

A STUDY ON EFFICIENCY OF THE INDIAN STOCK MARKET

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ABSTRACT

The study carried out in this paper has presented evidence of the inefficient form of the Indian Stock Market in a semi-strong form. From the event analysis and t-test, we are able to conclude that the series of stocks in the Indian Stock Market is biased random time series. The efficiency of the stock market has a significant impact on the potential return on investment. An efficient market eliminates the possibility of arbitrage and unexploited profit opportunities. This study analyzes the weak form efficiency of the Indian Stock market based on the two major Indian stock exchanges, viz., BSE and NSE. The daily closing values of Sensex and Nifty indices. The study confirms that the Indian Stock market is weak form inefficient and can thus be outperformed.

Keywords: Indian Stock Market, arbitrage, Sensex and Nifty indices

1. INTRODUCTION

The Indian Equity Market is also known as Indian share market or Indian stock market. The Indian market of equities is transacted on the basis of two major stock indices, National Stock Exchange of India Ltd. (NSE) and The Bombay Stock Exchange (BSE).

Indian Equity Market at present is a lucrative field for the investors and investing in Indian stocks are profitable for not only the long and medium-term investors, but also the position traders, short-term swing traders and for intra-day traders. In terms of market capitalization, there are over 5000 companies in the BSE chart list. Generally the bigger companies are listed with the NSE and the BSE, but there is the OTCEI or the Over the Counter Exchange of India, which lists the medium and small sized companies. There is the SEBI or the Securities and Exchange Board of India which supervises the functioning of the stock markets in India.

The growing financial capital markets of India being encouraged by domestic and foreign investments is becoming a profitable business more with each day. If all the economic parameters are unchanged Indian Equity Market will be conducive for the growth of private equities and this will lead to an overall improvement in the Indian economy.

Primary Market: Primary market refers to the long term flow of funds from the surplus sector to the government and corporate sector (through primary issue) and to banks and non bank financial intermediaries (through secondary issues). Primary issues of the corporate sector lead to capital formation (creation of net fix asset and incremental change in inventories) thus primary market is again sub divided into:

- ❖ Public issue
- ❖ Right issue
- ❖ Private placement
- ❖ Professional allotment

Secondary market: Secondary market is a market for outstanding securities. An equity instrument, being an eternal fund, provides an all-time market while a debt instrument with a defined maturity period, is traded at the secondary market till maturity.

Unlike primary issues in the primary market which result in capital formation, the secondary market facilitates only liquidity and marketability of outstanding debt and equity instruments. The secondary market contributes to economic growth by channelizing funds into the most efficient channel through the process of disinvestment to reinvestment. The secondary market also provides instant valuation of securities made possible by changes in the internal environment, that is, through companywide and industry wide factors. Such a valuation facilitates the measurement of the cost of capital and rate of return of economic entities at the micro level.

For trading in issue of corporate and financial intermediaries, there are:

- ❖ Recognized stock exchanges,
- ❖ National stock exchange of India limited (NSE)

2. REVIEW OF LITERATURE

ARTICLE: 1

Title: A Study on the Efficiency of the Indian Stock Market

Author: Devansh Jain

Source: Journal of Business Research

Abstract

The efficiency of the stock market has a significant impact on the potential return on investment. An efficient market eliminates the possibility of arbitrage and unexploited profit opportunities. This study analyzes the weak form efficiency of the Indian Stock market based on the two major Indian stock exchanges, viz., BSE and NSE. The daily closing values of Sensex and Nifty indices for the period from April 2010 to March 2019 are used to perform the Runs test, the Autocorrelation test, and the Autoregression test. The study confirms that the Indian Stock market is weak form inefficient and can thus be outperformed.

ARTICLE: 2

Kashif Hamid et al., 2010 [1] This study aims at testing the weak form market efficiency of the stock market returns of Asian countries and Australia. Monthly observations are taken from January 2004 to December 2009. Mathematical techniques like Autocorrelation, Ljung-Box Q-statistic Test, Runs Test, Unit Root Test, and the Variance Ratio are used to investigate whether the selected equity markets follow the Random Walk Model at an individual level or not. The study concluded that the monthly prices do not follow random walks in all the 14 countries of the Asian-Pacific region. Hence, investors can stream of benefits through the arbitrage process from profitable opportunities across these markets.

ARTICLE: 3

Hartika Arora et al., 2017 [4] This paper attempts to verify the weak form of efficient market hypothesis using interval return data for the top 10 frequently traded stocks and the Nifty 50 from 1st January 2009 to 31st March 2011. The author tests the weak form of efficiency using highfrequency data, which is required to capture the stock market's intraday predictability characteristics. Mathematical analysis has been done with the Augmented Dickey-Fuller (ADF) test to check the data's stationarity, ARMA model to verify autocorrelations, and GARCH (1,1) model for symbolizing volatility. The results of these statistical models' present evidence for the nonexistence of the weak form of efficiency, thereby providing an opportunity to investors towards exploiting the predictable characteristics of the market through trading.'

Ajju Patel et al., 2018 [6] This paper investigated the weak form of market efficiency. Three-year daily closing points were taken from the Bombay Stock Exchange (BSE) official website, from 1st April 2015 to 31st March 2018. The Runs test was used to analyze data. The study concluded that the market is not efficient enough to adjust readily by the news regarding the factors that may affect the stock market prices, so there may be chances where investors who are in touch with factors may outperform the market.

RESEARCH GAP:

The study confirms that the Indian Stock market is weak form inefficient and can thus be outperformed.

OBJECTIVES:

The objectives of the project can be mentioned as below:

1. To study volatility in Indian stock market while taking SENSEX of Bombay stock exchange as a source of secondary data which broadly represent Indian stock market along with NIFTY of National Stock Exchange also the study of Karvy stock broking limited.
2. To study the volatility of stock market with referred to Banking sector.
3. Understanding of Bull Market and Bear Market.
4. This project will be helpful to know volatility in Indian Stock Market and reasons for such high volatility and would be able to take decisions for investment in volatile stock market.

3. RESEARCH METHODOLOGY

Need For The Study

Derivatives a product created from equities, and the product when applying short positions when an investor has long positions in equity segment, where to make break even. And the major need to choose this topic to have a brief idea about arbitrage trading system in two different market segments. One of the single best things you can do to further

your education in trading commodities is to keep thorough records of your trades. Maintaining good records requires discipline, just like good trading. Unfortunately, many commodity traders don't take the time to track their trading history, which can offer a wealth of information to improve their odds of success most professional traders, and those who consistently make money from trading commodities, keep diligent records of their trading activity. The same cannot be said for the masses that consistently lose at trading.

Scope Of The Study:

1. Investor can assess the company financial strength and factors that affect the company. Scope of the study is limited. We can say that 70% of the analysis is proved good for the investor, but the 30% depends upon market sentiment.
2. The topic is selected to analyses the factors that affect the future EPS of a company based on fundamentals of the company.
3. The market standing of the company studied in the order to give a better scope to the Analysis is helpful to the investors, share holders, creditors for the rating of the company.

Methodology

Data Collection:

All the data are collected from secondary source, i.e, magazines, newspapers, websites etc. Data were collected from BSE Sensex and NSE Nifty. Sensex is a basket of 30 constituent stocks representing a sample of large, liquid and representative companies. Due to its wide acceptance amongst the Indian investors, sensex is regarded the pulse of the Indian stock market. Nifty is a well diversified 50 stock index accounting for 24 sectors of the economy. Hence these two indices were taken for the study.

•STATISTICAL TOOLS:

The primary data has been collected by using of Questionnaire and Interview Schedule specifically developed for the purpose.

Tools used for Data Analysis: Simple statistical and mathematical tools like percentage analysis of data.

LIMITATIONS OF THE STUDY

1. A period of 45 days was a very short period to understand the stock market.
2. The project is based on secondary data collected from other sources magazines, newspaper and websites etc.
3. Reliability of the sources could also be limitation for the project.
4. Possibility of error in analysis of data.

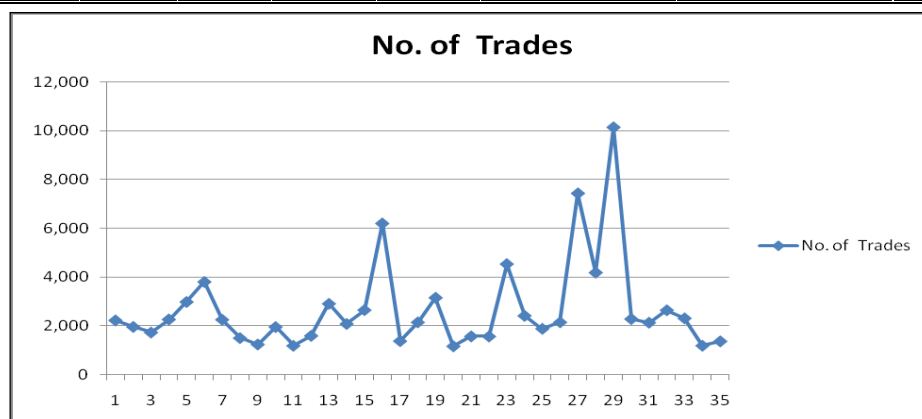
4. DATA ANALYSIS & INTERPRETATION

Company :SYNDICATE BANK 532276

Period: 02-Dec-2022 to 20-Jan-2023

Date	Open	High	Low	Close	WAP	No.of Shares	No.of Trades	Total turnover
2/12/22	89.95	90.60	88.40	88.85	89.68	2,57,442	2,216	2,30,87,519
3/12/22	89.40	89.90	88.10	88.75	88.86	1,60,873	1,947	1,42,94,720
4/12/22	88.50	89.55	87.50	87.75	88.36	1,61,956	1,720	1,43,10,756
5/12/22	88.70	91.00	88.70	89.55	89.92	1,92,385	2,255	1,72,99,621
6/12/22	89.95	91.25	88.60	90.40	90.26	2,47,116	2,972	2,23,05,820
9/12/22	93.00	95.00	92.00	92.55	93.42	3,93,720	3,791	3,67,82,548
10/12/2	93.30	93.45	90.00	91.20	91.20	2,20,660	2,244	2,01,12,361
11/12/22	90.90	91.50	89.90	90.85	90.67	1,28,802	1,488	1,16,78,458
12/12/22	90.50	90.90	89.20	89.50	90.03	1,21,446	1,226	1,09,34,169
13/12/22	88.50	89.00	86.95	87.40	87.74	1,87,456	1,942	1,64,47,993

16/12/22	87.70	88.00	86.10	86.95	87.19	1,31,501	1,193	1,19,62,985
19/12/22	86.20	87.90	84.00	84.70	85.68	1,62,370	1,581	1,39,11,795
20/12/22	84.20	89.20	84.20	88.65	87.52	2,67,423	2,896	2,34,05,558
19/12/22	89.50	91.90	85.65	86.10	86.77	1,94,702	2,069	1,68,94,397
20/12/22	87.00	89.20	86.10	88.65	87.63	1,59,353	2,637	1,39,64,236
23/12/22	89.50	93.35	89.00	92.05	91.75	2,81,651	6,193	2,58,41,491
24/12/22	92.20	93.25	90.30	92.10	91.62	1,27,638	1,364	1,16,94,361
26/12/22	92.10	94.70	92.10	93.60	93.74	2,16,029	2,136	2,02,50,448
27/12/22	94.50	98.30	93.90	95.10	96.29	3,64,909	3,193	3,51,36,488
30/12/22	95.50	96.00	93.20	93.40	93.99	1,22,807	1,202	1,20,42,804
31/12/22	94.00	94.90	92.35	94.60	94.08	1,47,957	1,558	1,39,19,516
1/01/23	95.50	96.90	94.25	96.05	95.32	1,85,543	1,555	1,76,85,799
2/01/23	96.25	100.70	93.10	93.75	97.59	5,66,628	4,525	5,52,95,448
3/01/23	93.70	95.75	91.95	95.35	94.19	2,21,783	2,403	2,08,85,770
6/01/23	95.30	95.60	92.85	93.40	93.92	1,27,485	1,871	1,19,73,193
7/01/23	93.55	94.25	90.90	92.05	92.19	2,05,571	2,138	1,89,51,719
8/01/23	92.50	100.05	92.50	99.40	97.70	8,26,365	7,428	8,07,36,791
9/01/23	99.50	101.45	95.55	96.20	98.23	4,66,603	4,195	4,58,36,581
10/01/23	97.00	98.30	92.70	93.20	95.65	5,08,192	10,138	4,86,06,197
13/01/23	93.30	94.90	92.30	93.55	93.57	2,48,083	2,272	2,32,13,584
19/01/23	94.20	95.30	93.50	94.05	94.20	1,95,932	2,122	1,84,57,164
20/01/23	94.80	97.10	94.35	96.70	95.87	2,82,943	2,631	2,71,24,795
16/01/23	97.45	97.85	95.00	95.85	96.22	2,36,020	2,299	2,27,08,821
19/01/23	95.90	96.20	94.20	94.85	95.06	1,20,882	1,196	1,19,90,720
20/01/23	93.20	94.00	92.00	93.30	93.12	1,19,649	1,355	1,09,55,934



Interpretation:

On open value risen from 89.95 to 93.20 than compare to higher value of EPS 90.60 to 94.00. Then coming to lower price from 88.40 to 92.00. Wholly the conclusion is 88.85 to 93.30 raised.

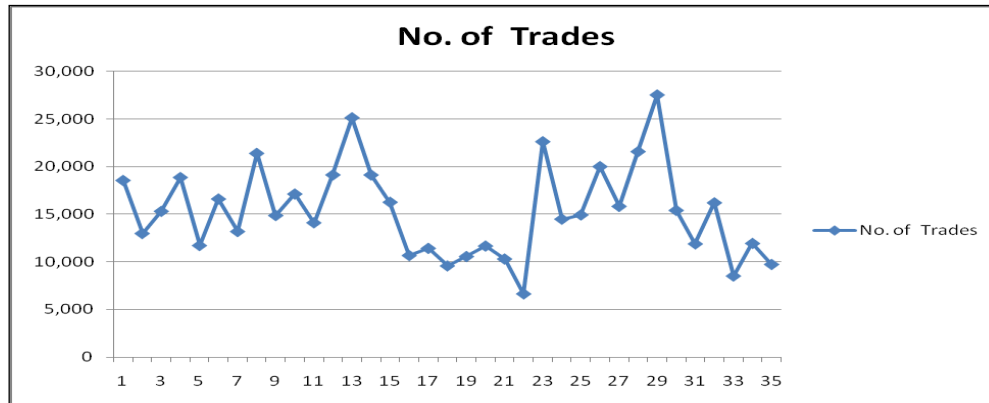
The comings to the volume on the same dates or days volumes are increased. Because on this session CANARA BANK value is raised i.e. percentage of 9.21%.

Company :STATE BANK OF INDIA 500112

Period: 02-Dec-2022 to 20-Jan-2023

Date	Open	High	Low	Close	WAP	No. of Shares	No. of Trades	Total Turnover
2/12/22	1,826.00	1,853.00	1,813.05	1,822.65	1,834.08	3,04,458	20,565	55,84,00,208
3/12/22	1,812.20	1,829.40	1,804.80	1,819.35	1,820.93	2,25,610	12,998	40,96,92,560
4/12/22	1,805.00	1,834.70	1,796.40	1,819.70	1,820.47	2,70,798	20,326	49,16,24,553
5/12/22	1,861.30	1,880.00	1,845.10	1,853.70	1,860.22	3,05,636	20,876	56,85,50,670
6/12/22	1,853.70	1,867.90	1,845.85	1,861.80	1,858.57	1,92,754	11,740	35,82,46,844
9/12/22	1,913.00	1,920.90	1,882.20	1,889.20	1,898.20	2,91,562	16,623	55,34,44,103
10/12/2	1,899.40	1,899.40	1,839.10	1,844.55	1,858.83	2,32,416	13,206	43,20,21,289
11/12/22	1,840.00	1,840.00	1,782.10	1,796.70	1,806.20	3,58,984	21,398	64,83,77,465
12/12/22	1,793.90	1,798.25	1,773.00	1,778.40	1,786.84	2,39,697	19,888	42,83,00,913
13/12/22	1,759.60	1,769.85	1,740.50	1,743.55	1,751.63	2,50,024	19,139	43,79,49,311
16/12/22	1,734.40	1,760.95	1,730.00	1,732.85	1,742.19	2,27,535	19,122	39,64,03,949
19/12/22	1,753.70	1,753.70	1,720.10	1,720.95	1,727.12	3,03,605	19,195	52,43,60,837
20/12/22	1,720.95	1,779.30	1,716.00	1,764.90	1,757.05	4,53,467	25,136	79,67,65,389
19/12/22	1,773.10	1,776.80	1,716.10	1,730.45	1,732.58	2,99,824	19,133	51,94,69,922
20/12/22	1,728.00	1,758.00	1,720.95	1,751.85	1,740.16	2,71,191	16,281	47,20,80,770
23/12/22	1,749.90	1,773.00	1,748.00	1,757.55	1,762.94	1,84,850	10,692	32,58,79,429
24/12/22	1,765.00	1,772.00	1,752.10	1,759.20	1,762.57	1,78,698	11,444	31,49,67,388
26/12/22	1,755.00	1,770.00	1,747.00	1,754.20	1,760.39	1,82,739	9,602	32,16,91,449
27/12/22	1,757.00	1,781.50	1,757.00	1,769.90	1,772.72	1,79,716	10,589	31,85,85,364
30/12/22	1,780.00	1,789.60	1,755.40	1,763.40	1,768.28	1,98,896	11,691	35,19,03,484
31/12/22	1,763.40	1,773.40	1,751.60	1,765.50	1,762.33	1,69,446	10,327	29,86,19,479
1/01/23	1,774.00	1,774.00	1,761.00	1,765.30	1,767.60	98,601	6,670	19,42,86,981
2/01/23	1,766.90	1,805.80	1,733.00	1,742.50	1,777.56	4,04,041	22,624	71,82,05,113
3/01/23	1,730.00	1,735.95	1,710.40	1,716.10	1,719.94	2,37,236	19,504	40,80,32,296
6/01/23	1,720.00	1,721.50	1,681.00	1,687.65	1,694.74	2,20,811	19,947	37,42,16,954
7/01/23	1,695.00	1,702.00	1,653.20	1,659.75	1,671.10	3,05,089	20,016	50,98,33,891
8/01/23	1,665.00	1,675.95	1,650.00	1,655.40	1,664.47	2,64,670	20,845	44,05,35,904
9/01/23	1,654.90	1,662.70	1,630.50	1,639.10	1,642.11	2,59,575	21,589	42,62,51,031
10/01/23	1,639.90	1,656.65	1,600.00	1,608.85	1,631.40	3,40,851	27,524	55,60,63,563
13/01/23	1,619.00	1,647.10	1,611.75	1,641.95	1,630.66	2,37,666	20,422	38,75,52,683
19/01/23	1,634.00	1,648.50	1,622.05	1,626.90	1,636.20	1,71,530	11,910	28,06,48,989
20/01/23	1,635.00	1,658.00	1,633.25	1,643.55	1,646.00	2,45,329	16,219	40,38,11,890
16/01/23	1,645.00	1,650.55	1,634.00	1,637.00	1,640.55	1,24,707	8,542	20,45,88,259

19/01/23	1,632.65	1,644.90	1,620.25	1,622.05	1,628.64	1,73,498	11,964	28,25,66,233
20/01/23	1,622.95	1,645.90	1,619.00	1,641.00	1,633.95	1,51,788	9,757	24,80,19,169



Interpretation:

On open value risen from 2026.00 to 1622.95 than compare to higher value of EPS 2053.00 to 1645.90. Then coming to lower price from 2013.05 to 1619.00. Wholly the conclusion is 2022.65 to 1641.00 raised.

The comings to the volume on the same dates or days volumes are increased. Because on this session STATE BANK OF INDIA value is raised i.e. percentage of 19.36 %.

5. CONCLUSION

The behaviour of Stock Market and the prices of stocks depend greatly on the speculation of the investors. So, over-reactions and wrong speculation can give rise to irrational behavior of the Stock Market. Excessive optimistic speculation of future prospects can raise the prices of stocks to an extreme high and excessive pessimism on the part of the investors can result in extremely low prices.

So, it is extremely difficult to make predictions about the Stock Market and the inexperienced investors who are not that much interested in financial analysis of stocks; rarely get the financial assistance from the Stock Market at the time of need.

The factors influencing the stock market affect the volatility of the market in which they are traded. These factors, in turn, are responsible for the development of the stock market in any country and making it comparable with the global markets. So, stock market development is a multi-dimensional concept.

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