

Historical Analysis of the Index BSE 30 Returns and its Potential to Create Wealth in Long Term

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Amsterdam Stock Exchange was the first stock exchange of the world and it was established in 1602.¹ New York stock exchange of USA was established in 1792.² Bombay stock exchange of India was established in 1975³ and NSE was established in 1996.⁴ We observe Indian history of stock trading is not very old, it is very new when compared to other stock exchanges of the world. Study exhibits returns i.e. compounded annual growth rate CAGR and volatility of BSE 30 to help investors to understand it in a simple way.

Keywords: BSE, NSE, CAGR, volatility, BSE 30, stock exchange

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1. Introduction

This research paper covers study of BSE 30 index returns since its commencement to the December 2024. It also studies various ups and downs in the journey. Finally through statistical analysis it tries to understand volatility in its returns and understand how index can be used for long term wealth creation.

2. Objective of the Study

When compared to other stock exchanges of the world in India concept is new and only some decades old. This study provides returns CAGR and volatility to make it easy to understand. It will help to enhance knowledge of the investors as study discusses CAGR from the very inception of BSE 30. It also throws light on volatility of the BSE 30. Study also describes some major events happened during its inception to 2024.

3. Data Collection

The study is based on secondary data. Data has been collected from various websites including the official website of Bombay stock exchange i.e. BSE.

Table 1: Closing Value of BSE 30 at the end of every year from 1979 to 2024

Year End	Closing Value	Year End	Closing Value
1979*	100	2002	3,377.28
1980	148.25	2003	5,838.96
1981	227.72	2004	6,602.69
1982	235.83	2005	9,397.93
1983	252.92	2006	13,786.91
1984	271.87	2007	20,286.99
1985	527.36	2008	9,647.31
1986	524.45	2009	17,464.81
1987	442.17	2010	20,509.09
1988	666.26	2011	15,454.92
1989	778.64	2012	19,426.71
1990	1,048.29	2013	21,170.68
1991	1,908.85	2014	27,499.42
1992	2,615.37	2015	26,117.54
1993	3,346.06	2016	26,626.46
1994	3,926.90	2017	34,056.83
1995	3,110.49	2018	36,068.33
1996	3,085.20	2019	41,253.74
1997	3,658.98	2020	47,751.33
1998	3,055.41	2021	58,253.82
1999	5,005.82	2022	60,840.74
2000	3,972.12	2023	72,240.26
2001	3,262.33	2024	78,139.01

1999	5,005.82	2022	60,840.74
2000	3,972.12	2023	72,240.26
2001	3,262.33	2024	78,139.01

Source:

<https://www.bseindia.com/Indices/IndexArchiveData.html>

4. Data Analysis

Data analysis has been done with the help of excel. Firstly CAGR has been calculated from the data.

Table 2: Calculation of CAGR for every year to 2024

Year End	Closing Value	CAGR	Year End	Closing Value	CAGR
1979*	100	15.95%	2002	3,377.28	15.35%
1980	148.25	15.31%	2003	5,838.96	13.15%
1981	227.72	14.54%	2004	6,602.69	13.15%
1982	235.83	14.82%	2005	9,397.93	11.79%
1983	252.92	15.01%	2006	13,786.91	10.12%
1984	271.87	15.20%	2007	20,286.99	8.26%
1985	527.36	13.67%	2008	9,647.31	13.97%
1986	524.45	14.07%	2009	17,464.81	10.50%
1987	442.17	15.01%	2010	20,509.09	10.03%
1988	666.26	14.15%	2011	15,454.92	13.28%
1989	778.64	14.07%	2012	19,426.71	12.30%
1990	1,048.29	13.52%	2013	21,170.68	12.60%
1991	1,908.85	11.91%	2014	27,499.42	11.01%
1992	2,615.37	11.20%	2015	26,117.54	12.95%
1993	3,346.06	10.70%	2016	26,626.46	14.40%
1994	3,926.90	10.48%	2017	34,056.83	12.60%
1995	3,110.49	11.76%	2018	36,068.33	13.75%
1996	3,085.20	12.23%	2019	41,253.74	13.63%
1997	3,658.98	12.01%	2020	47,751.33	13.10%
1998	3,055.41	13.28%	2021	58,253.82	10.28%
1999	5,005.82	11.62%	2022	60,840.74	13.33%
2000	3,972.12	13.22%	2023	72,240.26	8.17%
2001	3,262.33	14.81%	2024	78,139.01	

After calculating CAGR average CAGR from 1979 to 2024 has been calculated. Standard deviation from the period 1979 to 2024 also been calculated. Calculation has been done in the following table, table 3-

Table 3: Calculation of average CAGR and standard deviation

Year End	CAGR	Year End	CAGR
1979*	15.95%	2002	15.35%
1980	15.31%	2003	13.15%
1981	14.54%	2004	13.15%
1982	14.82%	2005	11.79%
1983	15.01%	2006	10.12%
1984	15.20%	2007	8.26%
1985	13.67%	2008	13.97%
1986	14.07%	2009	10.50%
1987	15.01%	2010	10.03%
1988	14.15%	2011	13.28%
1989	14.07%	2012	12.30%
1990	13.52%	2013	12.60%
1991	11.91%	2014	11.01%
1992	11.20%	2015	12.95%
1993	10.70%	2016	14.40%
1994	10.48%	2017	12.60%
1995	11.76%	2018	13.75%
1996	12.23%	2019	13.63%
1997	12.01%	2020	13.10%
1998	13.28%	2021	10.28%
1999	11.62%	2022	13.33%
2000	13.22%	2023	8.17%
2001	14.81%	2024	
Average CAGR		12.80%	
Standard Deviation		1.84%	

From analysis we observe that average CAGR is of 12.80% per annum. This simply shows that in long run BSE 30 has provided roughly 12.8% return to its investors.

Standard deviation of the above CAGR is 1.84%. This shows that deviation is very less.

A standard deviation of 1.84 is a measure of how spread out a set of data is. It means that the values in the data set typically deviate from the mean by a value of 1.84. A low standard deviation means values are close to the mean, while a high one means values are more spread out. For a normal distribution, it would imply that roughly 68% of the data points fall between 1.84 standard deviations below and above the mean. 95% of the data points fall between 3.68 standard deviations below and above the mean.

In finance, standard deviation is used to measure the volatility of an investment. A standard deviation of 1.84 would mean that an investment's returns have fluctuated by 1.84 on average over a specific period.

5. Major Events during Life Time of BSE 30

Since its inception in 1996 BSE 30 has witnessed many ups and downs. The worst year on BSE 30 was 2008 in which it fell sharply due Global Financial Crisis. And interestingly 2009 was the best year as BSE 30 index recovered sharply.⁵

Life story of BSE 30 can be divided in to two phases viz. Bear phase and bull phase.

Some notable years of bear phase can be described as follows:

1990: The index crossed the 1,000-point mark for the first time, spurred by early economic liberalization policies.

1992 Harshad Mehta Scam: The index crashed dramatically from over 4,500 points after the "Harshad Mehta bull run" collapsed as the financial irregularities came to light. This included a single-day fall of over 12%.

1996: BSE 30 witnessed a losing streak in the year of its inception for a straight 5 months.

2000-2001- In 2000 dot.com bubble got burst and all indices of the world seen sharp declines. BSE 30 also experienced decline during this time.

2008: BSE 30 plunged to its almost half value in the year of 2008 due to global financial crisis. Global financial crisis was started due to subprime mortgages in USA.

2011: Due to negative sentiments in the year 2011 BSE 30 witnessed a decline of more than 23%.

2020: Due to COVID-19 pandemic in the year 2020 BSE 30 lost its value heavily.

And notable years of bull phase can be discussed as follows:

2005 and 2006: Both years witnessed more than 35% growth in the index BSE 30.

2007: in the year 2007 returns of the index was more than 50%.

2009: 2009 was the best year ever. It witnessed more than 75% returns in it.

2017: in 2017 returns were more than 30% due to strong positive sentiments.

2020-21: BSE 30 index witnessed a v shaped recovery after post covid-19.

6. Conclusions

After analysis it is very obvious that if someone wants to invest for a long run one can invest in BSE 30 without much consideration. As in long run average CAGR is approx 13% per annum and standard deviation is very less.

It also has been observed that it entry in the market is at the time of crisis returns are better so one should not worry of crisis or fluctuation if investment is for long term.

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