



Effect of Seasonality in Stock Markets: A Case Study of BSE & NSE

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KEYWORDS

The rate, size and direction of economic growth of an economy depend largely on its financial system. A country's financial system consists of financial assets, financial intermediaries and financial markets. Financial system is a broader term to include all the three components mentioned above. Financial assets, unlike physical assets, are those assets which are useful for further production of other assets or for earning income. For example if one purchases land & building for residential purpose, these can't be used for further production. But if he purchases land & building for hiring, these become a financial asset. Financial assets are further classified into marketable and non-marketable assets depending on their transferability.

Financial intermediaries include all those institutions and organizations which intermediate and facilitate transactions in financial markets e.g. Financial Corporations and Investing Institutions, Commercial Banks, Stock Exchanges, Co-operative Banks etc.

As per the **Securities Contracts Regulation Act, 1956** "A stock exchange is an association, organization or body of individuals, whether incorporated or not, established for the purpose of assisting, regulating and controlling business in buying, selling and dealing in securities." Husband and Dockeray write "Securities or Stock Exchanges are privately organized markets which are used to facilitate trading in securities."

Hence, Stock exchanges or markets are organized and orderly regulated markets providing trading facility of listed securities through brokers thereby increasing liquidity and safety of investment and promoting saving and investment.

Stock Exchanges in India

India has a history of stock exchange for over a century. The Bombay Stock Exchange (BSE) is known as the oldest exchange in Asia. It traces its history to the 1850s, when stock-brokers would gather under banyan trees in front of Mumbai's Town Hall. The location of these meetings changed many times, as the number of brokers constantly increased. The group eventually moved to Dalal Street in 1874 and in 1875 became an official organization known as 'The Native Share & Stock Brokers Association'. In 1956, the BSE became the first stock exchange to be recognized by the Indian Government under the Securities Contracts Regulation Act. Development of cotton mills industry led to set up of many other stock exchanges. This was followed by the formation of associations/exchanges in Ahmedabad (1894), Calcutta (1908), and Madras (1937). At present there are many national and regional stock exchanges working in India. The Bombay Stock Exchange (BSE) and the National Stock Exchange of India Ltd (NSE) are the two primary national exchanges in India. In addition, there are several Regional Stock Exchanges. However, the BSE and NSE have established themselves as the two leading exchanges and account for about 80 per cent of the equity volume traded

in India³. The NSE and BSE are equal in size in terms of daily traded volume.

Seasonality

After understanding the concept of volatility, one can easily conclude this also that volatility is repeated over time and that price fluctuations often occur in clusters. As everyone understands the concept and nature of natural seasons, it is better known that a particular season is repeated over a certain period of time. In the season of spring the weather becomes warmer and plants start to grow leaves which turn out to fall in autumn. The earth completes its one round around the sun in 365 days and after that it comes to the same position where it was one year before. The sun rises in the east and sets in the west. Summer, autumn, winter and spring are the four seasons which come after one another in the same sequence every year. In festive seasons shopkeepers keep larger amount of stocks in anticipation of high sales. People living along the coastal areas of oceans take preventive actions regarding possibility of Tsunami, Katrina etc.

These examples illustrate that when people know the cyclic nature of a season they used to take preemptive measures accordingly. To sum up, there are a lot of things happening around us in a cyclical or repetitive manner and being a human being, we used to adapt those cycles and behave accordingly.

Seasonality in stock markets implies some kind of regular and repetitive phenomenon occurring at some regular interval of time, which may generate abnormal or excess returns. Seasonality includes day-of-the-week effect, month-of-the-year effect, quarterly effects, monthly effects, weekly effects, holiday effects etc. The present study attempts to explore the existence of seasonality in Indian stock market in four forms namely day-of-the-week effect, month-of-the-year effect, quarterly effects, and monthly effects. It was also aimed the general awareness regarding seasonality.

VARIOUS CALENDAR EFFECTS

While going through literature, following calendar effects were identified:

Day-of-the-Week Effect:

Day-of-the-week Effect implies that there is any day in a week which is generating or providing statistically significant returns on the stocks held which are in excess of those provided by other days. For example if returns of Thursday are significantly higher or lower than returns of other days, it will be termed as Thursday Effect. *Black Monday* or *Black Friday* are the common terms used in day to day life and reflects the existence of seasonality.

Month-of-the-Year Effect:

This term states that there are some months in a year which tend to produce excess returns from those of other months. As is observed in our day to day life that February is treat-

ed as the pre-budget month in India and in this month the behaviour of stock market is relatively calm and it gets changed as per the announcements made in the budget. If this fact is proven statistically, it will get turned into the month-of-the-year effect. Stock market participants are very much aware of the terms *Santa Claus Rally*, *January Effect*, *turn of the year effect*, *Sell in May and Go Away*, *November effect* etc.

Quarterly Effects:

It refers to the probability of earning abnormal returns during certain quarters of the year. In every country, each of the quarters has its own significance. So there might have existed chances to earn excess returns in that particular quarter. Quarterly effects may have their implications for long term investors.

Monthly Effects:

This effect explores the possibility of earning abnormal returns during certain parts of a month. Although less researched, but this effect may have important considerations for short time investors.

Holiday Effects:

It is a general experience in stock market that stock prices behave in a particular way before and after holidays. If these days (before and after holidays) statistically proven to yield returns which are in excess of returns earned during other days, the stock market will be said to have holiday effects.

Weekly Effects: It refers to the possibility of earning higher returns during particular week of a month. Many short term investors buy on Monday and sell on Friday or vice-versa. This practice may result in such weekly effects.

Election-Cycle Investing:

In many countries including India, election cycle consists of a five-year period. Since elections, exit polling and final results are otherwise also very important event for stock markets, there are chances to earn abnormal returns at a particular time before or after elections.

REFERENCES

1. Asteriou, D. & Hull, S. G. (2007). Applied econometrics- A modern approach using EViews and Microfit. Palgrave Macmillan.
2. Baltagi, B. H. (2008). Econometrics (4th Edition). Springer.
3. Ben, V. (2005). Econometric theory & applications with Eviews. Prentice Hall Pearson Education Ltd.
4. Donald E. F. & Ronald J. J. (1995). Security analysis and portfolio management. Prentice Hall.
5. Elory D. (1988). Stock market anomalies. New York, USA: Cambridge, University Press.
6. Endres, W. (2004). Applied econometrics time series (2nd Edition). New Delhi: Wiley India (P) Ltd.
7. Fosback, N. (1998). Stock market logic: A Sophisticated Approach to Profits on Wall Street. Dearborn Financial Publications.
- Journal Articles:
 1. Abdullah, D. A. & Hayworth, S. C. (1993). Macroeconometrics of stock price fluctuations. Quarterly Journal of Business and Economics, 32 (1), 50- 67. doi: <http://www.jstor.org/stable/40473075>.
 2. Aggarwal, A. & Tandon, K. (1994). Anomalies or illusions? Evidence from stock markets in eighteen countries. Journal of International Money and Finance, 13 (1), 83-106. Retrieved from <http://www.sciencedirect.com/science/article/pii/0261560694900264> visited on July 04, 2011.
 3. Aggarwal, R. & Rivoli, P. (1989). Seasonal and day-of-the-week effects in four emerging stock markets. The Financial Review, 24 (4), 541-550. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6288.1989.tb00359.x/abstract> visited on June 26, 2011.
 4. Algidede, P. (2008). Day-of-the-week seasonality in African stock markets. Applied Financial Economics Letters, 4, 115-120. Retrieved from <http://www.tandfonline.com/doi/pdf/10.1080/17446540701537749> visited on February 24, 2011.
 5. Algidede, P. (2008). Month-of-the-year and pre-holiday seasonality in African stock markets. Stirling Economics Discussion Papers with number 2008-23, Retrieved from <http://ideas.repec.org/p/stl/stledp/2008-23.html> visited on July 07, 2011.
 6. Al-Jafari, M. K. (2012). An empirical investigation of the day-of- the-week effect on stock returns and volatility: Evidence from Muscat securities market. International Journal of Economics and Finance, 4 (7), 141-149. doi: <http://dx.doi.org/10.5539/ijef.v4n7p141>
 7. Almonte, C. K. S. (2012). Calendar effects in the Philippine stock market International Journal of Information Technology and Business Management, 3 (1), 64-80. Retrieved from <http://www.jitbm.com/volume3/Calendar%20Effects%20in%20the%20Philippine%20Stock%20Market%20-%20JITBM.pdf> visited on March 11, 2014