

## Risk-return comparison of NSE India with International stock exchanges



### Management

**KEYWORDS:** NSE, International Stock exchanges, Risk and return, Standard Deviation

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### ABSTRACT

The National Stock Exchange of India Limited (NSE) is the leading stock exchange of India, located in Mumbai. NSE was established in 1992 and was the first exchange in the country to provide a modern, fully automated screen-based electronic trading system which offered easy trading facility to the investors spread across the length and breadth of the country. National Stock Exchange has a total market capitalization of more than US\$1.41 trillion, making it 'the world's 12th-largest stock exchange as of March 2016. NSE's flagship index, the NIFTY 50 is used extensively by investors in India and around the world as a barometer of the Indian capital markets. The study focuses on the risk return comparison of NSE India, with New York stock exchange, London stock exchange, Tokyo stock exchange and Hong Kong stock exchange.

### Introduction

The National Stock Exchange of India Ltd (NSE) is the leading stock exchange of India located in Mumbai and established in the year 1992. Most of the trading in the Indian stock market takes place on its two stock exchanges, the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). Both exchanges follow the same trading mechanism, trading hours, settlement process, etc. NSE enjoys a dominant share in spot trading, with about 70% of the market share and almost a complete monopoly in derivatives trading. Trading at NSE takes place through an open electronic limit order book. The entire process is order-driven, which means that market orders placed by investors are automatically matched with the best limit orders. All orders in the trading need to be placed through brokers, which provide online trading facility to retail customers. Institutional investors can take advantage of the direct market access (DMA) option, in which they use trading terminals provided by the brokers for placing orders directly into the trading system. The Index of NSE is CNX Nifty.

### Market Regulation

Securities & Exchange Board of India (SEBI) has the overall responsibility of development, regulation and supervision of the stock market. SEBI was formed in 1992 as an independent authority and since then, SEBI has consistently tried to lay down market rules in line with the best market practices. It is the watchdog of Indian stock exchanges and enjoys vast powers including imposing of heavy penalties on market participants, in case of the violation of rules and regulations.

### Risk and Return

Risk is the variability in return. In the theory and practice of investing, "Risk is the uncertainty that an investment will earn its expected rate of return."

The definition does not distinguish between loss and gain. Higher risk is associated with probability of higher return and lower risk is associated with lower return. This trade off which an investor faces between risk and return is called the risk return trade off. The risk-return tradeoff is the principle which states that the potential return rises with an increase in risk. the possibility of losses. Risk can be reduced through proper diversification.

### Major stock Exchanges of the World

Stock markets globally are worth more than \$70 trillion, with investors buying and selling enormous values of shares every day from various locations. Some markets are worth an awful lot more than others. The well-known markets like the New York Stock Exchange, NASDAQ, and London Stock Exchange rank among the most valuable exchanges, while several in China and other emerging markets also feature. New York Stock Exchange is the largest stock exchange in the world by both market capitalization and trade value. NYSE is the premier listing venue for the world's leading large and

medium sized companies. London Stock Exchange located in London City, it is the oldest and fourth-largest stock exchange in the world. It is the most international of all the world's stock exchanges, with around 3,000 companies from over 70 countries admitted to trading on its markets. Tokyo Stock Exchange is the third largest stock exchange market in the world by aggregate market capitalization of its listed companies. The main indices tracking Tokyo Stock Exchange are the Nikkei 225 index. Hong Kong Stock Exchange headquartered in Hong Kong is the third largest stock exchange in Asia and the sixth largest in the world in terms of market capitalization

### Review of Literature

Masih, M.M. Abul and Masih, Rumi (1997) examined the dynamic linkage patterns among national stock exchange prices of four Asian newly industrializing countries - Taiwan, South Korea, Singapore and Hong Kong. They concluded that the study of these markets are not mutually exclusive of each other and significant shortrun linkages appear to run among them.

Noor, Azuddin Yakob, Diana Beal and Delpachitra, Sarath (2006) studied the stock market seasonality in ten Asian stock markets. He concluded that the existence of seasonality in stock markets and also suggested that this is a global phenomenon. Lau, S T and Diltz, J.D. (1994) studied the transfer of information among Tokyo and New York stock exchanges. Agarwal, R N (2000) examined the financial integration of capital markets in developing nations gave insight with regards to the methodology and the area of study followed. Poshakwale, Sunil (2002) examined the random walk hypothesis in the emerging Indian stock market by testing for the nonlinear dependence using a large disaggregated daily data from the Indian stock market.

### Research Problem

The Indian stock exchanges fluctuates heavily due to the cross border capital inflows in the form of FII, FDI and to the reaction of Global issues. All the stock exchanges are influencing each other in one way or another, but still the variability in risk and return from these exchanges are different. It is important to analyze the Risk and Return associated with various markets because it helps the investors for getting maximum gain out of their investment.

### Objective of the study

The main objective of this study is to capture the trends, similarities and patterns in the activities and movements of the Indian Stock Market in comparison to its international counterparts. The aim is to help the investors to understand the change in Indian stock market in comparison with the international stock exchanges.

### Methodology

The study based on comparative analysis of different stock exchanges, and for this purpose the world is divided into various

regions namely the Europe, US, Asia, South east Asia and Eastern Asia. Stock exchanges Representing various regions used in this study includes NSE(India), NYSE(US), LSE (Europe),HKSE(South east Asia) and TSE( East Asia). The number of sample units for this study is five. The period chosen for the study is from January 1st 2005 to December 31<sup>st</sup> 2016.

Standard deviation= $\sqrt{\sum P_i[r_1-E(r)]^2}$  where  $P_i$  is the probability and  $E(r)$  is the expected return.

**Table-I Basic details of Major Stock Exchanges**

Parameters	National Stock Exchange (NSE)	New York Stock Exchange (NYSE)	London Stock Exchange (LSE)	Tokyo Stock Exchange (TSE)	Hong Kong Stock Exchange (HKSE)
Market Index	CNX Nifty	Dow Jones	FTSE	Nikkei	Hang Seng
Currency	Indian Rupee	US Dollars	Pound sterling	Japanese Yen	HongKong Dollars
Market Cap	1.41trillion USD	19.3trillion USD	6.18trillion USD	3.9trillion USD	3.32trillion USD
No of Listings	1696	1866	2400	2030	2292

**Risk and Return**

Risk and return are the most important factors that affect the performance of any index. This section compares the various exchanges on the basis of returns and the corresponding risks associated with it. From the return perspective, New York stock exchange found to be most stable among all of these stock exchanges. NYSE has given negative returns only in two years, in the years 2008 and 2009. Tokyo stock exchange is the most volatile among all these and has given returns ranged from 109% to -184%. NSE seems to have moved in tandem with the NYSE more after year 2009. Hang Seng exchange follows long cycles. If returns turn negative, they remain negative for two or three years. Similarly if the return turns positive, then they remain so again for two or more years.

London stock exchange has shown the least variation and hence appears to be least risky. Hang Seng has shown highest volatility as it is a much traded stock exchange. Also, the issues like East Asian crisis have

affected the volatility of this exchange. But, nevertheless, the volatility has reduced in the recent years than it has in the past. NYSE is a mature and most stable market of all these. The volatility has remained more or less constant over the years. The volatility of the National stock exchange has risen steadily over these years as the trading and market capitalization of the companies has increased. Now the volatility of NSE is almost at par with other exchanges.

**Conclusion**

India is a fast growing economy and the financial markets can contribute a lot for accelerating its growth. Currently a very low percentage of the household savings of Indians are invested in the domestic stock market. As the GDP growing at 7-8% annually and a stable financial market can attract more money into the market. The study reveals that the volatility of National stock exchange has risen steadily over the years comparing with other exchanges. Also its trading and market capitalization has increased creating a good platform for the investors. If it continue like this NSE would be one of the major destination for the overseas investors.

**References:**

1. Kalman Cohen et al., The Determinants of Common Stock Returns Volatility: An International Comparison. The Journal of Finance Volume XXXI, No. 2 The Journal of Finance, American Finance Association, 1976.
2. S. K. Barua and G. Srinivasan, Experiment on Individual Investment Decision Making Process, Sankhya, Vol. 53, Series B, 1991, p. 74-88.
3. Sankaran Venkateshwar, The Relationship of Indian Stock Market to Other Stock Markets. Indian Economic Journal, Vol. 39, No. 2 (Oct-Dec), 1991, p. 105-109.
4. L. C. Gupta, Stock Exchange Trading in India: Agenda for Reform. Society for Capital Market Research and Development, Delhi, 1992, p.23.
5. T. P. Madhusoodanan and Thiripalraju M., Investment Horizon and Volatility: An Analysis of the Indian Market. The ICFAI Journal of Applied Finance, Vol. 4 (1), 1998.
6. Renu Gupta, Performance Evaluation of National Stock Exchange of India. Doctoral thesis, Jamia Millia Islamia University, New Delhi, 2002.
7. Abul F.M. Shamsuddin and Jae H. Kim, Integration and interdependence of stock and foreign exchange markets: an Australian perspective. Journal of International Financial Markets, Institutions and Money, Volume 13, Issue 3, July 2003, Pages 237-254.
8. Noor Azuddin Yakob et al., Seasonality in the Asia Pacific Stock Markets. Journal of Asset Management, Volume 6, Number 4, 2005, pp.298-318.

**Table-II Comparison of Risk and Return**

Year / variables	NSE		NYSE		LSE		HKSE		TSE	
	Risk	Return								
2005	58.1	25%	313.5	18%	236.4	26%	42.1	-13%	9.1	-21%
2006	99.4	-2%	318.7	29%	192.1	13%	73.4	-33%	36	81%
2007	83.4	13%	805.1	18%	410.1	37%	107.3	-45%	92.5	61%
2008	114.4	19%	537.9	-19%	329	19%	86.2	36%	113	-184%
2009	174.0	49%	684.0	-44%	219	10%	146.8	57%	26.7	109%
2010	147.2	22%	541.8	21%	238.2	2%	153.8	-84%	24.1	-25%
2011	130.2	16%	660.8	19%	375	-7%	50.1	31%	24.1	70.1%
2012	68.7	5%	337.5	21%	559.1	-10%	79.0	-13%	22.4	31%
2013	244.2	53%	554.9	41%	479.2	21%	83.2	22%	79.3	44%
2014	160.0	7%	381.2	10%	230.1	19%	63.1	8%	54.6	-13%
2015	253.5	30%	280.3	9%	236.7	6%	137.3	33%	161.0	59%
2016	242.3	11%	235.0	11%	172.2	7%	59.3	-2%	131.9	41%