Impact of Quarterly Results on Sensex and Market Volatility- An Empirical Research

Pramod Kumar and Kirti Khanna

Abstract

In traditional practices, an Indian company has to communicate information regarding all its working, financial position and status once a year through the annual report. But with the passage of time; the need for quick and timely reporting has arisen. Because of this the disclosure of the quarterly or interim financial results has taken the centre stage as far as the stock market is concerned. Quarterly reporting is a means of communicating the results of business operations on a periodic and regular basis. It not only helps the company but the investors also by transparent reporting of the quarterly performance.

This study has two main objectives; to analyze the impact of top most sectoral indices on the BSE benchmark during the Quarterly results and to judge the market volatility during the period of Quarterly results announcements. For the fulfilment of these objectives the researchers have gathered data like; different indices figures, sensex trends, and the quarterly results announced by different companies and from various secondary data sources, for the financial year 2009-10. For the analysis of data various statistical measures viz., Coefficient of Correlation, Coefficient of Determination and Standard deviation have been used.

For analyzing the impact of sectoral indices on Sensex by the announcement of quarterly results the researchers have established the relationship between the two variables viz., sectoral indices and sensex movements by the Correlation method. The study also explains the degree and direction of that relationship that is the extent of impact on quarterly reporting of constituents of sectoral indices on sensex. To see the market volatility the use of market returns has been made which justifies the study.

By the analysis of different dimensions, the researchers have found that the quarterly results have their impact on the movement of sensex and during the period of announcement of results the market can vary as per their daily returns. But these announcements can affect the market for a short term only.

Keywords: BSE sectoral indices, Sensex, Quarterly Results announcements, Market volatility.

Introduction

In traditional practice, an Indian company has to communicate information regarding all its working, financial position and status once a year through the

annual report. But with the passage of time need for quick and timely reporting has arisen. Because of this the disclosure of the quarterly or interim financial results has taken the centre stage as far as stock market is concerned. Quarterly reporting is a means of communicating the results of business operations on a periodic and regular basis. It not only helps the company but the investors also by transparent reporting of the quarterly performance. Quarterly reporting can also be termed as Interim Financial Reporting (IFR).

Quarterly Reporting is the disclosure of financial statements, financial results along with the financial reports between the two financial periods or say between the periods of publishing two annual reports. Interim financial report or Quarterly report is a report containing either a complete set of financial statements or a set of condensed financial statements for an interim period. A set of financial statements normally comprises balance sheet, statement of profit and loss, cash flow statement, and selected explanatory notes. Accounting standards on this subject (e.g., AS 25 of India, IAS 34) require publication of IFR. Interim financial Results (IFRs) are not clearly defined by the Indian standard (AS 25), but is deemed to mean quarterly profit and loss statement.

Generally speaking, there are two conceptually different views regarding interim accounting reports and the annual report (i) the discrete view and (ii) the integral view. According to discrete view each interim period should be treated as a separate accounting period in the same manner as the annual period whereas the followers of integral view believe that each interim period is an integral part of the annual accounting period.

United Steel Corporation was the first corporation in the country which published the quarterly financial information with the beginning of Interim Financial Reporting in 1902. In India requirement of publishing IFR was for the first time, introduced by way of publication of unaudited half yearly results through amendments in Clause 41 of listing agreements w.e.f March 1988. Besides this, The ICAI has issued accounting standard (AS 25) on IFR w.e.f. April 1, 2002. However, the SEBI has long been revising the guidelines from time to time to make IFRs more user friendly. At present there is no prescribed formation of profit and loss account under the Companies Act, which requires the disclosure of certain items only. The SEBI has prescribed the format for the presentation of quarterly financial results in clause 41 of the Listing Agreement.

Need of the Study

There are many factors which affect the stock market behaviour rapidly. The variation due to different factors reflects its impact in the economy also. It is said that if one wants to learn the economic structure of the country, he should read out the behaviour of the stock markets. As far as Indian stock market is concerned, it is the most efficient market as it has the ability to respond to the rapid changing conditions. The main object of the study is to judge the behaviour of the stock market as per the Sensex by the different quarterly results, and also to see the consistency of market during this period.

Objectives

The study has been conducted with the view:

i. To judge the impact of Quarterly results on Sensex by the constituents of BSE sectoral indices.

ii. To analyze the market volatility as per the market returns during the period of Quarterly results.

Review of Literature

A large number of empirical studies have been conducted about the determinants of stock prices. To review the situation different studies have been undertaken on national and international ground. Different researchers have conducted their researches with different views and elucidated their findings by different parameters.

Halil Kiymaz, Eric Girard (2009) have investigated the relationship between the daily returns and trading volume. The study found that the persistency of conditional volatility is high and very close to unity, implying that current information can be used to predict future volatility. It has also found that no leverage affect contradicts other studies that report leverage effects. *Santu Das, J.K. Pattnayak, Pramod Pathak (2008)* have judged the impact of quarterly announcements on sensex. The study also examines the drifting up of share prices with reference to "good announcement" and "bad announcement." *Shruti Tripathi (2008)* has looked into the different aspects and judged the differences between BSE100 index and BSE Sensitive index through the use of various time series tools, and finally tries to find which series is better for the investors to base their decision on. *Angela J. Black, Patricia Fraser, Nicolaas Groenewold (2001)* have used 54 years of quarterly data and a VAR model underpinned by a theoretical framework describing the relationship between stock prices and the macro economy. This analyses the extent to which prices deviate from economy wide fundamentals.

Research Methodology

For the fulfilment of the objectives the data have been collected from different sources. The study has been based on secondary data. Information regarding the stock prices, the Sensex figures and Quarterly reports has been taken from the leading commercial papers; viz, The Economic Times, Business Standards, Financial Express and different authentic web sites also. For the purpose of the study top 5 sectoral indices viz; BSE Bankex, Bse IT, Bse Fmcg, Bse Auto, Bse Teck have been considered as the constituents of these five and have affected the market mainly. For the purpose of the study the period of one financial year 2009-10 has been taken.

For analyzing the data various statistical measures such as correlation analysis, coefficient of determination and standard deviation have been used. This study has established correlation between the BSE Sectoral indices and the Sensex. It has taken the changes in the figures of both; BSE sectoral indices and Sensex. These changes have been taken for all quarters in the study. The BSE sectoral indices have been termed as variable "x" and the Sensex figures have been termed as

variable "y". Besides this the market volatility during the period has also been judged by using the standard deviation.

Tool for Volatility:

$$V = Ir * 100 / Ia$$

Where

V = Volatility

Ir = range of index movements

Ia = average index

Empirical Research

An empirical research has been made on the basis of objectives, by using the different statistical measures.

- *To judge the impact of Quarterly results on Sensex by the constituents of BSE sectoral indices.*

The main criterion of taking BSE sectoral indices as the independent variable is the impact of stock prices changes in the constituents of any sector and it can be easily seen on the sectoral indices of that sector. So, it was quite appropriate that the sensex should be compared with BSE Sectoral indices to judge the impact of overall performance of different companies belonging to different sectors during the quarterly reporting period.

Table 1 (a) shows the relationship between the two variables viz.; Sectoral indices (x) and Sensex (y). By analyzing this, researchers elucidated that the sectoral indices have their impact on the Sensex. As during the Quarterly Results the constituents of different sectors can affect the behaviour of market mainly in short term. The study resulted that among the top five sectoral indices which can affect the market behaviour; two sectoral indices viz. BSE Auto and BSE Teck have a more positive relationship with sensex. Although all the five have a positive relationship with Sensex behaviour yet these two have widely affected the sensex movements during the result announcements as the degree and the direction of relationship (r) was +0.81 and +0.86 respectively. The study has found that the other sectoral indices have also affected the market but on low and moderate positive degree of correlation as BSE FMCG, BSE Bankex and BSE IT.

By using the Coefficient of Determination (r^2) the study has also explained upto what extent variable "x" is able to affect the variable "y". The sectoral indices BSE AUTO and BSE Teck have affected the Sensex widely as the coefficient of determination was .66 and .74 respectively. This shows that the 66 % and 74% changes that occurred in Sensex movements during the announcements of results were due to the changes in the BSE AUTO and BSE Teck. Beside this, the FMCG has not so much affected the market behaviour as the announcement of results

does not so much affect the constituents of this. It has quite a low positive degree of relationship +0.21 and only 5% changes have occurred in Sensex by this.

TABLE 1 (a)

SECTORAL INDICES	QUARTERS	x	y	FINDINGS
BSE AUTO	Q1	10.56	-2.45	
	Q2	-0.56	-1	R = + 0.81
	Q3	-15.5	-10.44	r^2 = 0.66
	Q4	-1	-2.23	
BSE BANKEX	Q1	2.35	1.59	
	Q2	1.3	1.98	R = + 0.33
	Q3	0.06	4.9	r^2 = 0.11
	Q4	-8.9	-1.59	
BSE FMCG	Q1	2.7	-1.26	
	Q2	10.2	-0.25	R = + 0.21
	Q3	-8.6	-1.59	r^2 = 0.05
	Q4	-8.7	-0.02	
BSE IT	Q1	5.9	-3.33	
	Q2	-0.01	-2.24	R = + 0.54
	Q3	6.5	8.94	r^2 = 0.29
	Q4	5.68	9.35	
BSE TECK	Q1	-0.01	-0.09	
	Q2	-0.02	-2.65	R = + 0.86
	Q3	2.65	3.78	r^2 = 0.74
	Q4	8.54	5.34	

Fig 1 to Fig 5 show the movements of the sectoral indices with Sensex. It was sometimes in positive direction and sometimes in negative direction. By this the researchers have explained that the movements of sectoral indices and sensex were in the same direction so that these could affect the BSE Sensex.
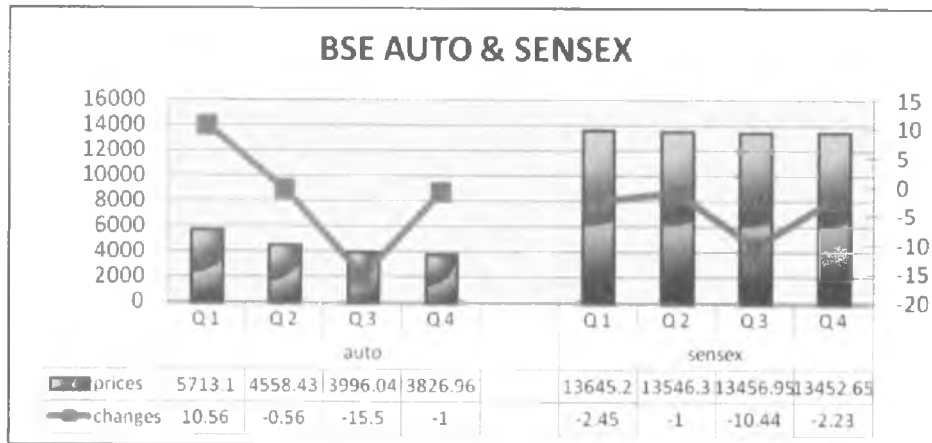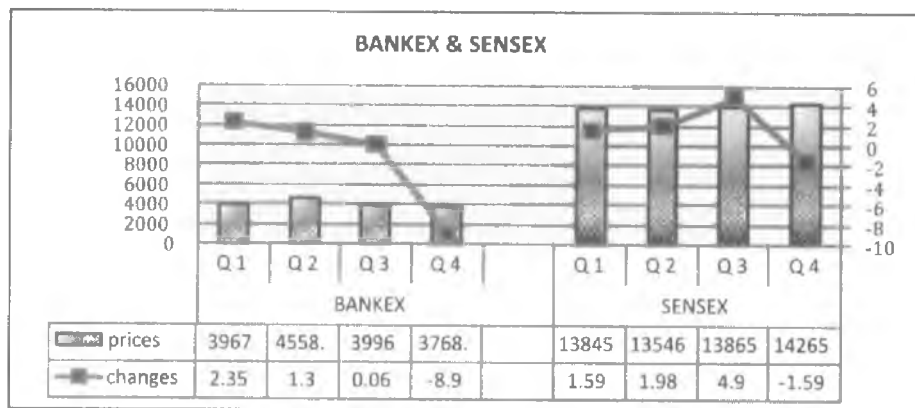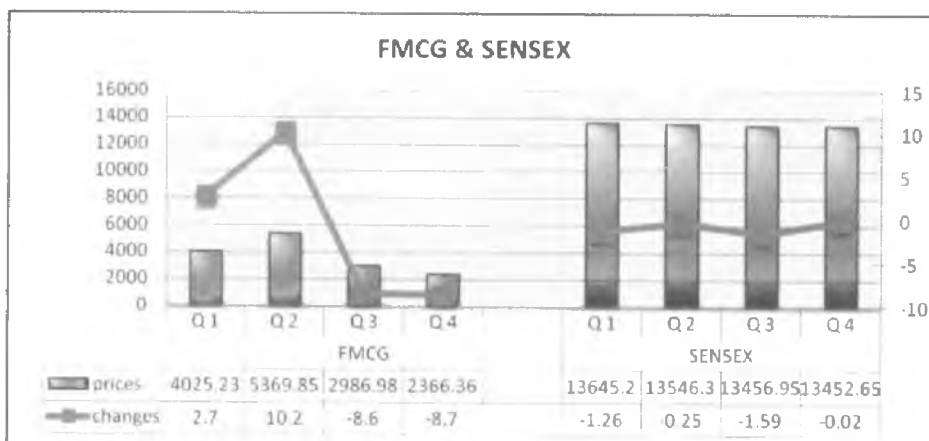
BSE AUTO & SENSEX

	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
		auto					sensex		
prices	5713.1	4558.43	3996.04	3826.96		13645.2	13546.3	13456.95	13452.65
changes	10.56	-0.56	-15.5	-1		-2.45	-1	-10.44	-2.23

Fig: 1

BANKEX & SENSEX

	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
		BANKEX					SENSEX		
prices	3967	4558.	3996	3768.		13845	13546	13865	14265
changes	2.35	1.3	0.06	-8.9		1.59	1.98	4.9	-1.59

Fig: 2

FMCG & SENSEX

	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4
		FMCG					SENSEX		
prices	4025.23	5369.85	2986.98	2366.36		13645.2	13546.3	13456.95	13452.65
changes	2.7	10.2	-8.6	-8.7		-1.26	0.25	-1.59	-0.02

Fig: 3

IT & SENSEX

	BANKEX				SENSEX			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
prices	3967	4558.	3996	3768.	13845	13546	13865	14265
changes	2.35	1.3	0.06	-8.9	1.59	1.98	4.9	-1.59

Fig: 4

TECK & SENSEX

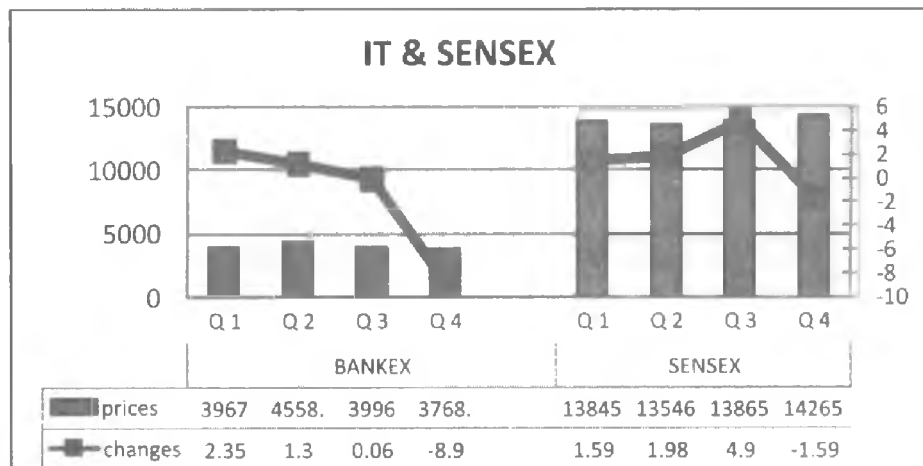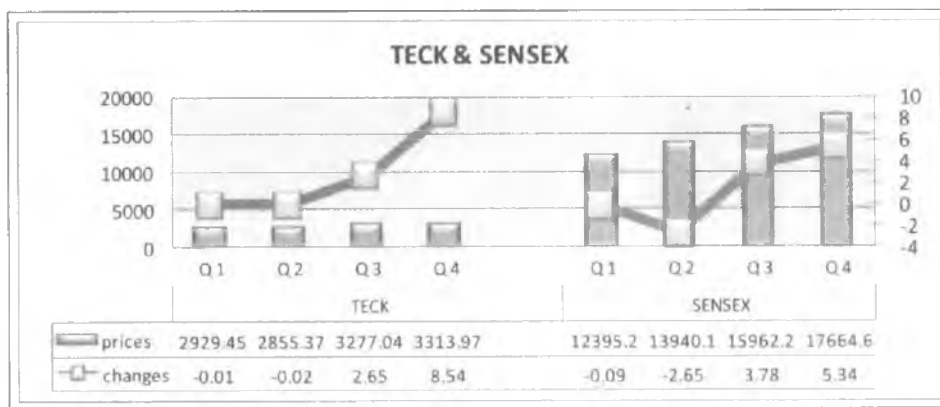|	TECK				SENSEX			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
prices	2929.45	2855.37	3277.04	3313.97	12395.2	13940.1	15962.2	17664.6
changes	-0.01	-0.02	2.65	8.54	-0.09	-2.65	3.78	5.34

Fig: 5

By analyzing the changes through graphical presentation, the researchers have found that the change in the direction prices has changed the sensex movements. In most of the sectoral indices and sensex figures have the same changes and the presence of relationship.

- *To analyze the market volatility as per the market returns during the period of Quarterly results.*

Volatility in the stock market is natural as it does not oppose a stable market concept. But due to different factors and events the market fluctuates more over times. With this objective, the researchers have tried to find out the impact of quarterly result announcements on the natural nature of volatility in the market. For obtaining this objective, the study considered the daily market returns during the announcement period. The study explained that the market volatility can differ for the different

months over the year. Table 1 (b) shows the volatility as per the months in Financial Year 2009-10.

TABLE 1 (b)

Months	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar.
Volatility	1.96	0.56	0.96	1.02	0.89	1.09	2.19	1.7	1.79	2.12	2.05	2.13

This table shows that the market volatility is different over the year and months. By this the study explained that during the announcement of quarterly results the market can be more volatile than on other days. In this the months of result announcements viz; April, July, Oct, Jan and March show more volatility conditions in the market. So this study concludes that during the result announcements the market fluctuates more in terms of volatility.

Conclusion

The disclosures of the quarterly or interim financial results have taken the centre stage in recent times as far as stock market is concerned. Drawing quarterly results not only helps the company but the investors also by transparent reporting of the quarterly performance. Although these results help the investors in short run they have the essential position in the market behaviour also. The study concludes that the constituents of the sectoral indices are able to produce their impact on the sensex. The changes in these indices reflect their impact on the sensex movement by the degree and direction of relationship. The market was too volatile during the announcement periods and also differed throughout the year.

References:

J.K. Pattnayak, "The Effect of Quarterly Earnings Announcements on Sensex: A case with clustering of events,"   Indian School of Mines, Dhanbad. Research report

Marisa Wilde, "Financial Reporting Frequency and its Impact on Stock Market – The Case of Switzerland," Research Assistant, Ph.D student. Research report, version: November 2005.

Santu Das, ISM University. ICFAI university journal of Accounting Research, Vol. 7, no.4, pp.64-78, Oct.2008.

Angela J. Black, "US Stock Prices and Macroeconomic Fundamentals," University of Aberdeen, Business School. Finance and Mgmt. Working Paper NO. 01-3.

Shruti Tripathi, "Comparison between BSE 100 and Sensex",   Indira Gandhi Institute of Development Research, Working Paper series, 2008.

Defo , Victor J. "An Empirical Investigation Of the Speed of the Market Reaction to Earning Announcements" , Ph.D student, Research paper, Arizona University.

Lang Mark, "Time Varying Stock Price response to earning included by uncertainty about the time series process of earnings" University of North Carolina, working paper series, International Journal of Economics.

Bibliography

Journals & Working Papers:

International Journal of Finance and Economic Studies.

The Management Accountants.

The Accounting World.

Indian Journal of Finance.

Journal of Accounting Research (ICFAI), vol.7, Oct. 2008.

IGIDR, working paper series, 2008.

NBER, working paper series No. W 7644

BOOKS:

Bruce Pounder, "Corporate Financial Reporting", Prentice Hall Pvt. Ltd.

P. Rao, "Accounting Theory and Standards", McGraw Hill Pub. Ltd.

Paul B.W.Miller and Paul R.Bahnson, "Quality Financial Reporting."

WEBSITES

www.google.com

www.economictimes.com

www.bseindia.com

www.icai.org.in/resource_file/11054p449-oct04

www.ssrn.com

Prof Pramod Kumar, Head of the Department of Accountancy & Law, Dayalbagh Educational Institute, Agra.

Miss Kirti Khanna, Research Scholar, Deptt. of Accountancy & Law, Faculty of Commerce, Dayalbagh Educational Institute, Agra.