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Do Investors React Differently on Friday's Earnings Announcements?

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ABSTRACT

This paper examines whether markets react differently to earnings announcements released on Fridays versus non-Fridays in the Malaysian capital market. We use a standard event study method using a market-adjusted return model to examine such differences based on a sample of 120 earnings announcements. The results show that announcements of profits released by companies on Fridays have a negative effect on stock prices while announcements of losses are associated with positive effects. These results contrast with the results observed when the earnings announcements are released on non-Friday, thus confirming that such differences exist in the Malaysian capital market.

Keywords: Earnings announcements, Friday and non-Friday, Event study, Malaysia

INTRODUCTION

Event study is one of the most important analytical tools in finance research with the objective of observing the effect of specific events on the stock prices movement of a company. The examples of such events include earnings announcements, dividends announcements, mergers and acquisitions announcements, and stock splits announcements. Earnings announcements have received particular concern in the event study area to examine the relationship between earnings and stock prices. The earlier literature in this line of research include the work of Ball and Brown (1968), and Beaver (1968) who investigated the information content in earnings announcements. Earnings announcements can be defined as the announcements of prior quarter's company's financial performance as well as business conditions on a particular date chosen by the managers. Earnings announcements can be either positive announcements, in which companies announce their profits to the public,

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or negative announcements, which is the announcement of losses by companies.

Previous studies in European countries (e.g., studies in the UK by Firth, 1981 and Pope and Inyangete, 1992; in Finland by Kallunki, 1996; in Spain by Pellicer and Rees, 1999; and in France by Gajewski and Quere, 2001) presented evidence regarding the market's reaction to earnings announcements that is generally similar with the results of the US studies (e.g., Brown and Warner, 1985; Ball and Kothari, 1991). These studies reported that investors pay close attention to the earnings announcements because it contains information that is relevant to the formulation of investment strategy and such strategy is reflected in the stock price. However, these studies did not split between the effects of announcements of profits and losses on the stock prices.

There is growing literature concerning the quality of investment strategies decided by investors due to distraction. Investors are said to have a limited amount of time as well as cognitive resources to process the information content in earnings announcements, hence, the quality of decisions are lower if they are distracted (DellaVigna and Pollet, 2009). Several studies have been conducted to examine the effect of earnings and dividends announcements on Friday. The studies by Penman (1987), Damodaran (1989), Bagnoli *et al*. (2005) found that negative (losses) earnings (and dividends) announcements are mostly released on Friday. However, these studies did not investigate the difference of effect on stock prices between announcements released on Friday with other weekdays. The more recent study by DellaVigna and Pollet (2009) seems to provide an answer for those studies as they found that there is a lower immediate response and a higher delayed response in Friday earnings announcements. They also reported that there is a lower trading volume for the Friday earnings announcements.

Prior research that used event study methods using Malaysian data only focused on dividends announcement (e.g., Nur Adiana, Rosemaliza and Yusnidah, 2002) and weekend effect (e.g., Annuar, Shamsher and Mohamad, 1988). Annuar *et al*. (1988) confirmed the existence of weekend effect or Monday effect and noted that the average returns on Friday were the highest among other weekdays.

Our study contributes to the knowledge by examining the effect of earnings announcements on stock prices by comparing between the announcements released on Friday with other weekdays (non-Friday). To our knowledge, there are no prior studies that have been undertaken in Malaysia to study such effects. To provide robustness to our results, we also split our sample between positive (profits) and negative (losses) earnings announcements. Therefore, the findings from the current study will provide an introductory understanding of the subject matter in explaining the difference of the effects due to the Friday and other weekdays' earnings announcements.

Using a sample of 120 earnings announcements released by companies listed on Bursa Malaysia, we find that the results obtained for earnings announcements released on Friday contrast with the announcements released on non-Friday. For

non-Friday, announcements of profits lead to positive effects on stock prices and announcements of losses are associated with negative effects. Furthermore, profits earnings announcements on Friday lead to negative effects on stock prices whereas losses earnings announcements affect stock prices positively. Our results also show that investors could obtain abnormal returns due to the earnings announcements.

The paper is organized as follows. Section 2 discusses previous literature and highlights the results. Section 3 explains the data selection and method used in the study. Section 4 reports the findings of the study. Section 5 concludes the paper.

LITERATURE REVIEW

Efficient Market Hypothesis (EMH) was first introduced by Fama (1965), and has made a great contribution to the finance research in studying the reaction of stock prices to certain information. As noted by Fama (1970), a stock market is efficient if prices always fully reflect the available information. The hypothesis is further divided into three subsets consisting of weak, semi-strong, and strong form efficient market that are associated with historical market data, publicly available information, and private information, respectively.

Notably, event study is crucial and widely used by academic researchers in order to examine the behavior of stock prices due to specific events. In particular, numerous studies have been done to examine the effect of earnings announcements on the stock prices of the company (e.g., Annuar *et al*, 1988; Louchini, 2008; Alzahrani and Skerrat, 2009; and DellaVigna and Pollet, 2009). DellaVigna and Pollet (2009) investigate the effect of earnings announcements by comparing the market reaction to earnings announcements on Friday to the reaction on other weekdays. They evaluate the immediate stock return response to information by comparing the top and bottom quantiles of the earnings surprise and also examine the immediate and delayed response for the entire sample period. Then, they construct portfolios to measure the differential post-earnings announcement drift for Friday announcements. They find that a higher than expected earnings announcements leads to a rise in the conditional returns on days before the news announcement and falls afterwards. The conditional volatility of the changes is significantly reduced by larger absolute values of the reported earnings before the news announcements and increase afterwards.

Louhichi (2008) carried out a study to analyze market reaction of stock prices around the earnings announcements in Euronext Paris. Using the intraday event study method, he categorizes his event into three: good news, bad news or no news. He shows that investors react positively when there is good news and negatively to bad news. The abnormal returns dissipate within 15 minutes and prices converge to equilibrium faster for good news compared to bad news. Additionally, Louhichi (2008) discloses that there is a rise in trading volume attributed to earnings release and this behavior remains even after the equilibrium price is achieved.

Alzahrani and Skerrat (2009) examine the response to earnings announcements where there is no analysts' forecast, with the aim to examine the efficiency of the Saudi Arabian stock market. In particular, they investigate the existence of post-earnings announcements drift using announcement returns as proxy for the earnings surprise. Their results pose a challenge to the efficiency of the Saudi Arabian stock market. They suggest that the market is slow in adjusting to new information when there is good news and overreacts to bad news.

Hirshleifer, Lim and Teoh (2009) provide new insights into the validity of the attention hypothesis by directly testing whether extraneous news distracts investors, causing market prices to underreact to relevant news. Specifically, they examine how the number of earnings announcements by other companies affects a company's volume, announcement period return, and post-event return reactions to an earnings surprise. They find that high-news days are significantly associated with a lower sensitivity of announcement abnormal returns to earnings news, a higher sensitivity of post-announcement abnormal returns to earnings news, and a lower trading volume response to earnings news. The effects support the investor distraction hypothesis. Competing announcements released by companies in other industries and big earnings surprises have a stronger distraction effect than announcements by companies in the same industries and small surprises, respectively. There is some indication that distraction affects market reactions to positive earnings surprises and announcements by small companies more strongly than reactions to negative surprises and large company announcements.

Annuar *et al*. (1988) investigate the market behavior and weekend effect in the Malaysian stock market. They examine the presence of the Monday effect by running a test to identify whether the mean return is significantly different from zero. Furthermore, they also test the differences in mean return across the five trading days and the behavioral stock return. The lowest mean return for the Malaysian market is found to occur on Tuesday. They also find that both Monday and Tuesday returns are significantly negative, and provide evidence that the Friday average returns are the highest among other trading days. They suggest that the Monday effect exists in the Malaysian stock market.

Besides this, a review is made of several studies that examine the effect of dividend announcements on stock prices. Dividend announcements form part of the earnings announcements released on a quarterly or annual basis by companies. Aharony and Swary (1980) examine the effect of quarterly dividend announcements on stock prices using US data. They find that dividend increases announced by companies lead to a positive market reaction and dividend decreases lead to a negative market reaction. Lonie, Abeyratna, Power and Sinclair (1996) also find similar results using UK data. For the Malaysian capital market, specifically, there is a paucity of studies conducted to investigate the market reaction due to dividend announcements. Mansor and Subramaniam (1992) examine the effect of dividends

and earnings announcements on stock prices using weekly data. Their findings are consistent with the studies conducted in the US and the UK, whereby an increase in dividend and earnings affect stock prices positively while a decrease in dividend and earnings are associated with a positive effect. However, Nur-Adiana *et al*. (2002) find the reverse of what was observed in earlier studies. They find that an increase (decrease) in dividend announcements affect the stock prices negatively (positively).

DATA SELECTION AND METHOD

For the purpose of this study, only secondary data has been used. All the data collected are from the period of 2003 to 2009. The quarterly earnings announcements date of 120 companies listed on Bursa Malaysia are collected from the Bursa Malaysia website. All the 120 companies have been chosen randomly by looking at their quarterly financial statements (profit and loss statement). In order to isolate the effect from earnings announcements from announcements of other events, as well as to increase the reliability of the results, the data are only selected if there are no other announcements released by companies three days surrounding the event date. After the data of 120 earnings announcements were properly selected, the data were then divided into two groups: Friday and non-Friday announcements. Each section was further split into two subsections – positive (profits) and negative (losses) earnings announcements. All the data on stock prices for all companies surrounding the announcement date and the market stock price were collected from the Thomson DataStream database.

For this study, the daily stock returns are calculated for a period of 45 days surrounding the event. These 45 days are transformed into days from t= -45 to t= +45, which is the event period. The event date, which is day 0, is defined as the date of earnings announcement for each of the 120 companies selected.

A standard event study method is adopted to examine the effect of earnings announcements on the 120 companies' stock price. In the analysis, the FTSE BM KLCI data are used as a proxy to market return (R_m). The market-adjusted return model is used to calculate the abnormal return (AR) by comparing the daily stock returns with the return of the market. This unexpected or abnormal return can be calculated using the following formula:

$$AR_{i,t} = R_{i,t} - R_{m,t}$$

where,

$AR_{i,t}$ = Abnormal returns for stock i on event day t;

$R_{i,t} = \left(P_{i,t} - P_{i,t-1}\right) / P_{i,t-1}$ = The fractional change of stock i's adjusted price (P_i) on event day t. This is also known as discrete return by Strong (1992); and

$R_{m,t} = (K_t - K_{t-1})/K_{t-1}$ = The fractional change of the market index (K) on event day t or the market return's on event day t.

Following Nur-Adiana *et al*. (2002), if a stock trading is suspended on a certain event day, the abnormal return on that particular day is equal to zero. Therefore, the daily return for the stock is treated the same as average daily return during the suspended period of the stock. The daily return for those stocks is calculated as follows:

$$R_{i,s} = \left[(P_{i,a} - P_{i,a-1})/P_{i,a-1}\right]/t_{i,s}$$

where,

$R_{i,s}$ = Average daily returns of stock i during the suspended period;

$P_{i,a-1}$ = Stock i's adjusted price on the last trading day before the suspended period;

$P_{i,a}$ = Stock i's adjusted price on the first trading day after the suspended period;

$t_{i,s}$ = The number of days during the suspended period of stock i plus the first trading day after the suspended period.

Then, the daily cross-sectional average abnormal return (AAR_t) for a specific day t is computed as follows:

$$AAR_t = \sum_{t=1}^{N} AR_{i,t}/N_t$$

where,

N_t = The number of valid observations on event day t

Next, we sum the cross-sectional average abnormal returns to yield cumulative average abnormal returns ($CAAR_t$) as follows:

$$CAAR_t = \sum_{k=t-T}^{t} AAR_t$$

where,

T = Some number of event days prior to day t

The t-statistic is then calculated in order to test the null hypothesis that the daily average abnormal return on event day t is equal to zero. In particular, it tests whether there is any significant change in stock price due to the earning announcements.

$$t = AAR_t/(S_t * \sqrt{N_t})$$

where,

$$S_t = \sqrt{\frac{\sum_{i=1}^{N}(AR_{i,t} - AAR)^2}{N_t - 1}}$$

where $i = 1,2,3,\ldots\ldots, N_t$

The cumulative average abnormal return (CAAR) on a specific event period is calculated in order to know whether the exact occurrence in the study involves uncertainty or not. The null hypothesis that the CAAR is equal to zero is calculated by using the *t*-statistic.

$$t_T = \frac{\frac{CAAR_T}{T}}{\frac{S_t}{\sqrt{T}}}$$

where,

$$S_t = \sqrt{\frac{\sum_{t=1}^{T}\left(AAR_T - \frac{CAAR_T}{T}\right)^2}{T-1}}$$

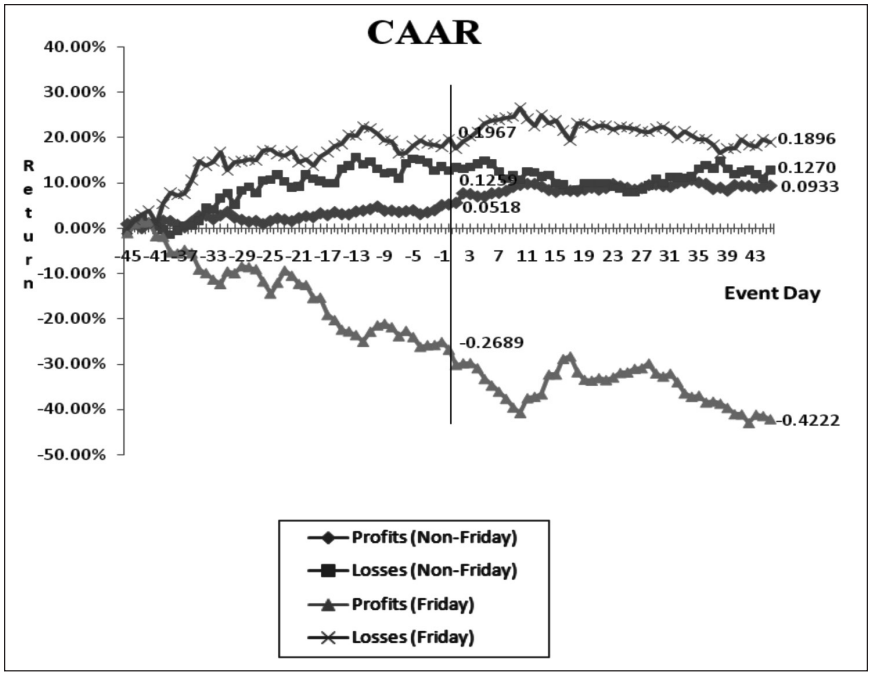
where $t = 1, 2, 3\ldots, T$;
$CAAR_T$ = Cumulative average abnormal returns over the T-day interval.

FINDINGS AND ANALYSIS OF RESULTS

Comparison of Results for Earnings Announcements on Friday and non-Friday

Figure 1 shows the cumulative average abnormal returns (CAAR) for each earnings announcement (profits and losses), both on Friday and non-Friday. As observed in Figure 1, the difference between earnings announcements on Friday and with the announcements on non-Friday can be clearly seen when the CAAR, throughout 91 days of observation, is computed and presented in a graphical figure. Focusing first on non-Friday earnings announcements, we find that earnings increases (profits) have a positive effect and earnings decreases (losses) have a negative effect on stock prices. Our results are consistent with a study on the Malaysian capital market by Mansor and Subramaniam (1992). Our results are also consistent with the findings from the studies by Aharony and Swary (1980), Lonie *et al*. (1996), Louchini (2008), and DellaVigna and Pollet (2009) who examined the effect of earnings as well as dividends announcement on stock prices.

Meanwhile, as for earnings announcements released on Friday, our results are in contrast to the results obtained from the earnings announcements on non-Friday. Similarly, the results are also inconsistent with the previous studies noted before. As can be seen from Figure 1, the results show that announcements of profits on Friday lead to a negative effect on stock prices whereas announcements of losses lead to a positive effect approximately 10 days after the announcement. Nevertheless, the CAAR for losses announcements still reported a positive return at the end of observation period (day t=+45) whereas the CAAR for profit announcements recorded a significant negative return. However, these results somewhat supported the findings of Nur-Adiana *et al*. (2002) who find that an increase (decrease) in



Notes: This figure graphs the cumulative average abnormal returns of 30 positive (profits) earnings announcements and 30 negative (losses) earnings announcements on both Friday and non-Friday from event day t=-45 to event day t=+45 using the Market-Adjusted Return Model.

Figure 1 Cumulative average abnormal returns (Friday vs non-Friday)

dividend announcements is associated with negative (positive) effects on stock prices in the Malaysian capital market.

Possible explanations to this counterintuitive result could be due to the size effect. Using the total assets of the companies as a proxy for size, we find that larger companies tend to announce their profits (losses) on Friday (non-Fridays).

Likewise, smaller companies are likely to release their profits (losses) announcements on non-Fridays (Friday). As noted by Bamber (1986), smaller companies are less monitored compared to larger companies. Therefore, if earnings announcements were to be released to the public and other things are held equal, smaller company's announcements are considered more informative than large company's announcements (How, Verhoeven and Huang, 2005). On the other hand, DellaVigna and Pollet (2009) find that Friday announcements will create larger (smaller) effects on stock prices in longer (shorter) periods. In our case, the larger companies could adopt this strategy to maximize (minimize) the impact of profits (losses) announcements by releasing them on Friday (non-

Fridays). However, those larger companies could miss their target of reporting profits (losses) on Friday (non-Fridays) because the results from this study showed that such strategy backfired, which could be due to the lesser information content of large company's announcements. Moreover, large companies could also have a larger analyst following and more information that is publicly available. This would help these companies to determine which stocks are worth investing in and which are not (Atiase, 1985; Lobo and Mahmoud, 1989; and Shores, 1990). With regards to small companies that announce losses on Friday, investors can see that their announcements are more informative, which in turn helps them reveal that these companies are somehow undervalued by the market. Our results are in line with Sponholtz (2008) who finds that earning announcements information content of small companies are larger compared to those by large companies.

In order to provide a clear picture from the findings of this study, the graphical figure of cumulative average abnormal returns (CAAR) after the announcement date are illustrated in Figures 2(a) and 2(b). The effect of earnings announcements on CAAR are divided into two specified periods, which is immediate response (from day t=0 to +1) and delayed response (from day t=+2 to +45). The immediate response of earnings announcements is presented in Figure 2(a) whereas the delayed effect is shown in Figure 2(b).

Figures 2(a) and 2(b) show the immediate and delayed effect of earnings announcements on both Friday and non-Friday. Earnings announcements are divided into two quantiles. Quantile 1 represents losses earnings announcements and Quantile 2 represents profit earnings announcements. The CAAR are computed by summing up the average abnormal returns (AAR) from day t=0 to +1 to stand for immediate effect and from day t=+2 to +45 to represent the delayed effect.

For the immediate effect, losses announcements (Quantile 1) on Friday exhibit a higher negative effect or lower CAAR than those losses announcements on non-Friday. However, when the delayed effect is computed, the CAAR for losses announcements on Friday jump to the upper level with positive (profits) CAAR. Meanwhile, the delayed effect of losses announcements on CAAR for non-Friday remains on the negative side with a downward trend.

For profit announcements (Quantile 2), the immediate effect of profit announcements on Friday is observed to exhibit a negative return as compared to profit announcements on non-Friday, which exhibit a positive return. These trends also continue with the delayed effect where profit announcements on Friday experience negative returns while profit announcements on non-Friday continue to exhibit positive returns. The results obtained from our study confirm that the investors react differently to Friday earnings announcements. These findings provide recommendations to public listed companies in Malaysia to announce positive (profits) earnings on non-Friday and negative (losses) earnings on Friday that will preserve or even increase its value before the next interim announcements are released.

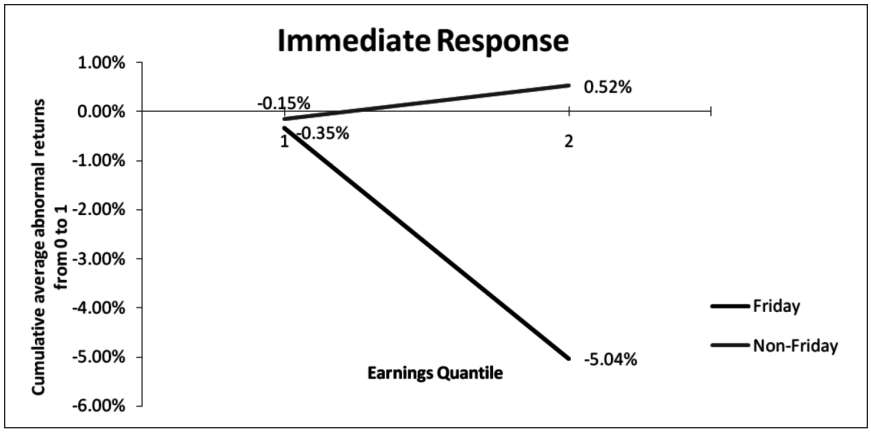


Figure 2(a) Immediate response

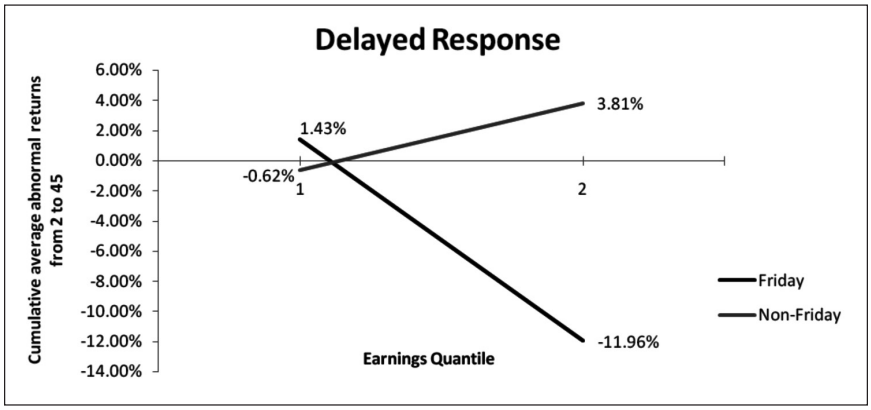


Figure 2(b) Delayed response

Notes: Figures 2(a) and 2(b) show the immediate and delayed response of earnings announcements both on Friday and non-Friday. Earnings announcements are divided into two quantiles, which is Quantile 1 for losses earnings announcements and Quantile 2 for profits earnings announcements. The CAAR are computed by summing up the average abnormal returns (AAR) from day t=0 to +1 for the immediate response and from day t=+2 to +45 for the delayed response.

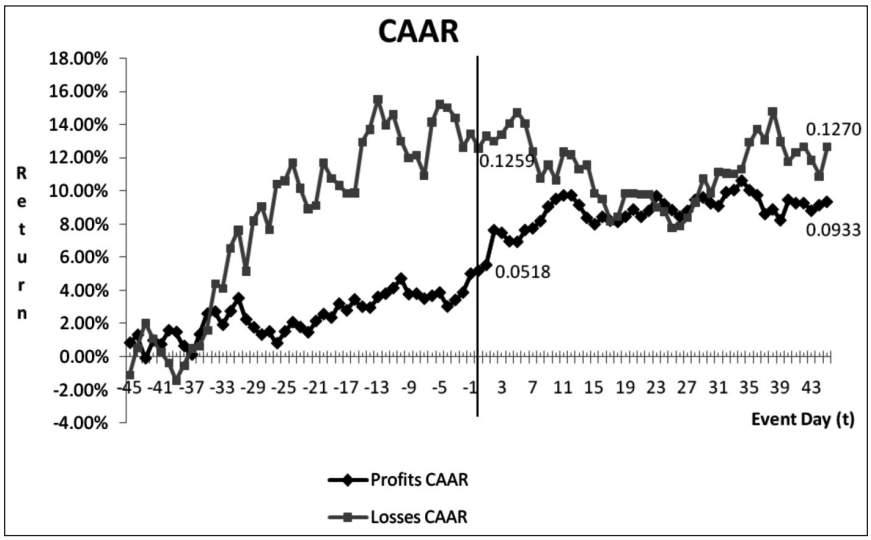
In order to see the effect of profits and losses earnings announcement on Friday and non-Friday clearly, we present the analysis of results separately in the following section.

Earning Announcements on Non-Friday

Profit Announcements

Figure 3 shows the plot of cumulative average abnormal returns of 30 positive (profits) earnings announcements and 30 negative (losses) earnings announcements released on non-Friday from event day t=-45 to event day t=+45 using the Market-adjusted Return Model. Meanwhile, Tables 1 and 2 report the daily average abnormal returns with the test of significant and cumulative average abnormal returns for 30 positive and 30 negative earnings announcements released on non-Friday, respectively.

The observation from Figure 3 reveals that there is a steady positive (increasing) trend of cumulative average abnormal stock return (CAAR) forty-five days before and after the announcement date. On the announcement date (day t=0), the result indicates that there is no significant immediate change of average abnormal stock returns after the announcement of positive earnings (profits). As reported in Table 1, the average abnormal return (AAR) shows a small positive value of 0.18 percent and a t-value of 0.472. However, on the second day after the announcement, which is day t=+2, AAR recorded a significant profit of 2.1 percent with a t-value of 2.321. After that, there is a mixture of positive and negative trends of AAR with the last



Notes: This figure graphs the Cumulative Average Abnormal Returns of 30 positive (profits) earnings announcements and 30 negative (losses) earnings announcements announced on non-Friday from event day t=-45 to event day t=+45 using the Market-adjusted Return Model.

Figure 3 Cumulative average abnormal return (non-Friday)

reported positive significant change of abnormal stock returns on day t=+40. The AAR value shows at 1.24 percent while the CAAR exhibits a positive return of 9.45 percent on such day.

As can be observed from Table 1, the CAAR is positive throughout the 91 days event period except on day t=-43, which is 43 days prior to the announcement date. On this particular day, the AAR recorded a loss of -1.42 percent with a t-value of -2.804. A significant change in stock prices due to the profits announcement can also be observed on day t=-36, -32, -30, -1, +6, +14, +23, and +37. The overall results from the findings discussed above suggest that profit announcements lead to positive effects on stock prices as shown in Figure 3.

Table 1 Daily average and cumulative average abnormal returns (non-Friday) for positive earnings announcements

Day	AAR %	t-test*	CAAR %	Day	AAR %	t-test*	CAAR %
-45	0.83	1.508	0.83	0	0.18	0.472	5.18
-44	0.48	1.007	1.31	1	0.34	0.453	5.52
-43	-1.42	**-2.804****	-0.10	2	2.10	**2.321****	7.62
-42	1.08	1.685	0.98	3	-0.16	-0.419	7.46
-41	-0.24	-0.523	0.74	4	-0.51	-0.877	6.95
-40	0.84	1.277	1.58	5	-0.03	-0.078	6.92
-39	-0.10	-0.179	1.48	6	0.71	**2.034***	7.63
-38	-0.84	-1.159	0.64	7	0.11	0.205	7.74
-37	-0.52	-0.800	0.12	8	0.43	1.028	8.17
-36	1.22	**2.111****	1.34	9	0.88	1.319	9.04
-35	1.25	1.217	2.59	10	0.46	0.492	9.50
-34	0.12	0.322	2.71	11	0.22	0.293	9.72
-33	-0.79	-1.231	1.92	12	0.00	0.002	9.72
-32	0.82	**2.441****	2.74	13	-0.58	-1.128	9.14
-31	0.79	1.348	3.52	14	-0.78	**-1.985***	8.36
-30	-1.28	**-2.049****	2.24	15	-0.39	-0.598	7.98
-29	-0.48	-0.966	1.77	16	0.44	1.119	8.42
-28	-0.44	-1.070	1.33	17	-0.23	-0.607	8.19
-27	0.19	0.327	1.52	18	-0.07	-0.140	8.13
-26	-0.71	-1.683	0.81	19	0.31	0.759	8.44
-25	0.70	1.249	1.52	20	0.43	1.084	8.86
-24	0.56	0.920	2.08	21	-0.44	-0.942	8.43
-23	-0.30	-0.654	1.78	22	0.37	0.943	8.79
-22	-0.32	-0.677	1.46	23	0.89	**1.708***	9.68
-21	0.68	1.031	2.14	24	-0.49	-1.215	9.19
-20	0.42	0.984	2.56	25	-0.36	-0.890	8.83
-19	-0.21	-0.596	2.35	26	-0.40	-0.642	8.44

Table 1 (*Cont'd*)

-18	0.84	1.117	3.19	27	0.35	0.738	8.79
-17	-0.40	-0.511	2.78	28	0.66	1.061	9.45
-16	0.66	1.395	3.45	29	0.14	0.422	9.59
-15	-0.44	-0.780	3.01	30	-0.35	-0.865	9.24
-14	-0.06	-0.121	2.95	31	-0.17	-0.391	9.07
-13	0.64	1.744	3.60	32	0.83	1.087	9.91
-12	0.20	0.388	3.79	33	0.13	0.258	10.04
-11	0.34	0.511	4.13	34	0.56	1.066	10.60
-10	0.57	0.992	4.71	35	-0.57	-1.570	10.03
-9	-0.94	-1.589	3.76	36	-0.30	-0.480	9.73
-8	0.03	0.097	3.79	37	-1.14	**-2.048****	8.59
-7	-0.30	-0.507	3.50	38	0.28	0.594	8.87
-6	0.17	0.150	3.67	39	-0.65	-1.260	8.22
-5	0.20	0.377	3.86	40	1.24	**1.770***	9.45
-4	-0.85	-1.059	3.02	41	-0.20	-0.792	9.25
-3	0.39	0.460	3.41	42	0.01	0.015	9.25
-2	0.45	0.875	3.86	43	-0.46	-0.825	8.79
-1	1.13	**2.103****	5.00	44	0.34	0.995	9.13
				45	0.20	0.729	9.33

Notes: This table reports the daily average abnormal returns with test of significant and cumulative average abnormal returns for 30 positive (profits) earnings announcements on non-Friday using the Market-adjusted Return Model.
*significant at α=0.10; **significant at α=0.05

Losses Announcement

As observed in Figure 3, it shows that there is an increasing trend of CAAR prior to the event date before the reversal happens due to the losses earnings announcement. The decreasing trend of CAAR starts after the announcement and reverses back approximately on day t=+26. The results reported in Table 2 also shows that the CAAR on the last day of observation for the losses earnings announcement, which is day t=+45, recorded a higher value of 12.7 percent as compared to profit announcements with only 9.33 percent, as reported in Table 1. The difference can also be clearly observed in Figure 1.

From the findings, there is evidence that there is no significant immediate change in stock prices (1 day surrounding the event day) due to the loss announcements. This result can be clearly seen in Table 2. After the announcement, a significant change of AAR only happens on day t=+8 where the AAR shows a loss of -1.63 percent with a t-value of -1.708. Meanwhile, a significant change of AAR can also be observed prior to the announcement date, which is on day t=-10 when the AAR hits a value of -1.61 percent with a t-value of -2.095. A significant change in

AAR from the entire event day also occurred at day t=-30, -23, -20, +15, +39, and +45. Above all, the findings and results reported for losses earnings announcement indicate that there is negative effect on stock price after the announcement up to a certain day (day t=+26).

Table 2 Daily average and cumulative average abnormal returns (non-Friday) for negative earnings announcements

Day	AAR %	t-test*	CAAR %	Day	AAR %	t-test*	CAAR %
-45	-1.12	-1.620	-1.12	0	-0.89	-0.678	12.59
-44	1.63	1.457	0.51	1	0.73	0.825	13.32
-43	1.53	1.103	2.04	2	-0.31	-0.291	13.02
-42	-0.95	-0.929	1.09	3	0.39	0.434	13.40
-41	-0.79	-0.722	0.31	4	0.68	0.803	14.08
-40	-0.67	-0.711	-0.37	5	0.66	0.336	14.74
-39	-1.08	-1.185	-1.44	6	-0.64	-0.634	14.11
-38	0.87	0.682	-0.57	7	-1.71	-1.526	12.40
-37	1.06	0.836	0.49	8	-1.63	**-1.708***	10.76
-36	0.13	0.126	0.62	9	0.83	0.814	11.59
-35	0.96	0.783	1.58	10	-0.94	-1.340	10.65
-34	2.84	1.633	4.42	11	1.72	1.417	12.37
-33	-0.29	-0.222	4.13	12	-0.17	-0.191	12.20
-32	2.43	1.343	6.56	13	-0.85	-0.843	11.35
-31	1.09	0.675	7.65	14	0.25	0.182	11.59
-30	-2.48	**-1.773***	5.17	15	-1.74	**-1.727***	9.86
-29	3.04	0.887	8.21	16	-0.32	-0.253	9.54
-28	0.86	0.532	9.07	17	-1.35	-1.012	8.19
-27	-1.39	-1.367	7.68	18	0.26	0.152	8.45
-26	2.74	1.376	10.42	19	1.42	1.497	9.88
-25	0.20	0.170	10.62	20	-0.02	-0.022	9.86
-24	1.09	1.152	11.71	21	-0.06	-0.057	9.80
-23	-1.53	**-1.860***	10.18	22	0.00	-0.003	9.80
-22	-1.25	-1.252	8.93	23	-0.77	-1.305	9.02
-21	0.20	0.175	9.13	24	-0.25	-0.578	8.77
-20	2.60	**1.843***	11.73	25	-0.97	-0.687	7.80
-19	-0.96	-1.217	10.77	26	0.09	0.068	7.89
-18	-0.42	-0.588	10.36	27	0.50	0.338	8.39
-17	-0.48	-0.698	9.87	28	0.94	0.829	9.33
-16	0.02	0.021	9.89	29	1.44	1.097	10.77
-15	3.09	1.681	12.98	30	-0.88	-0.930	9.89
-14	0.75	0.636	13.73	31	1.28	1.159	11.17
-13	1.82	1.164	15.55	32	-0.08	-0.102	11.08

Table 2 (*Cont'd*)

-12	-1.59	-0.796	13.96	33	-0.03	-0.031	11.06
-11	0.66	0.972	14.62	34	0.28	0.329	11.34
-10	-1.61	**-2.095****	13.01	35	1.62	1.341	12.96
-9	-1.00	-1.112	12.02	36	0.81	0.731	13.77
-8	0.18	0.157	12.19	37	-0.68	-0.894	13.10
-7	-1.24	-1.335	10.95	38	1.74	1.091	14.84
-6	3.21	0.770	14.17	39	-1.84	**-1.696***	13.00
-5	1.08	0.774	15.25	40	-1.22	-0.807	11.78
-4	-0.22	-0.162	15.03	41	0.55	0.559	12.33
-3	-0.60	-0.551	14.43	42	0.36	0.458	12.70
-2	-1.80	-1.151	12.63	43	-0.83	-0.859	11.87
-1	0.85	0.326	13.48	44	-0.99	-1.388	10.88
				45	1.82	**1.943***	12.70

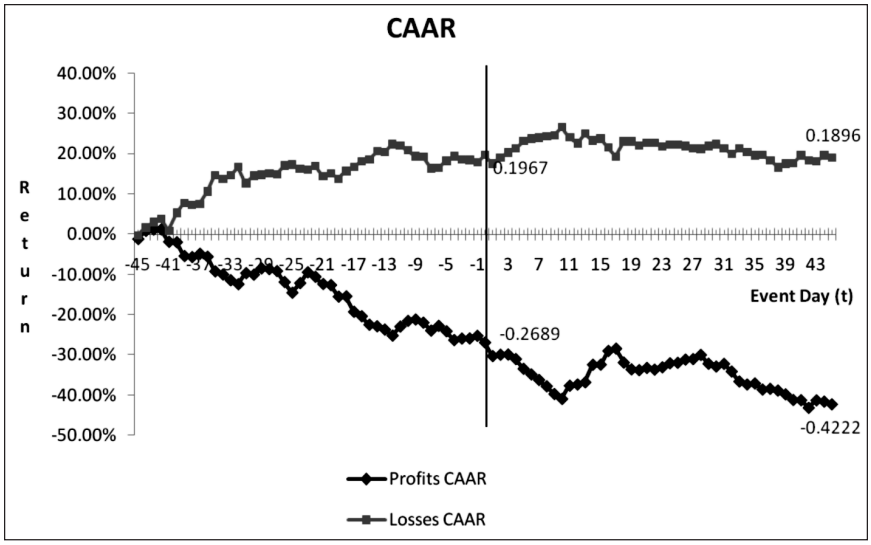
Notes: This table reports the daily average abnormal returns with test of significant and cumulative average abnormal returns for 30 negative (losses) earnings announcements on non-Friday using the Market-adjusted Return Model.
*significant at α=0.10; **significant at α=0.05

Earnings Announcement on Friday

Profit Announcements

The results obtained for profit announcements on Friday are in contrast to the results on non-Friday profit announcements. Figure 4 graphs the cumulative average abnormal returns of 30 positive (profits) earnings announcements and 30 negative (losses) earnings announcements released on Friday. As shown in Figure 4, the CAAR for profit announcements on Friday is in a decreasing trend. The decreasing trend of CAAR not only starts after the announcement date but continues from 45 days prior to the event date.

The daily average abnormal returns (AAR) for profit announcements on Friday are reported in Table 3. As shown in Table 3, there is a significant immediate change in stock prices due to the profit announcements. The table reports a significant loss happening immediately after the announcement, which is on event date or day t=0. The loss amounted to -1.67 percent with a t-value of -4.034 for that particular day and continues to experience a significant loss on the subsequent day (day t=+1), which is the day after the weekend (Monday) with an AAR value of -3.37 and t-value of -3.576. After the announcement, a significant loss also occurred on day t=+4, +5, +6, +7, +8, +9, and +10 before a profit could be observed on day t=+11 with a significant value of 3.27 percent and t-value of 3.454. The CAAR for that particular day is -37.6 percent and continues to increase because of profit trends up to day t=+28 with a CAAR value of -29.94 percent. Thereafter, there is



Notes: This figure graphs the cumulative average abnormal returns of 30 positive (profits) earnings announcements and 30 negative (losses) earnings announcements announced on Friday from event day t=-45 to event day t=+45 using the Market-adjusted Return Model.

Figure 4 Cumulative average abnormal returns (Friday)

a mixture of profit and loss until the end of event day (day t=+45). However, the losses value seem to outnumber the profits value where the CAAR on day t=+45 recorded a loss of 42.22 percent.

Meanwhile, the data prior to the event reported in Table 3 shows that no significant AAR occurred one day before the announcement (day t=-1). A profit of 0.65 percent and t-value of 1.173 are reported on that day. However, throughout the 45 days before the announcement, a number of days recorded a significant change in stock price that gave both profit and loss. A significant profit occurred on day t=-44, -31, -29, -24, -23, -11, and -10 while significant losses occurred on day t=-45, -41, -39, -35, -33, -26, -25, -22, -21, -19, -17, -15, -7, -5, and -4. Obviously, the results show that the average abnormal losses dominantly outnumbered the average abnormal profits. This can be supported by looking at the CAAR value of -1.21 percent 45 days prior to the announcement, which decreased to -26.89 percent on the announcement date (day t=0) and continued to show a downward trend to reach a value of -42.22 percent 45 days after the announcement. Table 3 also reveals that there are many days that experience a significant change in stock prices due to the profit earnings announcement, as compared to losses earnings announcement on Friday as well as the announcement on non-Friday (both profits and losses earnings announcements).

Table 3 Daily and cumulative average abnormal returns for positive earnings announcements on Friday

Day	AAR %	t-test	CAAR %	Day	AAR %	t-test	CAAR %
-45	-1.21	**-2.163****	-1.21	0	-1.67	**-4.034****	-26.89
-44	2.02	**2.582****	0.81	1	-3.37	**-3.576****	-30.26
-43	0.32	0.339	1.14	2	0.35	0.561	-29.90
-42	0.05	0.081	1.18	3	0.05	0.119	-29.86
-41	-3.07	**-3.626****	-1.89	4	-1.14	**-1.736***	-31.00
-40	-0.11	-0.092	-2.00	5	-2.39	**-2.736****	-33.38
-39	-3.44	**-5.572****	-5.44	6	-1.42	**-1.978***	-34.80
-38	-0.25	-0.250	-5.69	7	-1.36	**-2.395****	-36.16
-37	0.83	0.807	-4.86	8	-1.58	**-2.564****	-37.74
-36	-0.73	-0.759	-5.60	9	-1.92	**-3.682****	-39.65
-35	-3.63	**-4.467****	-9.23	10	-1.22	**-1.785***	-40.87
-34	-0.78	-1.246	-10.01	11	3.27	**3.454****	-37.60
-33	-1.43	**-1.723***	-11.44	12	0.31	0.346	-37.29
-32	-0.98	-1.637	-12.41	13	0.54	0.743	-36.75
-31	2.75	**2.228****	-9.67	14	4.36	**3.520****	-32.39
-30	-0.38	-0.755	-10.05	15	0.01	0.049	-32.38
-29	1.56	**2.515****	-8.49	16	3.41	**3.719****	-28.97
-28	-0.21	-0.377	-8.69	17	0.57	0.677	-28.40
-27	-0.47	-0.958	-9.16	18	-3.46	**-3.379****	-31.87
-26	-2.72	**-3.175****	-11.88	19	-1.67	**-1.957***	-33.54
-25	-2.64	**-2.723****	-14.53	20	-0.20	-0.528	-33.74
-24	2.38	**2.692****	-12.15	21	0.57	1.259	-33.18
-23	2.69	**3.624****	-9.46	22	-0.43	-0.624	-33.61
-22	-1.13	**-2.540****	-10.59	23	0.57	1.109	-33.03
-21	-1.80	**-2.657****	-12.38	24	1.02	1.495	-32.02
-20	-0.26	-1.046	-12.65	25	0.10	0.300	-31.92
-19	-2.85	**-3.887****	-15.50	26	0.80	1.456	-31.11
-18	0.08	0.147	-15.41	27	0.11	0.160	-31.00
-17	-3.85	**-4.949****	-19.26	28	1.06	**1.802***	-29.94
-16	-1.11	-1.397	-20.37	29	-2.20	**-2.993****	-32.14
-15	-2.11	**-3.386****	-22.48	30	-0.70	-0.984	-32.84
-14	-0.37	-0.586	-22.85	31	0.65	0.895	-32.18
-13	-0.82	-0.959	-23.67	32	-1.89	**-3.445****	-34.07
-12	-1.48	-1.567	-25.16	33	-2.48	**-2.936****	-36.55
-11	2.22	**2.795****	-22.93	34	-0.73	-1.408	-37.28
-10	1.42	**2.175****	-21.51	35	0.25	0.426	-37.04
-9	0.35	0.483	-21.16	36	-1.52	**-2.348****	-38.55

Table 3 (*Cont'd*)

-8	-0.79	-0.826	-21.95	37	0.19	0.304	-38.37
-7	-1.97	**-3.292****	-23.93	38	-0.43	-0.856	-38.80
-6	1.18	1.776	-22.75	39	-0.94	-1.606	-39.74
-5	-1.36	**-2.680****	-24.11	40	-1.39	**-1.730***	-41.14
-4	-2.17	**-2.575****	-26.28	41	-0.05	-0.097	-41.18
-3	0.38	0.562	-25.90	42	-1.91	**-3.074****	-43.10
-2	0.03	0.070	-25.86	43	1.87	**4.310****	-41.22
-1	0.65	1.173	-25.22	44	-0.32	-0.565	-41.55
				45	-0.01	**-2.197****	-42.22

Notes: This table reports the daily average abnormal returns with test of significant and cumulative average abnormal returns for 30 positive (profits) earnings announcements on Friday using the Market-adjusted Return Model.
*significant at α=0.10; **significant at α=0.05

Losses Announcements

Table 4 reports the daily average abnormal returns with a test of significant and cumulative average abnormal returns for 30 negative (losses) earnings announcements on Friday. As shown in Figure 4, there is an upward trend of AAR 45 days prior to the losses announcement. As observed in Table 4, even after the announcement, the upward trend (profits) continues approximately up to day t=+10 with AAR and CAAR value of 1.96 percent and 26.57 percent, respectively. Thereafter, the downward trend starts taking place with a relatively consistent value until the CAAR reach a value of 18.96 percent on the last day of observation, which is 45 days (day t=+45) after the announcement of losses. Interestingly, even though the loss announcements have been released, the CAAR still recorded a profit up until day t=+45.

Table 4 Daily and cumulative average abnormal returns for negative earnings announcements (Friday)

Day	AAR %	t-test*	CAAR %	Day	AAR %	t-test*	CAAR %
-45	-0.25	-0.328	-0.25	0	1.79	1.315	19.67
-44	1.92	**2.318****	1.67	1	-2.14	-1.619	17.53
-43	1.37	0.938	3.04	2	1.55	1.082	19.08
-42	0.78	0.424	3.82	3	1.18	0.823	20.26
-41	-2.91	-1.280	0.91	4	1.01	0.574	21.27
-40	4.40	1.092	5.31	5	1.87	1.534	23.14
-39	2.49	0.744	7.80	6	0.63	0.779	23.77
-38	-0.55	-0.635	7.26	7	0.18	0.318	23.95
-37	0.23	0.229	7.49	8	0.37	0.354	24.32

Table 4 (*Cont'd*)

-36	3.10	1.572	10.59	9	0.29	0.399	24.61
-35	4.12	1.169	14.71	10	1.96	**1.957***	26.57
-34	-0.93	-0.536	13.78	11	-2.44	**-2.503****	24.13
-33	0.86	0.920	14.64	12	-1.59	-1.236	22.55
-32	2.10	1.503	16.74	13	2.49	**2.118****	25.03
-31	-4.02	**-2.090****	12.72	14	-1.77	-1.066	23.26
-30	1.83	0.841	14.54	15	0.48	0.462	23.75
-29	0.18	0.230	14.73	16	-2.24	**-2.444****	21.51
-28	0.36	0.443	15.09	17	-2.21	**-2.044****	19.29
-27	-0.15	-0.155	14.95	18	3.79	1.599	23.08
-26	2.15	1.493	17.10	19	-0.01	-0.018	23.07
-25	0.19	0.161	17.29	20	-1.05	-1.147	22.02
-24	-0.99	-1.237	16.30	21	0.63	1.009	22.65
-23	-0.31	-0.203	15.98	22	0.00	-0.008	22.65
-22	1.02	1.055	17.01	23	-0.93	**-2.054****	21.72
-21	-2.51	**-3.337****	14.50	24	0.59	1.119	22.31
-20	0.64	1.247	15.14	25	-0.07	-0.118	22.24
-19	-1.35	**-1.647***	13.79	26	-0.35	-0.296	21.89
-18	1.89	1.349	15.68	27	-0.57	-1.127	21.31
-17	1.06	1.037	16.74	28	-0.10	-0.074	21.21
-16	1.42	1.176	18.16	29	0.72	1.524	21.93
-15	0.41	0.538	18.57	30	0.39	0.518	22.33
-14	1.99	**3.220****	20.56	31	-0.94	-1.124	21.39
-13	-0.14	-0.161	20.42	32	-1.50	-1.327	19.89
-12	1.90	1.285	22.33	33	1.46	1.485	21.36
-11	-0.32	-0.335	22.01	34	-0.98	-1.318	20.38
-10	-1.15	-0.844	20.86	35	-0.74	**-2.032***	19.63
-9	-1.45	**-1.978***	19.41	36	0.02	0.025	19.66
-8	-0.21	-0.248	19.20	37	-1.29	**-1.837***	18.37
-7	-2.78	**-4.056****	16.41	38	-1.79	**-2.386****	16.58
-6	0.07	0.069	16.48	39	0.98	1.692	17.56
-5	1.71	0.941	18.20	40	0.05	0.084	17.61
-4	1.14	0.846	19.34	41	1.95	**2.094****	19.56
-3	-0.73	-0.596	18.61	42	-1.25	**-1.722***	18.31
-2	-0.19	-0.137	18.42	43	-0.27	-0.360	18.04
-1	-0.54	-0.322	17.88	44	1.59	**2.126****	19.63
				45	-0.67	-1.078	18.96

Notes: This table reports the daily average abnormal returns with test of significant and cumulative average abnormal returns for 30 negative (losses) earnings announcements on Friday using the Market-Adjusted Return Model.

*significant at α=0.10; **significant at α=0.05

As noted earlier, there is a positive effect on stock prices after the announcement and a significant profit can be observed on day t=+10 that exhibits a value of 1.96 percent with a t-value of 1.957. Thereafter, there is a mixture of positive and negative AAR where no exact pattern could be explained. It is observed that there is a significant change in stock prices (both profits and loss) that occurred on day t=+11, +13, +16, +17, +23, +35, +37, +38, +41, +42, and +44. Meanwhile, a clear increasing trend could be observed for the period prior to the announcement date up until day t=-12 where the AAR and CAAR value for that particular day is equal to 1.9 percent and 22.33 percent, respectively. The downward trend starts to emerge from day t=-11 until day t=-1 before it reverses back after the event date, which is day t=0. A significant change in stock prices could also be observed prior to the event date, which occurred on day t=-44, -31, -21, -19, -9, and -7.

Additionally, the CAAR on a specified event interval is also tested and the results are reported in Table 5. Panels A and B report the results of non-Friday and Friday earnings announcements, respectively. Focusing first on non-Friday earnings announcements, it shows that only CAAR for day t=0 to +1 is significant at the 90 percent confidence level when the profits are announced with the CAAR value of 0.52 percent and a t-value of 3.165. Meanwhile, the test of significance for CAAR on specified event periods for losses earnings announcement also supported the results from Table 1 with no significant change in CAAR 1-day surrounding the announcement. The results from Table 5 also suggest that losses earnings announcements are not significantly affected by the CAAR throughout the specified event period.

As for Friday earnings announcement, the results show that three specified intervals are statistically significant when positive earnings are released. Throughout the 91 day period (day t=-45 to +45), the 2 day period after the announcement (day t=0 to +1), and the 6 day period (day t=+2 to +7) reported a CAAR of -42.22 percent, -5.04 percent, and -5.91 percent with a t-value of -2.700, -2.960, and -2.370, respectively. The significant results obtained for the interval of day t=0 to +1 suggest that there is an immediate effect on stock prices due to profit announcements on Friday. However, for the losses earnings announcement, it is found that only the CAAR for the period of day t=+2 to +7 are significant.

CONCLUSION

This study has examined the difference in market reaction towards Friday and non-Friday earnings announcements. A 91-day event window surrounding the announcement date and 120 observations were selected. We utilized a standard event study method to examine the market reaction.

We uncovered that there is a difference in investor's reaction between earnings announcements released on Friday and the announcements released on non-Friday. We also found that the effect of earnings announcements released

Table 5 Test of significance (t-test) over different specified intervals of Cumulative Average Abnormal Returns (CAAR) for non-Friday and Friday earnings announcements

Interval	Positive (Profits)		Negative (Losses)	
	CAAR %	*t*-test	CAAR %	*t*-test
Panel A: Non-Friday earnings announcement				
Days t=-45 to +45	9.33	1.553	12.70	1.042
Days t=-15 to +15	4.53	1.315	-0.03	-0.004
Days t=-15 to 0	1.73	0.803	2.70	0.002
Days t=-7 to 0	1.38	0.851	0.40	0.087
Days t=-1 to 0	1.31	1.375	-0.03	-0.020
Days t=-1 to +1	1.66	1.875	0.70	0.414
Days t=0 to +1	0.52	**3.165***	-0.15	-0.096
Days t=+2 to +7	2.21	0.966	-0.93	-0.407
Days t=+2 to +45	3.81	0.964	-0.62	-0.407
Panel B: Friday earnings announcement				
Days t=-45 to +45	-42.22	**-2.700****	18.96	1.263
Days t=-15 to +15	-12.01	-1.275	5.58	0.699
Days t=-15 to 0	-6.52	-1.198	1.51	0.280
Days t=-7 to 0	-4.93	-1.323	0.47	0.110
Days t=-1 to 0	-1.02	-0.442	1.25	0.5370
Days t=-1 to +1	-4.39	-1.258	-0.89	-0.259
Days t=0 to +1	-5.04	**-2.960***	-0.35	-0.088
Days t=+2 to +7	-5.91	**-2.370***	6.41	**4.280****
Days t=+2 to +45	-11.96	-1.154	1.43	0.158

Notes: This table reports the test of significance (*t*-test) over different specified intervals of Cumulative Average Abnormal Returns (CAAR) for non-Friday and Friday earnings announcements.
*significant at α=0.10 **significant at α=0.05

on Friday is in contrast to the results observed in prior non-Malaysian studies. However, those studies only investigated the overall market reaction towards earnings announcements in general without distinguishing them into Friday and other weekdays. Meanwhile, the results that we obtained for non-Friday earnings announcements are consistent with Aharony and Swary (1980), Lonie *et al*. (1996), Louchini (2008), and DellaVigna and Pollet (2009).

Consistent with Nur-Adiana *et al*. (2002), our results show that profits (losses) announcements on Friday have a negative (positive) effect on the stock prices. Our results suggest that companies should announce losses earnings on Friday and profits on non-Friday to increase companies' value.

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