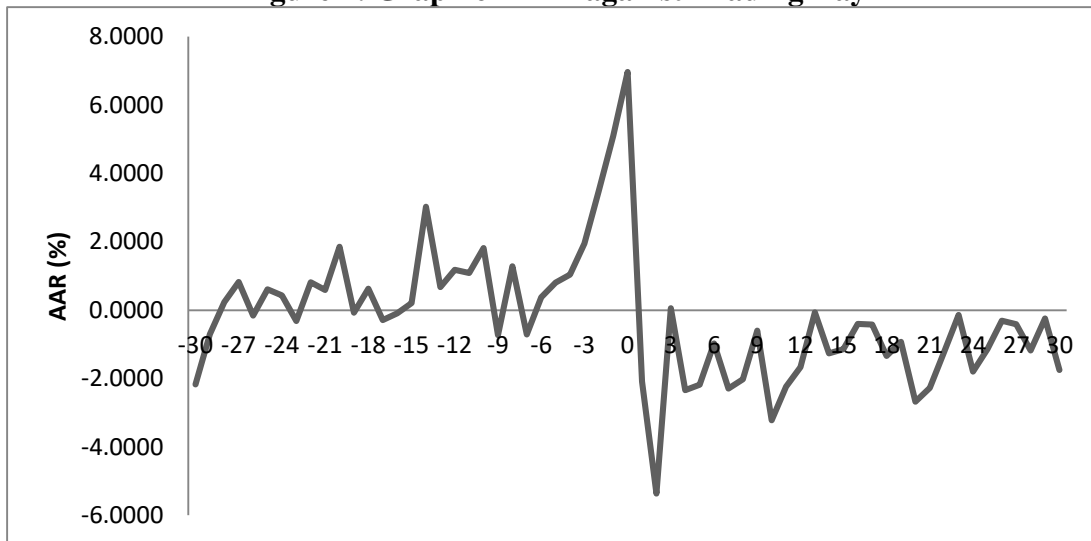
Figure 3 shows the graph of CAARs on y-axis against the trading day on the x-axis. A price run-up was evident as early as day -29, increasing slowly from -2% and reach 0% of CAAR at day -21. Then it continued to climb moderately from 0% to 2.5% until day -15 and thereafter it moved in a higher speed from 2.5% to 14% throughout day -15 to day -4. Next, CAAR eventually boosted sharply around day -3. During the four days leading to announcement from day -3 to day 0, CAAR increased by approximately 30%. In addition, the graph shows that CAARs are firstly decreased progressively from day 1 to day 3 after the announcement date at t = 0. Then, it decreased in a slower manner and touched 0% at day 18 and continued dropping at negative zone at day 19 to day 30. Table 1 shows the AARs and CAARs with their respective t-values.

Figure 3: Graph of CAAR against Trading Day
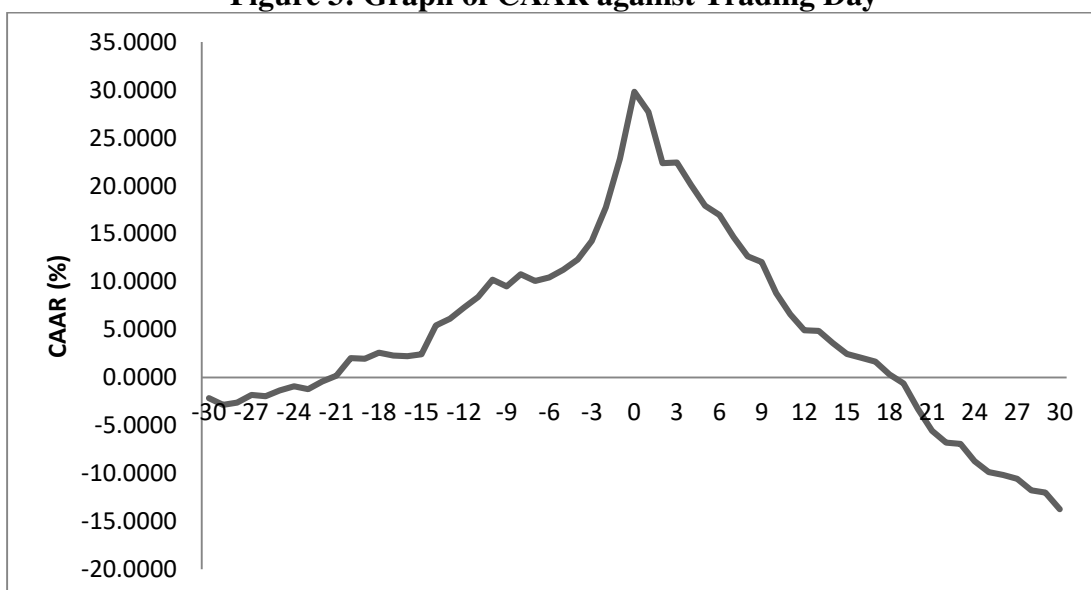
Table 1: AARs and CAARs with their Respective t-values

Days	AAR	t value for AAR	CAAR	t value for CAAR
-30	-2.1706	-2.0013*	-2.1706	-2.0013*
-29	-0.7028	-0.8216	-2.8734	-2.3289*
-28	0.2390	0.2598	-2.6344	-1.8033
-27	0.8236	0.7225	-1.8109	-1.1379
-26	-0.1557	-0.1324	-1.9665	-1.0477
-25	0.6140	0.5887	-1.3526	-0.6973
-24	0.4364	0.4806	-0.9162	-0.4097
-23	-0.3161	-0.3677	-1.2323	-0.4977
-22	0.8212	0.7665	-0.4111	-0.1387
-21	0.5905	0.3794	0.1794	0.0538
-20	1.8544	1.0953	2.0338	0.5295
-19	-0.0772	-0.0738	1.9566	0.4975
-18	0.6292	0.6442	2.5859	0.6126
-17	-0.2850	-0.3555	2.3008	0.5245
-16	-0.0881	-0.0985	2.2127	0.5198
-15	0.2041	0.2447	2.4168	0.5356
-14	3.0228	1.1008	5.4397	1.0015
-13	0.6804	0.6125	6.1201	1.0385
-12	1.1858	1.1115	7.3058	1.2116
-11	1.0885	1.2273	8.3943	1.3686
-10	1.8224	1.1391	10.2167	1.5267
-9	-0.7262	-0.6675	9.4905	1.3928
-8	1.2820	1.0149	10.7725	1.5208
-7	-0.7079	-0.8175	10.0646	1.4210
-6	0.3775	0.4260	10.4421	1.5203
-5	0.8112	0.5415	11.2533	1.5773
-4	1.0417	0.8287	12.2950	1.7286
-3	1.9542	1.6129	14.2491	1.9785*
-2	3.4954	2.6240*	17.7445	2.4256*
-1	5.0971	2.1021*	22.8416	2.7418*

Table 1: AARs and CAARs with their Respective t-values (Continued)

Days	AAR	t value for AAR	CAAR	t value for CAAR
0	6.9667	1.5680	29.8083	2.8752*
1	-2.0857	-1.0303	27.7226	2.5480*
2	-5.3606	-3.8877*	22.3620	2.0298*
3	0.0612	0.0462	22.4233	1.9796
4	-2.3369	-2.1367*	20.0864	1.7479
5	-2.1760	-2.1399*	17.9103	1.5624
6	-0.9734	-0.7066	16.9369	1.5103
7	-2.2922	-2.2580*	14.6448	1.2870
8	-2.0161	-1.5224	12.6287	1.1034
9	-0.5973	-0.3410	12.0313	1.0701
10	-3.2170	-2.5147*	8.8143	0.7770
11	-2.2326	-2.1859*	6.5817	0.5683
12	-1.6610	-1.8095	4.9207	0.4267
13	-0.0606	-0.0567	4.8601	0.4137
14	-1.2577	-1.3986	3.6024	0.3039
15	-1.1397	-1.3039	2.4627	0.2091
16	-0.3982	-0.3549	2.0644	0.1737
17	-0.4226	-0.5203	1.6418	0.1356
18	-1.3351	-0.8100	0.3067	0.0248
19	-0.9253	-1.0958	-0.6186	-0.0496
20	-2.6798	-2.4806*	-3.2983	-0.2601
21	-2.2776	-1.5869	-5.5760	-0.4310
22	-1.2149	-1.6057	-6.7909	-0.5186
23	-0.1371	-0.1111	-6.9280	-0.5275
24	-1.7970	-1.7505	-8.7250	-0.6506
25	-1.1388	-1.4755	-9.8637	-0.7387
26	-0.3104	-0.4057	-10.1741	-0.7534
27	-0.4072	-0.4507	-10.5814	-0.7757
28	-1.1823	-1.2109	-11.7636	-0.8560
29	-0.2431	-0.2754	-12.0068	-0.8708
30	-1.7509	-1.8226	-13.7577	-0.9849

Note: Asterisks (*) denote significant at 5% level.

Table 1 shows that 9 days are found to have negative AAR and 21 days to have positive AAR within the pre-announcement period. Nonetheless, there was only 1 day with positive AAR and the remaining 29 days were having negative ARR in the post-announcement period with the exclusion of event day. In addition, the event day displays a positive AAR. Besides, out of these 61 days, only 3 days (day -30, -2, -1) before the announcement and 7 days (day 2, 4, 5, 7, 8, 11, 20) after the announcement are discovered to be statistically significant in the confidence level of 95%.

Since there are only few days are discovered to be statically significant, the t-statistic of cumulative average abnormal returns (CAARs) should be considered. Thus, looking at Table 1, 9 days were found continuously generating negative continuously CAARs in the pre-announcement period, which are day -30 to day -22. Moreover, 40 days of continuous positive CAAR were revealed from day -21 in the pre-announcement period to day 18 in the post-announcement period, which this includes the announcement day too. Subsequently, 12 days of negative CAAR were displayed from day 19 to day 30 in the post-announcement period. Throughout these 61 days, 5 days (day -30, -29, -3, -2, -1) were found to be statistical significant before the announcement and 2 days (day 1 and day 2) are found to be statistical significant in the confidence level of 95% after the announcement. Additionally, on the announcement day, i.e., day 0, CAAR was also found to be statistically significant. In addition, CAARS from day -3 to day 2 were all significant.

4.2 Analysis for individual company with unusual increasing volume and/or price

Given that only 10 days and 8 days were found statistically significant in AAR and CAAR respectively, this study further explores the analysis abnormal return (AR) and cumulative abnormal return (CAR) of each company. Firstly, the announcements of those companies with unusual increasing volume and/or price are separated with the announcement of those companies with unusual decreasing volume and/or price. It is found that there are 52 companies with unusual increasing volume and/or price and 10 companies with unusual decreasing volume and/or price.

Out of 52 companies with unusual increasing volume and/or price, it is detected that 42 companies generate a lower CAR at day 30 after announcement. This is consistent with the previous analysis for UMA in whole. Stock name, stock quote, sector and the difference of CAR between day 0 and day 30 are shown in Table 2.

Nevertheless, out of these 42 companies, only one company, which is Green Ocean Corporation Berhad (GOCEAN, 0074) was found to have replied to QMA query. In the reply, the company said its subsidiary Ace Edible Oil Industries Sdn Bhd was in the advance stage of negotiation to supply the whole quality cooking oil production to a conglomerate. Apart from Ace Edible Oil Industries' ongoing negotiation, Green Ocean was not aware of any other development that could contribute to the UMA after making due enquire with its directors and major shareholders.

Table 2: Stock details for companies with a lower CAR at day 30 after announcement of unusual increasing volume and/or price

No.	Stock quote	Stock Name	Sector	CAR Day 0 (%)	CAR Day 30 (%)	Difference (%)
1	0133	SANICHI	IND-PROD	-13.06	-39.41	-26.35
2	0104	GENETEC	TECHNOLOGY	-238.62	-472.86	-234.23
3	0122	AIM	TRAD/SERV	33.80	-67.96	-101.76
4	0122	AIM	TRAD/SERV	-132.58	-197.71	-65.13
5	0140	UTOPIA	TRAD/SERV	-78.17	-90.93	-12.76
6	0024	JAG	IND-PROD	18.78	-52.07	-70.85
7	0111	K1	TECHNOLOGY	71.33	43.91	-27.42
8	0034	INGENCO	TECHNOLOGY	45.39	-116.63	-162.02
9	0036	KGROUP	TECHNOLOGY	141.44	53.14	-88.30
10	0045	GNB	TECHNOLOGY	64.69	-56.70	-121.39
11	0109	FLONIC	IND-PROD	17.45	-81.34	-98.79
12	0133	SANICHI	IND-PROD	127.66	78.83	-48.83
13	0140	UTOPIA	TRAD/SERV	55.41	4.59	-50.82
14	0055	SERSOL	IND-PROD	105.59	93.17	-12.42
15	0060	TMS	TECHNOLOGY	122.09	22.07	-100.02
16	0060	TMS	TECHNOLOGY	114.01	66.52	-47.49
17	0074	GOCEAN	TECHNOLOGY	155.12	133.91	-21.21
18	0022	OCPO	TECHNOLOGY	92.27	59.11	-33.17
19	0116	FOCUS	TECHNOLOGY	65.88	1.23	-64.65
20	0034	INGENCO	TECHNOLOGY	-10.35	-84.77	-74.42
21	0001	SCOMNET	IND-PROD	138.17	34.55	-103.61
22	0020	NETX	TECHNOLOGY	164.83	87.46	-77.37
23	0022	CYBERT	TECHNOLOGY	57.10	16.00	-41.10
24	0034	INGENCO	TECHNOLOGY	53.27	-16.10	-69.37
25	0034	INGENCO	TECHNOLOGY	120.54	-14.83	-135.37
26	0133	SANICHI	IND-PROD	22.70	-65.42	-88.11
27	0036	KGROUP	TECHNOLOGY	101.90	-10.09	-111.99
28	0106	REXIT	TECHNOLOGY	65.25	-9.47	-74.72
29	0152	DGB	TECHNOLOGY	59.10	6.57	-52.53
30	0024	JAG	IND-PROD	48.08	36.25	-11.83
31	0119	APPASIA	TECHNOLOGY	136.57	90.48	-46.09
32	0034	INGENCO	TECHNOLOGY	1.46	-7.05	-8.51
33	0140	UTOPIA	TRAD/SERV	-3.66	-46.63	-42.96
34	0162	IJACOBS	IND-PROD	38.65	-1.15	-39.80
35	0081	IDEAL	TRAD/SERV	54.47	10.44	-44.04
36	0064	EFFICIENT	TRAD/SERV	40.07	21.28	-18.79

Table 2: Stock details for companies with a lower CAR at day 30 after announcement of unusual increasing volume and/or price (Continued)

No.	Stock quote	Stock Name	Sector	CAR Day 0 (%)	CAR Day 30 (%)	Difference (%)
37	0113	MMSV	TECHNOLOGY	25.24	21.24	-3.99
38	0086	YGL	TECHNOLOGY	4.14	-64.04	-68.18
39	0026	NOVAMSC	TECHNOLOGY	18.61	-19.45	-38.07
40	0050	SYSTECH	TECHNOLOGY	74.23	55.11	-19.11
41	0023	IFCAMSC	TECHNOLOGY	-12.34	-50.60	-38.26
42	0050	SYSTECH	TECHNOLOGY	12.82	-29.31	-42.13

On the other hand, 10 out of 52 companies were detected to generate a higher CAR at day 30 after announcement with unusual increasing volume and/or price. It was found that there are 10 individual stocks had generated higher return at day 30 after announcement. Thus, it is not necessarily that stocks return will just drop dramatically after UMA announcement. However, none of these companies reply to the UMA query. As such, it is unknown as of why the CAR kept increasing after announcement. Stock name, stock quote, stock sector and the difference of CAR between day 0 and day 30 are shown in Table 3.

Table 4.3: Stock details for companies with a higher CAR at day 30 after announcement of unusual increasing volume and/or price

No.	Stock quote	Stock Name	Sector	CAR Day 0 (%)	CAR Day 30 (%)	Difference (%)
1	0133	SANICHI	IND-PROD	65.42	134.59	69.18
2	0020	NETX	TECHNOLOGY	59.92	177.52	117.60
3	0165	XOX	TRAD/SERV	90.61	97.16	6.55
4	0060	TMS	TECHNOLOGY	-46.46	-24.16	22.30
5	0103	MNC	TECHNOLOGY	63.59	104.68	41.09
6	0093	SOLUTN	TECHNOLOGY	95.77	97.41	1.64
7	0055	SERSOL	IND-PROD	53.32	125.78	72.46
8	0034	INGENCO	TECHNOLOGY	6.74	12.67	5.93
9	0080	RAYA	TRAD/SERV	72.23	85.58	13.35
10	0023	IFCAMSC	TECHNOLOGY	73.92	94.53	20.61

4.3 Analysis for individual company with unusual decreasing volume and/or price

After investigated companies with unusual increasing volume and/or price, this study also further investigates for those companies under UMA queries of unusual drop in price and/or volume. There were 10 companies with unusual decreasing price and/or volume. Out of these 10 companies with unusual drop in price and/or volume, it was detected that 7 companies generated a lower CAR at day 30 after announcement. This is consistent with the previous analysis for UMA in whole. Stock name, stock quote, sector and the difference

of CAR between day 0 and day 30 are shown in Table 4. Out of these seven stocks, no company had reply to the UMA query.

Table 4: Stock details for companies with a lower CAR at day 30 after announcement of unusual drop in price and/or volume

No.	Stock quote	Stock Name	Sector	Day 0 (%)	CAR Day 30 (%)	Difference (%)
1	0086	YGL	TECHNOLOGY	-209.74	-323.53	-113.78
2	0095	XINGHE	CONSUMER	-53.09	-92.40	-39.31
3	0034	INGENCO	TECHNOLOGY	-44.83	-111.79	-66.96
4	0022	CYBERT	TECHNOLOGY	-134.52	-262.67	-128.15
5	0055	SERSOL	IND-PROD	-93.44	-126.28	-32.83
6	0072	AT	IND-PROD	-12.51	-67.86	-55.36
7	0120	VIS	TECHNOLOGY	-42.25	-124.32	-82.06

Additionally, 3 out of 10 companies were detected to generate a higher CAR at day 30 after announcement with unusual drop in price and/or volume. All these 3 stocks had not reply to the UMA query. However, their CAR was better at day 30 after the announcement. Therefore, it shows to investors that they do not necessary have to be panic and turn out selling their stocks immediately after the announcement of UMA. Stock name, stock quote, stock sector and the difference of CAR between day 0 and day 30 are shown in Table 5.

Table 5: Stock details for companies with a higher CAR at day 30 after announcement of unusual drop in price and/or volume

No.	Stock quote	Stock Name	Sector	Day 0 (%)	CAR Day 30 (%)	Difference (%)
7	0103	MNC	TECHNOLOGY	-30.10	-14.85	15.25
8	0150	ASIABIO	TRAD/SERV	6.04	16.60	10.56
10	0103	MNC	TECHNOLOGY	-51.85	6.98	58.83

5   Conclusion and Policy implication

Table 6 shows the average abnormal return (AAR) and cumulative average abnormal return (CAAR) for the significant days. Throughout the 61 days of event period, a total of 10 days were discovered to be statistically significant for the AARs. 3 days (day -30, -2, -1) before the announcement and 7 days (day 2, 4, 5, 7, 8, 11, 20) after the announcement were discovered to be statistically significant in the confidence level of 95%. During the pre-announcement, day -30 was found to have negative AAR while day -2 and day -1 were found to have positive AARs. In addition, all the 7 days in the post-announcement revealed negative AARs.

Furthermore, CAARs were found to be statistically significant for a total of 8 days. Out of these 8 days, 5 days had statistically significant CAARs before the announcement (day -30, -29, -3, -2, -1) and 2 days had statistically significant CAARs after the announcement (day 1 and 2). Additionally, on the announcement day, i.e., day 0, CAAR was also found to be statistically significant. In addition, CAARS from day -3 to day 2 were all significant. Moreover, only day -30 and day -29 were discovered to have negative CAARs while the

rest of the days (day -3 to day 2) were having positive CAARs. The results are consistent with Hanifi (2010) and Yanuarti and Mulyono (2013). In their studies, stock returns for Indonesia market are affected by UMA announcement.

Table 6: AARs and CAARs with their Respective t-values

Days	AAR	t value for AAR	Days	CAAR	t value for CAAR
-30	-2.1706	-2.0013*	-30	-2.1706	-2.0013*
-2	3.4954	2.6240*	-29	-2.8734	-2.3289*
-1	5.0971	2.1021*	-3	14.2491	1.9785*
2	-5.3606	-3.8877*	-2	17.7445	2.4256*
4	-2.3369	-2.1367*	-1	22.8416	2.7418*
5	-2.1760	-2.1399*	0	29.8083	2.8752*
7	-2.2922	-2.2580*	1	27.7226	2.5480*
10	-3.2170	-2.5147*	2	22.3620	2.0298*
11	-2.2326	-2.1859*			
20	-2.6798	-2.4806*			

Note: Asterisks (*) denote significant at 5% level.

Besides, this study also further investigates on individual company. It was found that there are 52 companies with unusual increasing volume and/or price and 10 companies with unusual decreasing volume and/or price. Out of 52 companies with unusual increasing volume and/or price, it was detected that 42 companies generate a lower CAR 30 days after announcement. This is consistent with the general analysis for UMA. Nevertheless, out of these 42 companies, only one company, which is Green Ocean Corporation Berhad (GOCEAN, 0074) was found to reply to QMA query. However, the CAR at the day 30 was still ended with 21% lower than announcement day. In addition, 10 out of 52 companies were detected to generate a higher CAR at day 30.

Moreover, out of 10 companies with unusual drop in price and/or volume, it was detected that 7 companies were generating a lower CAR at day 30 after announcement. Additionally, 3 out of 10 companies were detected to generate a higher CAR at day 30 after announcement with unusual drop in price and/or volume.

The findings of the significant impacts of UMA on stock in this study suggests that policy makers and regulators such as Bursa Malaysia and Security Commission should continue to pay attention to UMA as these two institutions play crucial role in solving and preventing the rising issues of UMA, in order to protect investors' wealth. Furthermore, investors and shareholders must be aware of the reply to query from the announcement of UMA. Investors and shareholders shall not be intimidated by UMA announcement and sell their share immediately. It is not necessarily that share price will drop immediately after the announcement. Some of them actually rise instead of fall. However, investors must take note that majority of the stock returns falls substantially eventually at the end of 30 days after the UMA announcement. Hence, it is not advisable for investors to buy stock after UMA announcement.

Moreover, management team of the companies which involved in the query of unusual market activity should also be aware and take concern on the announcement. A satisfying answer from the management team will reflect the responsibility of the company towards

unexpected incident and subsequently increase the confidence level of the investors. In return, the share price would not be falling or falling less because the panics of the investors have been pacified.

References

Azzam, M., & Karlquist, J. (2008). *Effects of allegations of corporate misconduct on share value - A study on the Swedish market*. (Unpublished thesis). Stockholm School Of Economics.

Bodie, Z., Kane, A., & Marcus, A. J. (2009). *Investments (8th edition).* New York: McGraw-Hill.

Dumay, J. C., & Tull, J. A. (2007). Intellectual capital disclosure and price-sensitive Australian Stock Exchange announcements. *Journal of Intellectual Capital, 8*(2), 236-255.

Gerace, D., Chew, C., Whittaker, C., & Mazzola, P. (2014). Stock market manipulation on the Hong Kong stock exchange. *Australasian Accounting, Business and Finance Journal 8*(7).

Hanafi, M. M. (2010). Unusual market activity. A study of price manipulation on the Indonesian stock exchange. *Gadjah Mada International Journal of Business, 12*(2), 159-187.

Huang, Y. C., Chen, C. Y., & Cheng, Y. J. (n.d). *Stock manipulation and its impact on market quality.* (Unpublished working paper). National Kaohsiung First University of Science and Technology, Kaohsiung 811, Taiwan, ROC.

Jiang, G., Mahoney, P. G., & Mei, J. (2005). Market manipulation: A comprehensive study of stock pools. *Journal of Financial Economics 77*(1), 147-170.

Jong, F. (2007). *Event studies methodology*. Retrieved from http://www. tilburguniversity.edu/research/institutes-and-research-groups/center/staff/dejong/ preprints/eventstudies.pdf.

Kaltchev, G. D. (2009). Securities litigation and stock returns: An event study. *International Conference on Applied Economics – ICOAE 2009*.

Khotari, S. P., & Warner, J. B. (2006). Econometrics of event studies. In B.E. Eckbo (Ed.) *Handbook of Corporate Finance: Empirical Corporate Finance* (Chapter 1). North-Holland Elsevier. KPMG. (2009). *KPMG Malaysia Fraud Survey.*

Khwaja, A. I., & Mian, A. (2005). Unchecked intermediaries: Price manipulation in an emerging stock market. *Financial Economics, 78*(1), 203-241.

Leinweber, D. J., & Madhavan, A. N. (2001). Three hundred years of stock market manipulations. *The Journal of Investing 10*(2), 7–16.

Patell, J. (1976). Corporate forecasts of earnings per share and stock price behaviour: Empirical tests, *Journal of Accounting Research, 14*(2), 246-76.

Perry, J. & Fontnouvelle, P. (2005). *Measuring reputational risk: The market reaction to operational loss announcements.* (Unpublished working paper). Federal Reserve Bank of Boston.

Ray, K. K. (2010). Stability of beta over market phases: An empirical study on Indian stock market. *International Research Journal of Finance and Economics, 50*, 174-189.

Rhode, P. W., & Strumpf, K. S. (2007). *Manipulating political stock markets: A field experiment and a century of observational data*. (Unpublished working paper). University of Arizona and NBER and University of Kansas School of Business.

Shaheen, I. (2006). *Stock market reaction to acquisition announcements using an event study approach.* (Unpublished doctoral dissertation) Franklin and Marshall College, Pennsylvania.

Voon, S. L., Puah, C. H., & Entebang, H. (2008). Corporate crime announcement effects on stock performance: An empirical study in Malaysia. *Journal of Economic Cooperation*, *29*(2), 15-28.

Yanuarti, I., & Mulyono. (2012). The effect of unusual moving activity announcement on stock return and trading volume in Indonesia stock exchange, *Economics, Business, and Accountancy Ventura, 16*(3), 423-430.

Zhao, X. (2014). Trade-based manipulation or speculative bubble: A case study. *International Business & Economics Research*, 13(4).