



## Stock Market Behavior to the Release of Financial Statements: A Study of Selected Listed Manufacturing Firms in Sri Lanka

K. K. Arulvel

Department of Accounting, University of Jaffna,  
Sri Lanka

---

**Abstract:** *Investors mostly seem to analyse the investment decision prior to making their investor in stock markets. The study is directed towards identifying the reaction of stock prices around the release of annual financial statements of the firms listed under manufacturing sector. Consequently, event study methodology has been applied in this research as it enables an observer to assess the impact of a particular event on a firm's stock price. The results revealed that there is a significant relationship between share price and release on financial statement on the dividend announcement day. Further, based on the result, there is a significant relationship between share price and dividend announcement only in the dividend announcement date.*

**Keywords:** *share price, share market, financial statement and manufacturing companies*

---

### I. INTRODUCTION

#### 1.1 Background of the Study

Financial statements are being used to serve the requirements of various stakeholders ranging from managers, employees, government, banks, investors and so on. The information being presented via financial statements can take two forms namely accounting information and non-accounting information. Accounting information processes financial transactions to provide external reporting to outside parties. As far as non-accounting information is concerned, it cannot be measured in monetary terms and predominantly used to serve the requirements of internal users.

The concept of stock market behavior can be well explained by the Efficient Market Hypothesis (EMH). The notion that stock prices reflect all available information is referred to as EMH. According to the Efficient Market Hypothesis, stock prices should not be affected by the release of information that is well accepted. Only new information should move prices. For example, the announcement that a firm's earnings were up 30% over the last year may be a good news if the expected increase was 10%. On the other hand, this may be bad news if a 60% increase was accepted.

It is apparent that stock market plays a crucial role to the economic growth of a nation. It provides a mechanism for allocating the nation's capital stock. Shares should be actively traded or in other words, a functioning stock market is essential so as to keep the economy in a growth momentum. Moreover, stock prices functioning as a directing mechanism that steers the investors to optimally allocate their capital in a way that will maximize the total utility of the economy.

Markets are generally neither perfectly efficient nor completely inefficient. The degree of informational efficiency varies across countries, times and markets. Market will be more efficient if more information is available to investors. When it comes to businesses, financial statements are considered to be the medium for transmitting the information to stakeholders. In developed markets, information is plentiful and markets are quite efficient. Contrary to this, market prices are relatively less efficient in emerging markets as the availability of information is low. However, the Sri Lankan stock market poses a striking difference. Even though the Sri Lankan stock market is relatively small as compared to developed markets, it is fairly efficient in the weak and semi-strong forms of the market efficiency (Dissabandara and Samarakoon, 2002). This offers an opportunity to address the research issue of interest and to ascertain the importance of the information content of the annual financial statements.

#### 1.2 Statement of Problem

Numerous studies have been conducted by relating stock market reaction to the release of financial statements especially in the developed markets. The findings of the studies in the developed markets were largely consistent with the EMH. An efficient market will absorb all information and new price level is instantaneously established. But, in inefficient market such information is not absorbed at the event day and it will take many days for the market price to be adjusted to new information. Developed markets are characterized as efficient markets as the information is plentiful. Moreover, in the developed markets whenever a new information is available that will quickly get reflected in the market prices as the investors are highly educated and sophisticated.

Emerging markets are characterized by a relatively large number of poorly informed and unsophisticated investors (Osei, 2002). Even though Sri Lanka is considered as an emerging economy, the stock market is quite efficient as the market became as the world's second best performing market in the year of 2009. Moreover, there are a limited number of studies conducted in the emerging markets especially in Sri Lanka so as to test the stock market behavior to the release

of financial statements (information disclosure). These facts emphasize that it is imperative to conduct a study on stock market reaction to the release of financial statements. Hence, no one can repudiate the inevitability of an exclusive research in this area.

### **1.3 Objective of the Study**

The study is directed towards identifying the reaction of stock prices around the release of annual financial statements of the firms listed under manufacturing sector.

## **II. LITERATURE REVIEW**

It is indisputably true that information has a pronounced role in a functioning stock market. Even though, several issues regarding how stock markets process and react to new information still remain unanswered. A short discussion of some central findings in the market efficiency literature is presented below in order to provide a general picture of the state of this research.

Tests for market efficiency can be categorized into three namely; tests for return predictability, event studies and tests for private information. Tests for return predictability consider the return forecasting power of historical data. Event studies enable an observer to assess the impact of a particular event on a firm's stock price. Tests for private information investigate whether some investors have information not reflected by stock prices.

A practical implication of the market efficiency conditions is that all new financial statement information is instantaneously incorporated into the prices of stocks when it is disclosed to the public. However, all new financial information is not instantaneously priced, empirical indications reveal. In line with this Grossman and Stiglitz (1980) proved the impossibility of fully informationally efficient markets. They came to know that fully informationally markets can only exist when information and transaction costs equal zero, which are conditions certainly not fulfilled in any known market. Moreover, they found that markets with positive information and transaction costs will show an equilibrium degree of efficiency which allows informed investors to make returns in excess of equilibrium returns large enough to compensate them for their information costs.

[[[[

Ball and Brown (1968) were the people who took some initial steps in investigating the usefulness of earnings information. They found that earnings figures contain highly useful information which is not entirely incorporated into stock prices immediately when it is disclosed.

Bartov et al. (2000) found that the magnitude of the post announcement abnormal returns is negatively correlated with the fraction of the firm owned by institutional investors. They characterized institutional investors as sophisticated investors and the value of a firm that is owned to a greater degree of institutional investors thus reaching new valuation equilibriums more promptly than the value of a firm owned to a higher degree by non-institutional or unsophisticated investors.

Kallunki (1996) came to know that market reaction is different according to the earnings news which can either be positive or negative. He found that the delay being lower for good earnings news. In line with this, Kallunki and Martikainen (1997) conducted a study to investigate the market's reaction to earnings news during two time periods; a period of strong economic growth (1988-1990) and a period of severe economic recession (1991-1993). They found that the response to earnings news is remarkably different for the two time periods. The response being considerably lower during recession than during growth.

[[[[[

Grinblatt and Keloharju (2001) in a study found that past returns and historical price patterns affect trading. More specifically they found that stocks are more likely to be sold if they either have recently generated large positive returns or priced close to their monthly highs.

[

Nasar (2002) examined the price reaction to the release of financial statements in the Stock Exchange of Saudi Arabia. Market model has been utilized so as to investigate the relationship between share price reaction and the release of financial statements. By using five-year data with the event study methodology, the study revealed that the released financial statements influenced changing investors' behavior.

Javid and Faraz (2011) conducted a study on the reaction of stock prices to earnings announcement at Karachi Stock Exchange (KSE) in Pakistan. The study used five-year data on the stock prices from January 2004 to August 2008 for 114 non-financial firms. There is no abnormal return during the past earnings announcement period, the findings reveal. Furthermore, they identified that there is a bigger element of surprise for bad news than for good news as the market reaction to the bad news is stronger than that of good news.

[

Menike and Wang Man (2013) did a study on stock market reaction to the release of financial statements of the banks listed in Colombo Stock Exchange (CSE). Event study methodology has been utilized by employing five-year data. Findings reveal that abnormal return and cumulative abnormal return around the release of financial statements are positive but not significant at 0.05 level. Moreover, the stock price behavior on the announcement of annual reports was different from that outside the test period.

## **III. METHODOLOGY**

The notion of informationally efficient markets leads to a powerful research methodology. Price changes must reflect new information if security prices reflect all currently available information. Hence it seems that one should be able to

measure the importance of an event of interest by examining price changes during the period in which the event occurs. Event study methodology has been applied in this research as it enables an observer to assess the impact of a particular event on a firm's stock price.

Daily share return and the market return as proxied by All Share Price Index (ASPI) have been calculated in this study so as to determine whether the stock earned abnormal gain or not. The abnormal return due to the event is estimated as the difference between the stock's actual return and benchmark. ASPI has been utilized in this study as a yardstick for measuring the market return. Daily share return of each company was calculated based on the following equation.

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Where;

- R<sub>it</sub> = Return on share i on day t
- P<sub>it</sub> = Price of the share i on day t
- P<sub>it-1</sub> = Price of share i prior to the day t

Many researchers have used a market model to estimate abnormal returns. This approach is based on the index model. For investors, indices give the direction of entire market. Ideally, a change in the price of an index represents an exactly proportional change in the stocks included in the index. The ASPI is one of the principal stock indices of the CSE and it measures the movement of share prices of all listed companies based on market capitalization.

Market indices enable investors to calculate market return. It represents the rate of return earned by investing in a portfolio that impersonates the market portfolio. The ASPI indicates the price fluctuations of shares of all the listed companies and covers all the traded shares of companies during a market day. The equation for calculating the ASPI is as follows;

$$ASPI = \frac{\text{Market Capitalization of all the Listed Companies}}{\text{Base Market Capitalization}} \times 100$$

### 3.2 Sample and Data Collection

The sample of this study composed of 30 manufacturing firms listed in the CSE. Data library CDs of the CSE and annual reports of the companies were used as the primary sources of data for this study. Daily market information published in the newspapers and related Central Bank publications were also utilized in this study.

## IV. RESULTS AND DISCUSSION

Table 1- Average Abnormal Returns of the Overall Sample

Event date	AAR(average for 5 years)	Standard Deviation(SD)	T(AAR)
-10	0.010311	0.008566	1.44732
-9	-0.00124	0.009254	-0.1783
-8	0.003466	0.009254	0.43265
-7	0.002004	0.009254	0.36524
-6	-0.00439	0.009254	-0.75412
-5	-0.00304	0.009254	-0.2431
-4	-0.00522	0.001125	-0.4265
-3	0.00368	0.009254	0.31254
-2	0.005216	0.009254	0.50914
-1	0.000096	0.009254	0.2356
0	<b>0.016821</b>	<b>0.007296</b>	<b>2.30564*</b>
+1	0.009056	0.009254	1.24560
+2	0.005566	0.009254	0.90542
+3	-0.00233	0.009254	-1.333
+4	0.000422	0.009254	0.06584
+5	0.000355	0.009254	0.040521
+6	0.003091	0.009254	0.40124
+7	-0.02416	0.009254	-2.6166*
+8	-0.00566	0.009254	-0.338
+9	-0.02844	0.009254	-1.0245
+10	-0.00214	0.009254	-1.0184

Average abnormal return (AAR) divided paying companies of CSE over all period starting from day -10 to +10 relative to dividend announcement day. The results reported in Table 1 shows that average abnormal return (AAR) on the day of dividend announcement was only 0.016821 percent, which was statistically significant. This could be due to the fact that the information of dividend payment often leaks out to the market a few days before the announcement made by the company. While, the announcement of dividend is normally carries no surprise to the market. Therefore, evidence shows that AAR of day +7 and -2.6166 percent respectively, which are significant at 10 percent level. This suggests that market reacts earlier than the actual announcement of dividend.

Average Abnormal Returns on Event Days

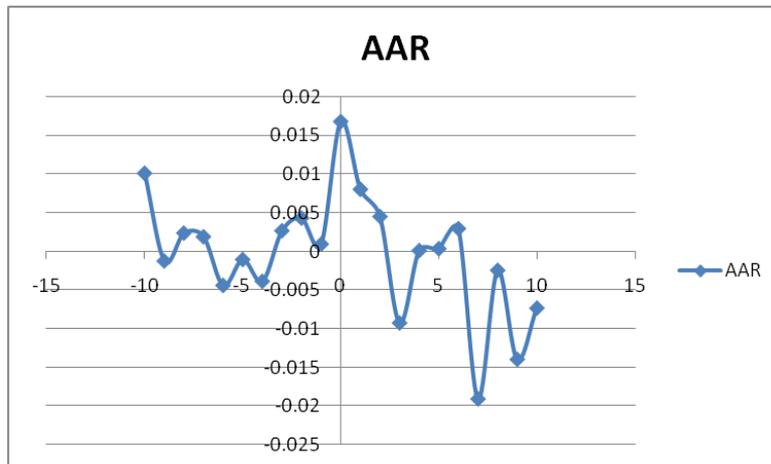


Figure 1- Average Abnormal Returns on Event Days

According to the above diagram, it shows the overall average abnormal return of manufacturing sector. In the event announcement day average abnormal return is 0.016821. Before 10 days was 0.010127 but it is same after 10 days. So there is no effect on dividend announcement. The average abnormal return of day +7 and -2.6166 percent respectively which is significant at 10 percent and 1 percent level. This suggests that market reacts earlier than the actual announcement of dividend. Cumulative Abnormal Return (CAR), which measures the investor’s total return over a period starting from well before the announcement of the dividend to after ex- dividend date. The following table and figure are used for this analysis.

Table 2-Cumulative Abnormal Return (CAR)

Win. Period	AAR(average for 5 years)	AVERAGE-CAR
-10	0.020128	0.06528
-9	-0.00324	0.001254
-8	0.004396	0.03652
-7	0.002055	0.098652
-6	-0.00741	0.009635
-5	-0.00201	0.005246
-4	-0.8886	0.002415
-3	0.00369	0.003652
-2	0.005369	0.02563
-1	0.000852	0.02563
0	0.075698	0.03652
1	0.009052	0.032563
2	0.004256	0.02415
3	-0.00125	0.02365
4	0.000365	0.0321
5	0.000795	0.032468
6	0.003652	0.0879
7	-0.02145	0.04698
8	-0.00365	0.04365
9	-0.02165	-7.2569
10	-0.00899	-0.00325

Results in the above Table shows that investors do not gain value from dividend announcement. Evidence depicts that CAR had risen from 0.010127 percent on day -10 to a level of 0.029 percent on the day of dividend announcement, but gained value was lost over the next 10 days after dividend announcement, as CAR dropped to -0.00741 percent on the day 10. Although results tends to suggest that investors may have overreacted to the dividend announcement, the evidence generally consistent with the dividend irrelevance. Findings also show that investors lost more value in the ex-dividend period than the value gained in the pre-dividend period. This finding tends to suggest that dividend announcement does not carry information about the future earnings and cash flow of the companies. In Sri Lanka CSE generally rate the performance of the listed companies based on their regular dividend payments. Hence, companies may like to retain their good standing by paying regular dividends. In the presence of a kind of indirect pressures from the regulatory authorities, the companies may not be able to effectively signal the future earnings prospects through their

dividend announcement. However, there is a positive high value of average Cumulative Abnormal Returns (CAR) on the announcement day, which means that there is a high information signaling effect on the dividend announcement day. Further there is a low level of positive Cumulative Abnormal Return (CAR) during the period of -3 to +4, which also represents that there is a low level of information signaling effect from 3 days before the announcement date to after 4 days of the announcement date.

## V. CONCLUSION

This study concluded that there is a significant relationship between share price and dividend announcement on the dividend announcement day. Further, based on the result, there is a significant relationship between share price and dividend announcement only in the dividend announcement date. Thereby, there is an information signaling effect only on the announcement day. According to it, in the dividend announcement date, share holders and other new investors can expect that share price will increase. Therefore, theoretical literature and anglicized suggested that dividends pay out should not be desirable provided that companies can better invest their funds. Moreover, cash dividend is not desirable if investors need to pay taxes on their dividend income. Given the valid reasons for not paying dividends, an announcement of dividend payments may carry some information for the market and stock prices may be adjusted accordingly

## REFERENCES

- [1] FAMA, E. F. 1970. Efficient Capital Markets: A Review of Theory and Empirical work. *Journal of Finance*, 25, 383-417.
- [2] BALL, R., BROWN, P. 1968. An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research*, 6.
- [3] GROSSMAN, S., STIGLITZ, J. 1980. On the impossibility of informationally efficient markets. *American Economic Review*, 70, 393-408.
- [4] BARTOV, E., RADHAKRISHNAN, S., KRINSKY, I. 2000. Investor sophistication and patterns in stock returns after earnings announcements. *The Accounting Review*, 75, 43-63.
- [5] KALLUNKI, J. P. 1996. Stock returns and earnings announcements in Finland. *European Accounting Review*, 5, 199-216.
- [6] KALLUNKI, J. P., MARTIKAINEN, T. 1997. The lead-lag structure of stock returns and accounting earnings: Implications to the returns-earnings relation in Finland. *International Review of Financial Analysis*, 6, 37-48.
- [7] GRINBLATT, M., KELOHARJU, M. 2001. What makes investors trade? *Journal of Finance*, 56, 589-616.
- [8] NASAR, K. 2002. Share price reactions to the release of financial statements in Emerging Stock Markets: The Case of Saudi Arabia. *International Financial System and Stock Volatility, Issues and Remedies*, 13.
- [9] JAVID, I. & FARAZ, A. F. 2011. The stock price reaction to earnings announcement: The case of an emerging market. Department of Statistics, Karachi University, Pakistan.
- [10] OSEI, K. A. 2002. Asset pricing and informational efficiency of the Ghana Stock Market. *AERC Research Paper*, 115, Nairobi, Kenya.
- [11] DISSA BANDARA, D. B. P. H. & SAMARAKOON, L. P. 2002. Dividend announcement, Firm size & Dividend growth in the Sri Lankan Stock Market. *Sri Lanka Journal of Management*, 7.