Post Earning Announcements Drift, PEAD in Saudi Stock Market

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The purpose of this paper is to investigate whether a different market microstructure environment in a less developed stock market would imply different reaction to news .We examine Saudi Stock market, SSM behaviour around the earnings announcements where there are no analysts' forecasts with the aim to examine the efficiency of SSM . Event Study methodology is used to examine the overall market reaction to quarterly earnings announcements. The SSM seems to underreact to positive news at first and then reaction tend to be stronger for the following weeks indicating post earnings announcement drift, PEAD . On the other hand, SSM overreacts to negative news at first five days then reverse its direction and reporting upward PEAD.

Keywords: Financial Market, Saudi, Market Behaviour, PEAD

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Introduction

How investors perceive, interpret, and react to news has been an active area of research since Ball and Brown (1968) seminal work. They empirically investigate the association between accounting earnings as the core information in the financial statement and stock returns in order to assess the usefulness of accounting information. They were the first to report a drift in the stock returns after earnings announcements which have become called afterward Post-Earning-Announcement-Drift (PEAD). Liu et al. (2003) define PEAD as "cumulative abnormal returns for stock announcing extreme positive (negative) unexpected earnings drift upward (downwards) for an extended period after the announcement".

This phenomena refers to generating continues returns over and above the expected return as measured by valuation model such as capital asset pricing model (CAPM) . PEAD is considered one of the most robust stock market anomalies around in the finance literature. This phenomenon of stock returns persistence even after the news had been announced is against the Efficient Market Hypothesis (EMH) 1 which asserts that prices reflect al available information at anytime. Moreover PEAD has become a global and found in many deducted in many international and emerging markets around the world.

PEAD can be explained with a number of hypotheses. Recently, the most widely accepted explanation for the effect is investor under-reaction to earnings or irrational explanation which is a result of behaviour finance rise up in the finance literature. It is attributed to the shared human attributes such as overconfidence; greed, or fear, people make errors in judgment, which are a deviation from the rational expectations assumption in economy.

Saudi Stock Market, SSM

The rapid structural ,technological and regulatory changes the SSM has been facing recently has brought interest to focus on how such market behaves in terms of price returns. Despite the growth and development that the SSM has witnesses over the last decade, it has been regarded as thinly traded, less liquid and less efficient than Western stock markets .It is considered as an underdeveloped market that has a bigger room for improvement. The number of companies listed in the SSM is too small when compared to the total number of the registered companies. The average size of the company in Saudi is four times the average company size in the region.

The SSM lacks active institutional players (for example, Pensions Funds, Mutual funds and others) where they can stabilise the market and create sound investment environment. In developed markets, institutional investors represent around 70% of the trading in the market whereas individual investors in Saudi trade more than 90% of all trades. Currently, there are 126 publicly traded companies whereas some experts claim that the market can accommodate 200 companies at least (Saudi Arabian General Investment Authority). Depth and breadth of the market shows lower level of those in developed markets .In a recent country assessment report by IMF (2006), SSM is regarded as buoyant market2, with significant turnover and limited provision of investment information.

A few studies have attempted to cover the SSM. Al-Suhaibani and Kryzanowsky (2000) find that the SSM exhibit similar intraday liquidity pattern even though it has different structure normally found in other markets. Al-Abdulqader (2003) finds that SSM can be describes as weak-form inefficient and investors can earn excess returns by using trading strategies such as filter rules and moving averages.

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[1] A theory stating that stock prices reflect all available information at any given times ; see Fama, E., "Random Walks in Stock Market Prices," Financial Analysts Journal, September/October 1965

[2] A market in which prices have a tendency to rise easily with a considerable show of strength

Data and methodology

Most of the previous research on SSM has primarily extracted data of time span that is prior the introduction of the CMA in 2004 which is a milestone to the SSM development history. Data analysed after the creation of CMA will be of significance contribution not only attributed to the CMA existence itself but to the rules, development, and changes that have been facing SSM thereafter.

We hypothesise that the PEAD would exist in the SSM and that the magnitude of the drift would varies between Good news and Bad news announcements. Good news companies are those who exceed expectations in their earnings and bad news companies are the ones who failed to meet expectations. We Event Study technique to measure the economic impact of the announcement(1667 quarterly earnings announcements) on the stock prices for each individual company(89 company) included in the study for the period 2001-2007. We calculate Abnromal returns in the following manner:
$AR_{it} = R_{it} - E(R_{it})$ Where:

AR_{it} Is the abnormal return for firm *i* over time interval *t*

R_{it} Is the actual return for firm *i* over time interval *t*

$E(R_{it})$ Is the expected / predicted return for firm *i* over time interval *t* ***(Market-Adjusted Model)***

Next, we calculate the daily stock returns of the listed companies from 2001 to 2007 and the daily returns of the Index (TASI), by using historical prices obtained from Tadawul as shown below;

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}, and \quad R_{mt} = \frac{T_t - T_{t-1}}{T_{t-1}},$$

Where P_{it} is the stock price of the *i*th firm at time *t*, R_{it} refers to its rate of return, T_t represents TASI(index) value at time *t* , and R_{mt} is its rate of return.

AR_i are aggregated through two dimensions cross-sectional aggregation and time aggregation. In latter, AR_i are aggregated through time over 40 days surrounding the announcement day(-19,+20) .In the cross-sectional aggregation, AR_i are averaged across the N firms in the sample on each day t to form the average abnormal returns AAR where it can be shown in the following equation: $AAR_t = \frac{1}{N} \sum_{i=1}^{N} AR_{it}$.

Figure 1: Cumulative Average Abnormal Returns performance over 40 trading days around earning announcements (-19, +20).the Graph shows CAAR performance for Good and Bad news portfolios. Good news portfolio (708 observations), Bad news portfolio (959 observations)

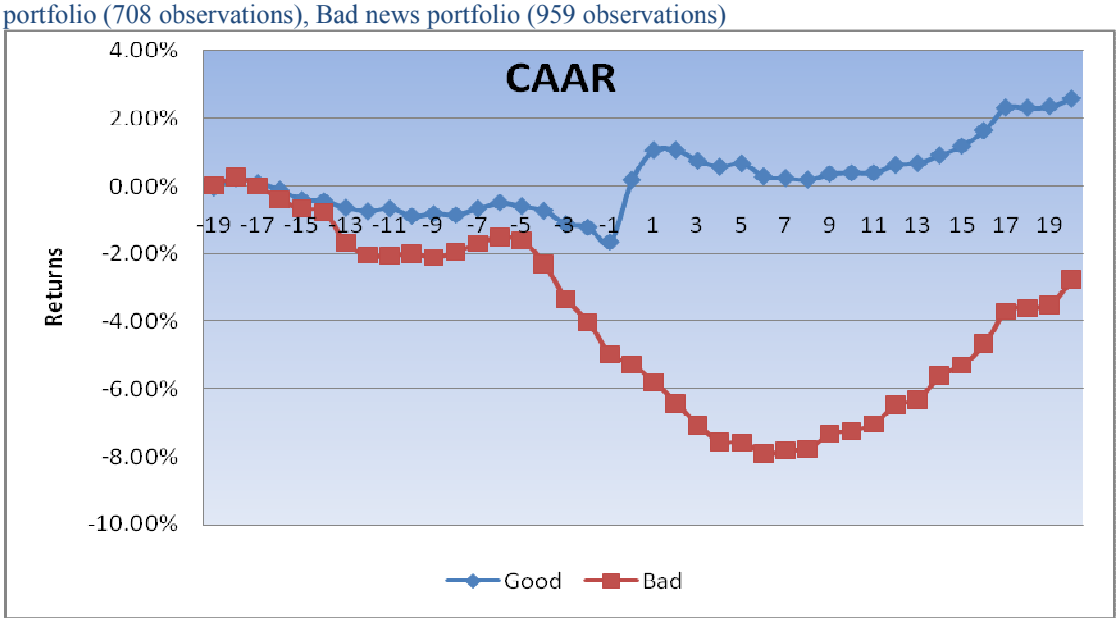

Table 1: provides a standard test for weather the average abnormal return AARt is significantly different from zero. Good news (708firms) and Bad news (959 firms) portfolios were formed based on the earnings announcement returns during the period (0, +1). Positive (negative) Returns were formed into Good (Bad) portfolios. The average abnormal index $API = [\prod_{t=0}^{T}[1 + AR_{it}]$ was calculated to show wealth formation changes around earnings announcements.

	AAR test and Average Performance Index API					
	Good(Positive returns)			Bad(Negative Returns)		
DAY	**AAR(%)**	**t-test**	**API**	**AAR(%)**	**t-test**	**API**
-19	**0.09%**	**-0.642**	**1.001**	**-0.07%**	**0.620**	**0.999**
-10	**-0.08%**	**-1.255**	**0.999**	**0.33%**	**3.311*** **	**1.000**
-5	**-0.07%**	**-1.116**	**1.001**	**0.11%**	**1.320**	**1.001**
-4	**-0.07%**	**-0.124**	**1.000**	**-0.26%**	**-2.609*** **	**0.998**
-3	**-0.04%**	**-1.855***	**1.000**	**-0.34%**	**-2.093** **	**0.995**
-2	**-0.01%**	**-0.882**	**1.000**	**-0.24%**	**-1.522**	**0.993**
-1	**-0.18%**	**-2.043** **	**0.998**	**-0.05%**	**-0.247**	**0.992**
0	**1.83%**	**14.145*** **	**1.016**	**-2.12%**	**-18.273*** **	**0.971**
1	**-0.30%**	**-7.494*** **	**1.013**	**-0.49%**	**-15.105*** **	**0.966**
2	**-0.01%**	**-1.014**	**1.013**	**-0.33%**	**-3.870*** **	**0.963**
3	**-0.18%**	**-0.005**	**1.011**	**-0.18%**	**-3.292*** **	**0.961**
4	**-0.07%**	**-0.579**	**1.010**	**-0.22%**	**-2.285** **	**0.959**
5	**0.05%**	**0.947**	**1.011**	**-0.02%**	**-0.490**	**0.959**
10	**0.01%**	**0.350**	**1.014**	**0.27%**	**0.461**	**0.974**
20	**0.12%**	**2.047**	**1.030**	**0.18%**	**3.878**	**0.994**

t-test for AAR; *** p<0.01, ** p<0.05, * p<0.1

Conclusion

The SSM shows under-reaction to positive news and overreaction to bad news which be attributed to the fact that most investors are individual who lack the ability to interpret the announcement properly. Moreover, delayed reaction to news ‘’Investors Attention” is evident in the market as investors wait for explanation and analysis from “experts “in the media. The Absence of active analysts is one of the main reason behind ‘’Investors Attention”. Finally, it is possible to exploit PEAD in the SSM to gain abnormal returns.

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