

COMPARATIVE STUDY OF NSE AND BSE: MARKET CAPITALIZATION

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ABSTRACT

Market capitalization is often used as a parameter to rank companies in many sectors, and it is of due importance in the case of the stock market as well. Thus, this paper focuses on comparing two leading stock exchanges of India NSE and BSE based on their market capitalization during the period 2015-2020 and the major objective of the study was to compare market capitalization of both the exchanges for the sample period. For the analysis of data and hypothesis testing, statistical tools like simple mean, simple percentage, standard deviation, and paired sample t-test have been used. The findings indicated that in terms of market capitalization BSE holds a significantly better position than NSE.

Keywords: NSE, BSE, Market Capitalization, t-Test, Stock Exchanges.

Introduction

The origin of the stock market in India goes back to the 18th century when long-term negotiation securities were first issued. Later, in the 19th century with the introduction of the companies act 1850 stock market began to rise in India. In the beginning stage of its development, the emergence of the Native Share and Stock Brokers' Association (1875) was there which is presently known as the Bombay stock exchange (BSE). BSE is considered Asia's oldest stock exchange and the world's fastest stock exchange with a speed of 6 microseconds. (Thomas et al., n.d.) BSE is the first stock exchange in India that received permanent recognition under the Securities Contract Regulation Act of 1956 and was also recognized as 1st listed stock exchange of India in 2017 with over 250 companies.

Over time, there was the formation of several associations/exchanges in Ahmedabad (1894), Calcutta (1908), and Madras (1937). In 1994 formation of the National Stock Exchange (NSE) with the launch of the wholesale debt market followed by the cash market segment was proved as one of the major developments in the stock exchange. In the same year, NSE introduced screen-based trading, and in 1995 electronic delivery facilitated by depositories was introduced and in 2002 rolling settlement was introduced in a phase-wise manner. NSE is the first stock exchange in the world to employ satellite technology. NSE in a very short period dominated the market and stand in competition with BSE. Both the stock exchange combined form almost 80 percent of the total Indian stock market. (Singh Lodhi & Jain, n.d.)

Review of Related Literature

Lodhi, G. S., and Jain, K., (2014) – This study was conducted to compare the financial performance and profitability of BSE and NSE with the help of various statistical tools including mean, standard deviation, coefficient of variance, trend analysis, and t-test. For which census data of stock market was occupied of 10 years from 2000-2001 to 2012-2013. The results revealed that trading frequency and the stock market are higher on NSE. Also, the execution cost in NSE is less while the average size per trade is higher on BSE.

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Chougule, A.R. and Khamborkar, A.K., (2015) – In this study, an attempt was made to compare the financial performance of NSE and BSE through the use of ratio analysis, for which data was collected from the annual report of two companies from 2009 to 2014. The results concluded that in terms of overall performance NSE is better than BSE.

Shah, S. K., and Gondaliya, V., (2019) – This study attempted to compare NSE and BSE for a period of 5 years from 2013 to 2018. It compares both the stock exchanges in terms of the number of companies listed, market capitalization, market turnover, and various ratios. The study concluded that during the period in terms of market capitalization and the number of companies listed, BSE holds a higher position than NSE. The study supported the fact that both NSE and BSE go hand-in-hand and complement each other rather than compete with each other.

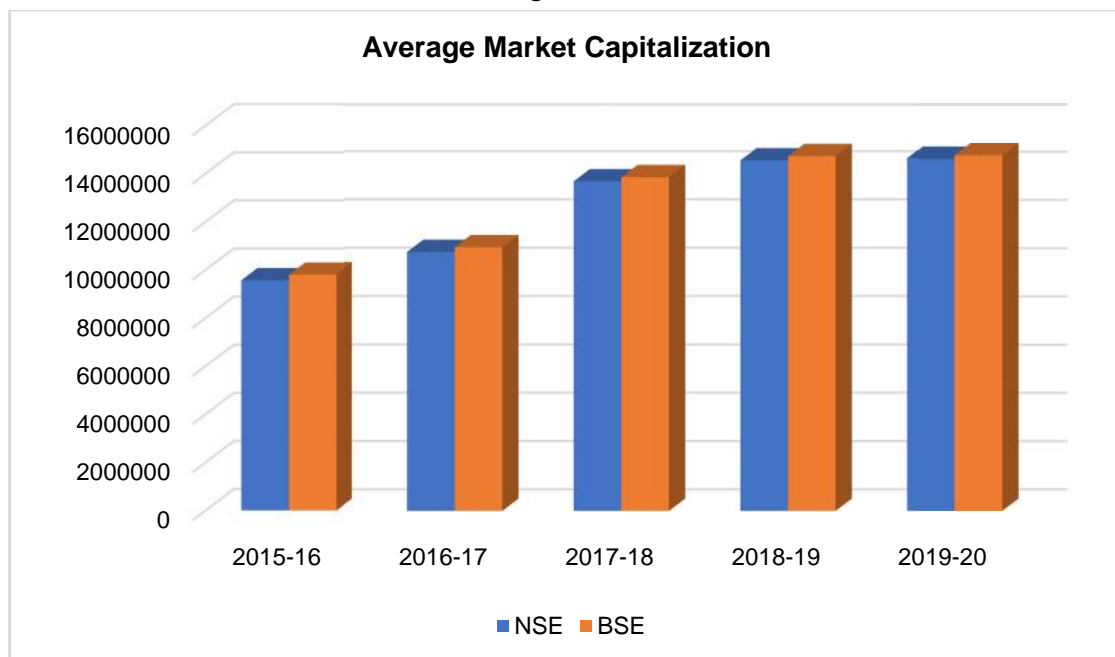
Conceptual Framework

Market capitalization is termed as the aggregate of total outstanding shares multiplied by the current value of share or closing market value of the share. It is considered one of the most important elements in finding out the market value of a company. Further, it helps the investor in knowing their risk-return associated with the company. Thus, they hold a tough competition in India.

Market Capitalization = Number of outstanding shares X closing market price per share

In the study, average market capitalization has been considered of both NSE and BSE from the financial year 2015-16 to 2019-20 as it is considered as the most effective way in finding out the value of a company.

Figure: 01



Source: Export from Excel

Research Methodology

Need of Study

This study is conducted to explore the aspects of market capitalization in stock exchange companies of India. It is of utmost importance to establish the rank of different companies in any sector in terms of growth, profit, and capitalization.

Objectives

- To explore the market capitalization of BSE.
- To explore the market capitalization of NSE.
- To compare the market capitalization of NSE and BSE.

Hypothesis

H₀₁: There is no significant difference between the market capitalization of NSE and BSE.

H_{A1}: There is a significant difference between the market capitalization of NSE and BSE.

Research Design

This research is exploratory and descriptive in nature. It focuses on comparing the data of two leading stock exchanges in India NSE and BSE.

Data Source

This study is based on secondary data which has been extracted from the Annual Handbook of Statistics on Indian Economy 2019-20 published on September 18, 2020, available on the website of RBI.

Sample Design

The sample consists of 5 years of monthly market capitalization data from the financial year 2015-16 to 2019-20 of both NSE and BSE.

Data Analysis

For the fulfillment of research objectives and hypothesis testing the collected data has been analyzed by different statistical tools like simple mean, simple percentage, standard deviation, and Paired sample t-test. The mean and standard deviation of each year from the financial year 2015-16 to 2019-20 was calculated of monthly market capitalization for both NSE and BSE and it was labeled from pair 1 to 5 yearly as shown in table01

		Mean	N	Std. Deviation
Pair 1	NSE 2015-16	9570788.33	12	453335.385
	BSE 2015-16	9800298.83	12	497901.928
Pair 2	NSE 2016-17	10718506.17	12	708416.283
	BSE 2016-17	10912532.33	12	712879.873
Pair 3	NSE 2017-18	13642105.67	12	1029971.412
	BSE 2017-18	13814074.58	12	1044701.887
Pair 4	NSE 2018-19	14506980.42	12	613101.675
	BSE 2018-19	14684895.17	12	623303.713
Pair 5	NSE 2019-20	14599259.00	12	1178979.898
	BSE 2019-20	14748073.83	12	1194940.923

Source: Export from SPSS

Table 01 shows that from the year 2015-16 onwards the average market capitalization of both the stock exchange shows an increasing trend. NSE has increased from 9570788.33 to 14599259.00, that is 52.54% in the past 5 financial years whereas BSE has increased from 9800298.83 to 14748073.83, that is 50.49% from the financial year 2015-16 to 2019-20. Paired Sample Test has been shown below in table 02 that consists of paired differences of mean, standard deviation, standard error of NSE, and BSE for the financial year from 2015-16 to 2019-20. The table also consists of t-test values with degree of freedom and level of significance for each year.

		Paired Differences			T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	NSE 2015-16 – BSE 2015-16	-229511	63292.5	18271	-12.561	11	0
Pair 2	NSE 2016-17 – BSE 2016-17	-194026	19687.9	5683.4	-34.139	11	0
Pair 3	NSE 2017-18 – BSE 2017-18	-171969	24197.8	6985.3	-24.619	11	0
Pair 4	NSE 2018-19 – BSE 2018-19	-177915	13924.1	4019.53	-44.263	11	0
Pair 5	NSE 2019-20 – BSE 2019-20	-148815	29211.8	8432.71	-17.647	11	0

Source: Export from SPSS

In the above table, all 5 pairs were analyzed by comparing their respective mean values and standard deviation at a 5% level of significance with 11 degree of freedom for the testing of the hypothesis by Paired sample t-test. Pairs 1 to 5 are representing a comparison of NSE and BSE in terms of market capitalization.

- In the case of Pair 1 (the financial year 2015-16), the mean difference between NSE and BSE was calculated as -229511 which is significant with t-statistics -12.561 at a 5% level of significance, which indicates that there is a significant difference between the market capitalization of NSE and BSE and the negative values of t-statistics (-12.561) shows that in terms of market capitalization BSE is better than NSE for the year 2015-16.
- Pair 2 (the financial year 2016-17) also indicates that there is a significant difference between the market capitalization of NSE and BSE with the mean difference of -194026 which is significant with t-statistics -34.139 at 5% level of significance and the negative value of t-statistics shows that market capitalization of BSE is better than NSE for the year 2016-17.
- In the financial year 2017-18 which is labeled as Pair 3, the mean difference between NSE and BSE was calculated as -171969 with t-statistics -24.619 at a 5% level of significance, which indicates that there is a significant difference between the market capitalization of NSE and BSE. And the negative value of t-statistics shows that in terms of market capitalization BSE is better than NSE for the year 2017-18.
- In the case of Pair 4 (the financial year 2018-19) again the mean difference between NSE and BSE was calculated as -177915 with t-statistics -44.263 at a 5% level of significance, which indicates that there is a significant difference between the market capitalization of NSE and BSE and the negative values of t-statistics shows that in terms of market capitalization BSE is better than NSE for the year 2018-19.
- In the case of Pair 5 (the financial year 2019-20) again BSE found to be significantly better than NSE in terms of market capitalization as the mean difference between NSE and BSE was calculated as -148815 with t-statistics -17.647 at a 5% level of significance for the year 2019-20.

Based on the above analysis of all the pairs it is found that there is a significant difference between the market capitalization of NSE and BSE thus null hypothesis is rejected. Additionally, it is also proved that BSE is leading in all five years in terms of market capitalization.

Results and Findings

- Market capitalization values of both NSE and BSE have an increasing trend over the last five years.
- The value of market capitalization for BSE was found more than NSE for each sample year.
- In the year 2018-19, the difference in market capitalization between both the exchanges was highly significant compared to any other year. While in the year of 2015-16 it was found to be lowest.

Conclusion

NSE and BSE are considered a reflection of the Indian stock exchange, covering more than 80% of the market. (Singh Lodhi & Jain, n.d.) It tells us the economic flow of the country. As per the above analysis, it was found that BSE is significantly better than NSE for the period 2015-16 to 2019-20 in terms of market capitalization. As the pioneer in stock exchange BSE has managed to form its place at the rank of 11th in the world stock exchange. But this does not mean that NSE has less influence in the stock market it is performing hand-in-hand with BSE. With the introduction of various technological advancements, NSE holds 12th position in the world stock exchange market. (Kirankumar Shah & Gondaliya, 2019) Both the exchanges are unique in their own way and working for the Indian stock market as complementary not as competitors. In all the years it can be said that both the stock exchange is growing at a steady phase giving a healthy competition to in the international stock market.

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