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Share Price Response to Quarterly Earnings Announcements

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Abstract

The information content of earnings is an issue of obvious importance for investors. Company's earnings announcements are closely-watched events, being the main source of new information about company performance. The study investigated the impact of Quarterly Earnings announcements on the stocks constituting the Sensex. The study of the effect of clustering of event dates on the overall stock returns has been incorporated in the study. The objective is to check the share price behavior to quarterly earnings announcements. The study includes Top 100 companies rated by Chartered Financial Analyst Survey 2008 and informational efficiency for last ten calendar periods- January. 2004 to December 2013 has been investigated. The results show that the Indian Capital Market is semi-strong efficient as it is using the information relevant for security valuation and for investment decision-making. However, the reaction after the announcement shows that the Indian Capital Market is not perfectly efficient as abnormal returns have been observed both prior to and after the announcement. The role of SEBI can be instrumental in preventing insider trading so that the confidence of the investors is maintained and the stock market can become more vibrant and dynamic.

Keywords: *Share Price behavior, Trading, Stocks, Capitoline database*

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1. INTRODUCTION

In the light of media attention to corporate scandals and numerous restatements of financial statements, one common demand on company chief executive officers and chief financial officers became evident; the need to beat earnings forecasts by the attainment of double-digit returns which subsequently drove up share prices of their respective companies. Financial analysts forecast earnings stream as one of their fundamental economic variables and often connect these forecasts into meaningful measures of security returns. Management decisions and their compensations are often stated in terms of earning objectives. Investors, bankers and creditors assess the prospects of enterprises' net cash flows through forecasts of the future earnings based on present and past earnings.

The information content of earnings is an issue of obvious importance for investors. Company earnings announcements are closely-watched events, being the main source of new information about company performance. It has been well-documented that prices respond quickly to the information in earnings announcements with investors reacting positively to good news and negatively to bad news. However, when companies meet expectations, the price response is typically close to zero. Stock market has been found to react to various corporate announcements. One such significant announcement, which has a bearing on the stock price movements of the firm, is earning information disclosure. The phenomenon is reflected in the abnormal stock return of the firm surrounding the announcement. The magnitude of abnormal return provides a direct measure of unexpected change in the security holders' wealth associated with the event. The effect of the quarterly earnings announcement drift has been found to persist for a significant time, creating post earnings announcement drift. However, the magnitude of the effect and the time taken to incorporate the information content depend on characteristics of the firm under study. Thus, the effect of the earning announcements is an important empirical matter in the capital market, influencing the movement of the share prices.

2. REVIEW OF LITERATURE

A number of studies have documented the post-earnings announcement drift phenomenon where stock prices tend to drift upward or downward after the earnings announcement, if the earnings are unexpectedly positive or negative respectively. Thus, post-earnings announcement drift continues to pose a significant challenge to financial theorists **(Brennan, 1991; Fama, 1998).**

Reported earnings have been documented as an important determinant of stock prices in both accounting and finance literature. This study intends to fill the gap by conducting a comprehensive research on the issue of association between the stock price movements with earnings changes of firms listed on the Kuala Lumpur Stock Exchange, in an emerging market. In an emerging market, the availability and transmission of information have been found to be relatively inefficient compared to developed markets, making the surprise element even more relevant in this market **(Ajayi and Mehdian, 1994).**

Ball and Brown (1968), Rendeleman et al. (1982), Foster et al. (1984) as well as **Bernard and Thomas (1989, 1990)** proved the presence of abnormal returns during at least three months after the financial report publication date. On the basis of the research carried out by **Chan et al. (1996)** it can even be assumed that the delay of investors' reaction can reach as much as three quarters of a year.

In the U.S., **Aharony and Swary (1980),** on examination of quarterly earnings and dividend announcements at least 10 days apart, concluded that both earnings and dividends have information content. **Healy and Palepu (1988)** extended the work of **Asquith and Mullins (1983)** by looking at the nature of earning changes surrounding a dividend initiation or omission announcements. The results of the study showed a significant earning increase/decrease for at least one year prior to the dividend initiation/omission announcements.

Jegadeesh and Lakonishok (1996) assumed that the delay of investors' reaction can reach as much as three quarters of a year. However, this delay is not always symmetrical. Overall, post-announcement results suggest that investors over-react when the earnings surprise from the prior quarter is not repeated in the next quarter; investors are disappointed by firms meeting expectations when they were expecting another positive surprise, and they are pleasantly surprised by firms meeting expectations when they were expecting another negative surprise.

Mallickarjunappa (2004) found that the Indian stock market is slow in incorporating the quarterly earning information. A similar study by **Gupta (2006b)** investigated the stock market reaction associated with earnings announcements in the Indian stock market and to verify whether these announcements possess any informational value. An event study was conducted on 50 companies, comprising the CNX Nifty Index, which made earnings announcements in March 2004. Thus, the results of the study indicated that earnings announcements contained important information which causes stock prices to change.

Das et al. (2007) studied the effect of quarterly earnings announcements made by the large companies. However, this study was limited to a single quarter earnings releases comprising only 30 announcements and, moreover, the effect of clustering of multiple events in the overall return behaviour of the firms was not incorporated. **Kwon (2012)** examined the sensitivity of executive incentive compensation to market-adjusted returns and changes in earnings for high-tech (HT) firms vis-à-vis firms (NHT) in other industries. **Wang (2012)** investigated analysts' ability to process public information for investors by examining price reactions to a sample of analysts' recommendation revisions issued shortly after quarterly earnings announcements. The researcher found that these recommendation revisions were used by investors to reassess the valuation implications of announced earnings.

3. NEED FOR THE STUDY

There is a need to study the significance of the emerging trend, its signalling effect on share price and its impact on the wealth of the shareholders. Further, it has been argued that if the capital markets are efficient then they would react immediately to various kinds of Earnings announcements. On the other hand, if the markets are inefficient then such information already gets trickled to the markets much before it is formally announced. Since decisions regarding any Earning announcements are taken in the meetings of the Board of Directors, it is quite possible that there could be a leakage of information by employees who come to know of such information. The study aims to check whether efficient market hypothesis holds for Indian stock market or not i.e., whether there is any movement in share prices before or after the corporate announcements.

4. OBJECTIVES OF THE STUDY

The study investigates the impact of Earnings announcements on the stocks constituting the Sensex. The study of the effect of clustering of event dates on the overall stock returns has been incorporated in the study. The objective is to check the share price behaviour to earning announcements.

5. RESEARCH DESIGN

The present study is exploratory and empirical in nature. The study includes Top 100 companies rated by Chartered Financial Analyst Survey, 2008 and informational efficiency for last ten calendar periods- January 2004 to December 2013 has been investigated.

As many as 2502 companies listed on the Bombay Stock Exchange were considered for The Analyst 500 rankings. The data for financial years (April 1, 2007 to 31 March, 2008) was taken for the purpose of rankings. The Analyst 500 companies have been ranked on the basis of their Net Sales alone. Besides Net Sales, other parameters, such as like Profit after tax (PAT), Operating profit or Profit before depreciation and tax (PBDIT), Operating Profit Margin and Market Capitalization have also been considered.

For the present study, secondary data has been used. For exploring the objectives of this study, the information disclosure concerning the earnings announcements have been collected from BSE (Bombay Stock Exchange) website. Data regarding share prices and Sensex has been taken from BSE (Bombay Stock Exchange) and NSE (National Stock Exchange) websites. The data on daily closing values of market proxy is obtained from Capitaline Database. Capitaline Database is maintained by Capital Market Publishers India Private Limited. In case of non-availability of data concerning the exact date, the nearest date (not varying more than a week) has been considered.

'**Event Study**' methodology has been used for the purpose of analyzing the corporate announcements effect. The event study methodology has been extensively used to assess the impact of an announcement of a particular strategy on the firm's stock prices. This analytical approach is well accepted and has been widely used in various disciplines such as Finance, Accounting, Marketing, Strategy, E-Commerce and Law. The methodology has also been applied to assess the impact of some marketing and advertising relationship events such as brand extension announcements **(Lane and Jacobson, 1995).**

The event study methodology has been used to estimate Cumulative Abnormal Returns (CAR) for a 15 day window period. Market Model Method (Single factor Model) has been used. The study endeavours to find the Cumulative Abnormal Return (CAR). Market Model assumes that all inter-relationships among the returns on individual's assets arise from a common market factor that affects the return on all assets, i.e., the expected return on individual assets**.** The event study methodology has been extensively used to assess the impact of an announcement of a particular strategy of the firm's stock prices.

6. INTERPRETATION AND ANALYSIS

This study examines the relationship between share prices and earnings announcements. This study goes beyond previously documented market reactions to earnings announcements and presents a justification for management decisions.

Data regarding share prices and Sensex has been taken from BSE and NSE websites. The data on daily closing values of market proxy is obtained from Capitaline Database. This process revealed 3527 observations. To be included in the sample, an earnings announcement must satisfy the following criteria:

- The earnings announcement date is to be reported in any of the leading financial dailies such as Economic Times, Business Line etc.
- At least 200 daily returns are available before and after the earnings announcement date. These returns are used to calculate pre-event and post-event beta.

Table 1.1: Average Abnormal Returns and Cumulative Average Abnormal Returns of Quarterly Earnings Announcements

Days	Average Abnormal Returns	Z-value	Cumulative Average Abnormal Returns
−15	0.0122	2.2103*	0.0122
−14	0.0292	0.7810	0.0415
−13	−.0051	−1.6711	0.0364
−12	−0.0017	−2.5532*	0.0347
−11	0.0017	0.8224	0.0364
−10	−0.004	−0.6345	0.0318
−9	0.0049	1.3453	0.0367
−8	0.0002	0.02831	0.0367
−7	0.0101	1.9231*	0.0468
−6	0.0192	3.4130**	0.0661
−5	0.1350	2.2223*	0.2011
−4	−0.122	−1.8624	0.0786
−3	−0.280	3.8329**	−0.2021
−2	0.0173	0.9927	−0.1842
−1	0.1046	4.1704**	−0.0802
0	**0.0038**	**5.0494****	**−0.0763**
1	0.0193	3.6724**	−0.0570
2	0.0016	2.8836**	−0.0554
3	0.0010	2.0542*	−0.0543
4	0.0020	2.0218*	−0.0522
5	0.1436	0.3376	0.0914
6	0.0015	3.4810**	0.0929
7	−0.0001	−1.2912	0.0920

8	−0.0005	−0.9859	0.0915
9	−0.0019	−1.6635	0.0896
10	−0.0002	−0.1726	0.0893
11	−0.0242	−10.2736**	0.0651
12	−0.0009	−1.5343	0.0641
13	−0.0003	−0.7524	0.0638
14	0.0029	1.1713	0.0667
15	−0.0010	−1.8424	0.0656

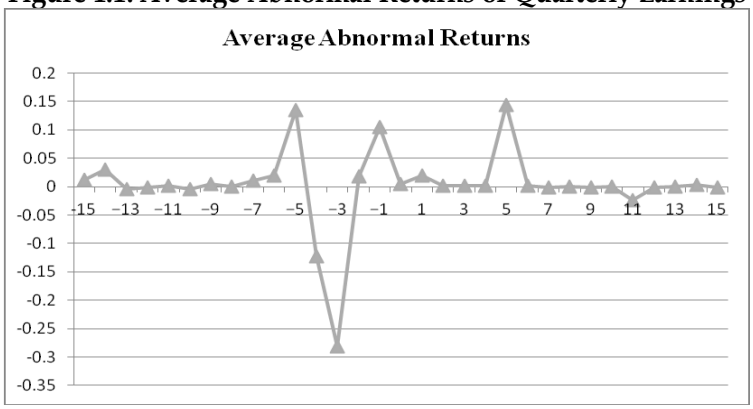
**Significantly different from zero at 1 percent level
* Significantly different from zero at 5 percent level

Table 1.1 highlights the average abnormal returns and the corresponding Z-values for each of the 31 days of the event window for all the 3527 earnings announcements.

The average abnormal returns during the event period are statistically significant at 5 percent level on −15, −12, −7, -6, −5, −3, −1, 0, +1, +2, +3, +4, +6, and +11, day. The average abnormal returns during the event period are statistically significant at 1 percent level on −6, −3,−1, 0, +1, +2, +6, and +11 day.

The table also highlights the cumulative average abnormal return for each of the 31 days of the event window for all the 3527 earnings announcements. On the day of earning announcements, Cumulative Average Abnormal Return (CAAR) is −0.0763. On the announcement day (0 day), the average abnormal return is 0.0038 and z-value is 5.0494 which are statistically significant at 1 percent level. Average abnormal return is fluctuating randomly prior to and post-announcement event period; thus, inference can be made that the abnormal returns are showing an erratic trend due to earning announcement.

Figure 1.1: Average Abnormal Returns of Quarterly Earnings

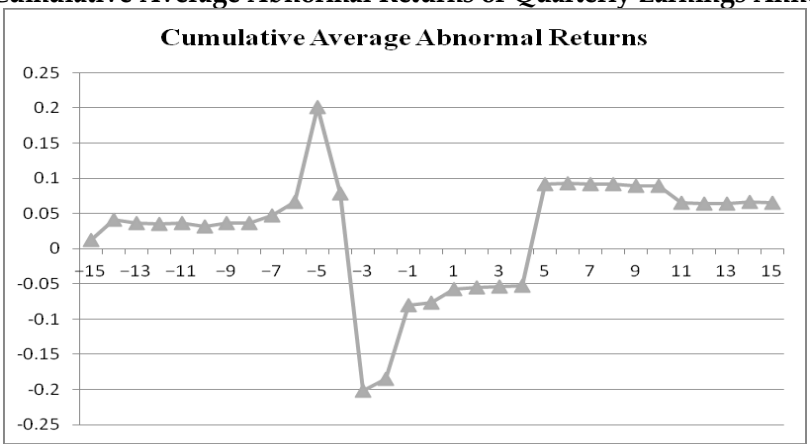


6. ANNOUNCEMENTS

The figure given above highlights the Average abnormal returns of earnings announcements. The figure indicates that for the 15 days before the announcement date, there is no consistent pattern

of abnormal returns of companies engaging in earning announcement. The analysis of results shows that on the day when the earnings are announced, the Average abnormal returns (AARs) are 0.0038 which is highly significant at 1 percent level. The pre-announcement reaction shows that market is able to capture the earnings information before its announcement. The Average Abnormal Returns figure shows that to some extent the market gradually learns (information leaks out) about the forthcoming announcement.

Figure 1.2: Cumulative Average Abnormal Returns of Quarterly Earnings Announcements



As it could have been foreseen, the results presented above confirm the relationship between unexpected changes in quarterly earnings and stock returns. Further, the cumulative effect of abnormal returns showed a continuous upward drift after the announcement. This might reflect over performance of the index with respect to the expected model of market return. The stock rising three days before the event day is an indication of the market expectation of good news from the quarterly earnings. On the day of earning announcements, Cumulative Average Abnormal Returns (CAAR) is −0.0763.The results of Cumulative Average abnormal returns show that Indian capital market uses the quarterly earning announced by the companies for valuation of securities and market is efficient in seizing the information.

7. CONCLUSION

The stock price movements are attributed to various factors related to the economy, industry, company etc. It is impossible to forecast the share prices on the basis of economy-wise and industry-wise factors as it is quite difficult to obtain the quantitative data on these factors. Therefore, the various company performance variables have been considered to determine the equity price behavior.

Management decisions and their compensations are often stated in terms of earning objectives. Investors, bankers and creditors assess the prospects of enterprises' net cash flows through forecasts of the future earnings based on present and past earnings. An evidence of significant abnormal returns has been found in these samples. This implies that the Quarterly Earnings Announcements have pre-return or post-return effects on the firms included in the Sensex. It may also be inferred that these announcements carry information value for investors. The index also reflects higher level of market efficiency where the influence of non-fundamental factors, which

are largely behavioural, is the least. The Quarterly Earnings Announcements do have information relevant for the security valuation and market uses the information in general. The Indian capital market is able to capture the information contained in the Quarterly Earnings announcements. Hence, it is efficient in the semi-strong form of Efficient Market Hypothesis. The pre-announcement reaction shows that market is able to capture the earnings information before its announcements.

The results show that the Indian Capital Market is semi-strong efficient as it is using the information relevant for security valuation and for investment decision making. However, the reaction after the announcement shows that the Indian Capital Market is not perfectly efficient as the abnormal returns have been observed both prior to and after the announcement. The role of SEBI can be instrumental in preventing insider trading so that the confidence of the investors is maintained and the stock market can become more vibrant and dynamic.

8. RECOMMENDATIONS AND SUGGESTIONS

From the foregoing analysis, the following suggestions have been made to make Indian capital market more efficient. It is a known fact that reliability of accounting information is important. The regulation of accounting norms and audit practices will improve the reliability of accounting information. The larger the number of analysts, the more efficient will be the market. Thus, market efficiency depends upon the number of investors in the market, particularly the institutional investors and number of analysts. There is need to promote programmes that will produce professional analysts. The more visible a company, the more perfect its market is likely to be 'Perfect' implies that most of the likely factors affecting the price of its securities are presumably known to the market and vice versa. The existence of insider trading or information leakage can erode the confidence of investors in the instrument and may be viewed by them more as a tool to deceive than to benefit them. SEBI should mull over the listing rules, and suitable amendments are the need of the hour to prevent such practices.

9. LIMITATIONS OF THE STUDY

The results of the study could have further improved, provided the study had covered even larger sample and longer time period. The study has conducted the analysis on the daily stock returns. It is quite possible that the results could have been different had the analysis been done on monthly or annual returns data. The closing share prices have been taken from CAPITALINE database. The results may differ if it would be collected from any other database. The non-availability of trading data reduced the sample size for present study. The result would have been more comprehensive, had the trading data relating to all announcements been available.

10. SCOPE FOR FURTHER RESEARCH

A bigger sample size adopted in the same area of study can help to get improved results. The study was based on a time series data, which was highly affected by the state of business cycle in the economy. Thus, to get better results the research over a longer period is recommended. It should be tested on annual or monthly data basis to find whether efficient market hypothesis holds for Indian stock market or not, i.e., whether there is any movement in share prices before or after the corporate announcements.

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