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Role of Derivatives (Future and Options) in the Indian Stock Market

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ABSTRACT

Volatility in the financial market is inevitable. Due to this volatility risk factor came into existence. In today's era business faces two types of risk such as unsystematic and systematic risk. Volatility in the market comes under systematic risk which can be evaluated with the help of standard deviation. Increase or decrease in volatility in future depends upon market sentiments, emotions and other fundamental concepts of stocks in the market. One major issue arises how we can reduce the risk or mitigate systematic risk. Volatility cannot be mitigated through diversification, only through hedging or by using the right asset allocation strategy. The concept of derivatives came into existence which helps in hedging the risks while adding liquidity to the market.

This study attempts to learn the growth of derivatives market in regard to India context and types of traded derivatives products and challenges for derivative market in future. The data are collected from BSE and NSE website.

Keywords: *Derivatives, unsystematic risk and systematic risk, volatility*

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INTRODUCTION

In the financial system capital market has a direct impact on the development of the country. Volatility in the capital market increase the quantum of different types of risk such as interest rate risk, market risk, inflation risk and exchange risk. These risks affect the day to day activities of the business. The role of risk management has emerged strongly for controlling or protecting their operating profit from above mentioned risks. Derivatives are one of the important tools for risk management in developed nation. Derivatives provide an effective solution to the problem of risk caused by uncertainty and volatility in underlying asset. Derivatives are the financial instruments that derive their value from some underlying assets such as indices, exchange rates and so on. Forward, futures, options and swaps are of the most simple, common and widely used derivatives across the world. The growth of these products in the last yester years has been one of the most extraordinary and important events in the financial market.

The current study is centered on index futures and index options. Some vital definitions are provided at the outset to present a clearer picture of the issue under discussion. A futures contract is an agreement to make an exchange in the future. It does not necessarily involve exchange of assets in future. An index future contract is basically an obligation to deliver at settlement, an amount equal to "x" times the difference between the stock index value on the expiration date of the contract and the price at which the contract was originally struck. The value of "x", which is referred to as the multiple, is predetermined for e stock market index. Under the future trading, the buyer and seller of index future settle or square off their positions on the last Thursday of every month by making the payment between the future price and spot price of the index. Under the index option trading the buyer has a right to exercise the right not an obligation. But in this case the buyer pays the premium for the same [1].

OBJECTIVES OF THE STUDY

(1) To outline the historical development in derivative market in India.
(2) To study the growth of index future, and their volume in the Indian market.
(3) To study the development of index options in the Indian market.

RESEARCH METHODOLOGY

Research type: This study is descriptive in nature.
Source of data: This study is mainly based on secondary data gathered from various newspapers, magazines, journals, and websites.

INDIA SCENARIO

In December 1999 the Securities Contract Regulation Act (SCRA) was amended to include derivatives within the sphere of ‘securities” and a regulatory framework were developed for governing derivative trading. The act specified that derivatives shall be legal and valid only if they are traded on a recognized stock exchange, thus precluding Over-the-Counter derivatives. Besides, the government also withdrew in March 2000, the three decades old notification, which prohibited forwards trading in securities.

Derivatives trading commenced in India in June 2000 with the approval of the SEBI. Subsequently, derivatives trading on the National Stock exchange (NSE) started with S&P CNX Nifty Index Futures. Futures contracts on Individual stocks were launched in November 2001, while trading in index options commenced in June 2001 and trading in options on individual’s securities began in July 2001 [2].

Under the Supervision of Mr. O.P. Sodhani, a committee was formed for developing the guidelines for artificial derivatives in forex market. The committee submitted its report in 1995.On limited scale some products like currency swaps, interest rate swaps and fixed rate agreements are now available. Generally, OTC derivatives products are currently available and these contracts between two parties are very flexible in nature [3].

Trading and settlement in derivative contract is done in accordance with by laws, and regulations of the respective exchanges and their clearing house/corporation duly approved by SEBI and notified in the official gazette, National securities Clearing Corporation Limited (NSCCL) is the clearing and settlement agency for all the deals executed on the National Stock Exchange future and options segment [4]. Foreign institutions are allowed to trade in all exchange-traded derivatives products. Derivatives products derive their value from underlying asset. In this paper we have studied the growth of index stock, options and Stock futures, option. No doubt derivative market has shown tremendous growth in futures and options since 2000. It has been observed that option trading is more than futures after the collapse of market in the year 2008. Investors feel safe in the option trading as compared to the futures trading. Foreign Institutional investors are also shown a lot of interest in derivative market. Cumulative FII positions as percentage of total gross market position in the derivative segment as on April 20, 2012 is 31.31%. Index futures and index option trading is more as compared to stock options and futures. Nifty futures during the year is the increased intraday volatility in the spot market that provides attractive trading opportunities to day traders. The sequence of the events in financial derivative market in India is summarized in Table 1. Whereas Table 2 shows the continuous increase in turnover in derivatives traded in NSE. This indicates the remarkable growth in derivative markets in India. In addition to this, Figure 1 shows product wise turnover of futures and options traded in NSE from 2000 to 2014 in which index futures are the major part in aggregate turnover [5].

Table 1. *Chronology of instruments.*

1991	Liberalisation process initiated
14 December 1995	NSE asked SEBI for permission to trade index futures.
18 November 1996	SEBI setup L.C.Gupta Committee to draft a policy framework for index futures.
11 May 1998	L.C.Gupta Committee submitted report.
7 July 1999	RBI gave permission for OTC forward rate agreements (FRAs) and interest rate swaps.
24 May 2000	SIMEX chose Nifty for trading futures and options on an Indian index.
25 May 2000	SEBI gave permission to NSE and BSE to do index futures trading.
9 June 2000	Trading of BSE Sensex futures commenced at BSE.
12 June 2000	Trading of Nifty futures commenced at NSE.
25 September 2000	Nifty futures trading commenced at SGX.
2 June 2001	Individual Stock Options & Derivatives

Source: NSE Website.

Table 2. *NSE derivatives segment turnover (Rs. in Billion).*

Year	Index future	Stock future	Index option	Stock option	Total	Average daily turnover
2014–2015	3076665	6555482	30105990	2653183	42393548	215196
2013–2014	3083103	4949282	27767341	2409489	38211408	152237
2012–2013	2527131	4223872	22781574	2000427	31533004	126639
2011–2012	3577998	4074671	22720032	977031	31349732	125903
2010–2011	4356755	5495757	18365366	1030344	29248221	115150
2009–2010	3934389	5195247	8027964	506065	17663665	72392.1
2008–2009	3570111	3479642	3731502	229227	11010482	45310.6
2007–2008	3820667	7548563	1362111	359137	13090478	52153.3
2006–2007	2539574	3830967	791906	193795	7356242	29543
2005–2006	1513755	2791697	338469	180253	4824174	19220
2004–2005	772147	1484056	121943	168836	2546982	10107
2003–2004	554446	1305939	52816	217207	2130610	8388
2002–2003	43952	286533	9246	100131	439862	1752
2001–2002	21483	51515	3765	25163	101926	410
2000–2001	2365				2365	11

Source; NSE Website [6].

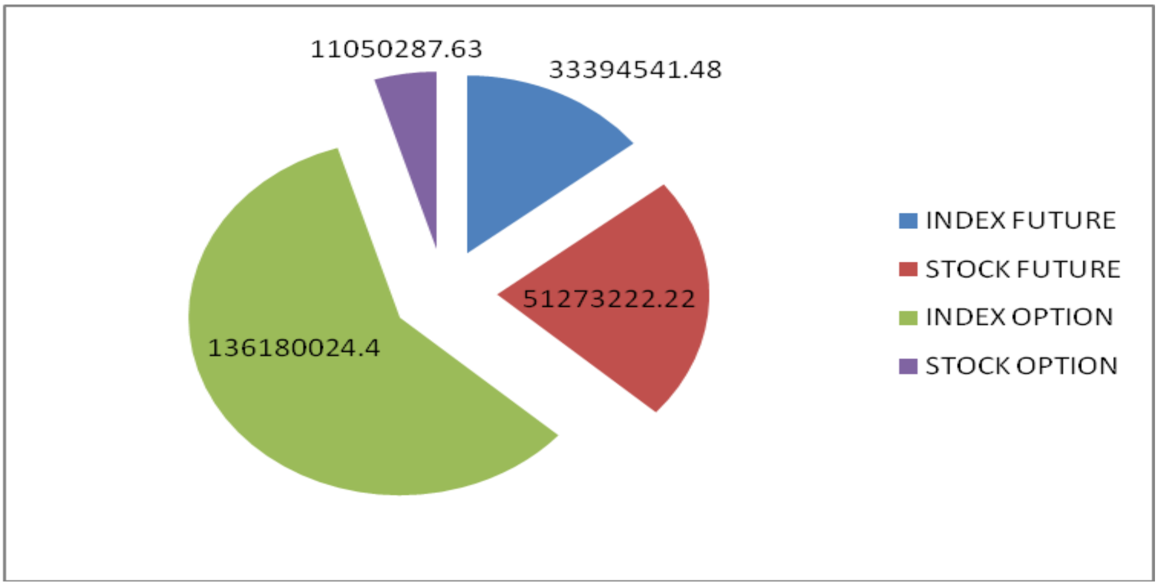

Fig. 1. *Product wise turnover of F & O at NSE from.*

TRADING DETAILS OF DERIVATIVE MARKET

After recording a 92.17% growth (2007–2008) in trading volume on year on year basis the index future trading volume has shown downward trend of 34.37%(2008–2009),-----15.26(2009–2010), –7.44(2010–2011) [6]. The turnover of 2007–2008 on year on basis was –6.55. The highest turnover growth in index future on year on year was seen in the year 2003–2004 i.e. 1161.48. The volume in index options shown a momentum growth after 2006–2007. Now the investors rely more on the index options as compared to stock options and futures due to the less risk and more vibrate market. Trade in the stock option is less due to low movements in stock price as compared to Nifty index options. The Notional value of index option on the NSE increased from 9246 billion in 2003 to 30105990 billion in 2014 and notional value of NSE Stock futures increased from 286533 billion in 2003 to 6555482 billion in 2014.

CONCLUSION

Due to globalization and privatization significant growth has been seen in the financial derivative market as compared to other financial instruments products. Derivatives are tools for hedging the risk. With the help of equity derivatives investor have an opportunity to transfer risk from one to another. Derivative market in India has emerged as a highly successful market as compared to its counterpart globally. India is one of the most successful developing country in terms of a vibrate market for exchange-traded derivatives. The equity derivatives market has shown a tremendous growth in all the derivative products traded. Moreover, it also helps in shaping price discovery. Volatility in financial asset price, integration of financial market internationally, complicated risk management tools, innovations in financial engineering. In spite of many issues such as lack of economies of scale, tax and legal bottlenecks, increased off-balance sheet exposure of Indian banks, need for an independent regulator. Derivative market has shown a remarkable growth in the terms of volume and turnover. Steps should be taken to resolve all the issues and it will increase the confidence of investors in the derivative market.

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