

Present Scenario of Derivative Market in India: An Analysis (2010-2018)

Meenakshi Bindal

Professor, Department of Management Studies, Modern Institute of Technology and Research Centre, Alwar, Rajasthan, INDIA

¹Corresponding Author: bindalmeenakshi95@gmail.com

ABSTRACT

Derivative market has an important role to play in economic development of a country. Change in exchange rates, interest rates and stock prices of different financial markets have increased the financial risk to the corporate world. Adverse changes in the macroeconomic factors have even threatened the very survival of business world. It is therefore necessary to develop a set of new financial instruments known as derivatives in the Indian financial markets, to manage such risk. The objectives of these instruments is to provide commitments to prices for future dates for giving protection against adverse movements in future prices, in order to reduce the extent of financial risks. This paper traces the growth and current position of India derivative market the present study is an effort to analyze derivative trading in India. It is an effort to demonstrate the growth and expansion of financial derivative of NSE in India the time period i.e 2010-2011 to 2017-18. The market turnover has grown from Rs.17663664.57 Cr. in 2009-2010 to 1163539816.124 Cr. in 2017-18.

Keywords-- DERIVATIVES, Stock exchange, Future option, SEBI, NSE, Financial market

I. INTRODUCTION

Derivative market has an important role to play in the economic development of a country. In India derivatives introduced as a new investment option. Equity derivatives trading in India started in the year 2000. Index Futures were launched in June 2000, followed by Index Options in June 2001, Individual Stock Options in July 2001, Single Stock Futures in November 2001. Equity Derivatives in India have progressed a long way since then. This market has witnessed expanding list of eligible investors, increase in volumes, best risk management framework for exchange traded derivatives and innovation in market microstructure and design. A vibrant exchange traded derivatives market is the hall mark of

India. This is achieved through nation-wide market access, anonymous electronic order book trading and a predominantly retail market. This study focuses on NSE as it forms major share in India's equity derivatives volume.

II. LITERATURE REVIEW

Makbul Rahim (2001) argued in his speech that the regulatory framework must provide the right environment for the development and the growth of the market. High standards of probity and professional conduct have to be maintained and reach world class standards. Integrity is very important as well confidence. The development of a proper free flow of information and disclosure helps investors to make informed investment decisions.

Rajeswari, T. R. and Moorthy, V. E. R. (2005) said that expectations of the investors influenced by their perception and human generally relate perception to action. The study revealed that the most preferred vehicle is bank deposit with mutual funds and equity on fourth and sixth respectively. The survey also revealed that the investment decision is made by investors on their own, and other sources influencing their selection decision are news papers, magazine, brokers, television and friends or relatives.

B. Das, Ms. S. Mohanty and N. Chandra Shil (2008) studied the behavior of the investors in the selection of investment vehicles. Retail investors face a lot of problem in the stock market. Empirically they found and concluded which are valuable for both the investors and the companies having such investment opportunities. First, different investment avenues do not provide the same level of satisfaction. And majority of investors are from younger group.

Jayanth R. Varma (2009) stated that derivative exchanges have fared much better banks during the global financial crisis (2007-2008) as their models were stronger

and robust than the internal models of the banks. The robustness should never be compromised for an increased sophistication and calibration of the markets. The benefits of Information Technology should be fully exploited to cover risk management. The exchange should not be complacent on their margining systems and try to eliminate the elements that contribute towards the fragility of the risk management systems.

Mayank Raturi (2005) concluded that the value of outstanding derivative contracts continues to expand, despite some setbacks due to the aftermath of the Baring Bank and similar bankruptcies stories. Survival of Credit Derivatives was also questioned.

III. OBJECTIVE OF THE STUDY

- To analyze the current position of NSE in the derivative exchanges.
- To examine the growth of derivative market in India.
- To find out new opportunities in equity derivative market.

IV. RESEARCH METHODOLOGY

The present study has been undertaken with empirical analysis of status of financial derivatives in India with the use of secondary data. Data and information for the research study were collected and analyzed from secondary published sources like newspapers, web sites, books etc.

V. CONCEPT OF DERIVATIVES

A derivative is a financial product which has been derived from another financial product or commodity. The derivatives do not have independent existence without underlying product and market. Derivatives are contracts which are written between two parties for easily marketable assets

A Study of Derivatives Market in India. Derivatives are also known as deferred delivery or deferred payment instruments. Since financial derivatives can be created by means of a mutual agreement, the types of derivative products are limited only by imagination and so there is no definitive list of derivative products.

A derivative is a financial product which has been derived from another financial product or commodity.

Definition of derivatives: The securities contracts (Regulation) Act 1956 defines “derivative” as under section 2 (ac). As per this “Derivative” includes (a) “a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security.”

(b) “a contract which derived its value from the price, or index of prices at underlying securities.”

Participants in the derivative trading Hedgers

Derivative products are used to hedge or reduce their exposures to market variables such as interest rates, share values, bond prices, currency exchange rates and commodity prices. This is done by corporations, investing institutions, banks and governments alike. A classic example is the farmer who sells futures contracts to lock into a price for delivering a crop on a future date. The buyer could be a food processing company, which wishes to fix a price for taking delivery of the crop in the future.

Speculators/Traders

Derivatives are well suited to trading on key market variables such as interest rates, stock market indices and currency exchange rates and on prices of commodities and financial assets. It is much less expensive to create a speculative position using derivatives than by actually trading the underlying commodity or asset. As a result, the potential returns are much greater.

A classic application is the trader who believes that increasing demand or scarce production is likely to boost the price of the commodity. He has two options with him - first option is to buy and store the physical commodity whereas other option is to go long on futures contract.

Trader chooses the second option to go long futures contract on the underlying asset. If commodity price increases, the value of the contract will also rise and he can reverse back position to book his profit.

Arbitrageurs

An arbitrage is a deal that produces risk free profits by exploiting a mispricing in the market. A simple arbitrage occurs when a trader purchases an asset cheaply in one exchange and simultaneously arranges to sell it at another exchange at a higher price. Such opportunities are unlikely to persist for very long, since arbitrageurs would rush in to buy the asset in the cheap location and simultaneously sell at the expensive location, thus reducing the price gap.

VI. APPLICATION OF FINANCIAL DERIVATIVES

Risk aversion tools: One of the most important services provided by the derivatives is to control, avoid, shift and manage efficiently different types of risks through various strategies like hedging, arbitrage, spreading, etc. Derivatives assist the holders to shift or modify suitably the risk characteristics of their portfolios. These are specifically useful in highly volatile financial market conditions like erratic trading, highly flexible interest rates, volatile exchange rates and monetary chaos.

Prediction of future prices: Derivatives serve as barometers of the future trends in prices which result in the

discovery of new prices both on the spot and futures markets.

Further, they help in disseminating different information regarding the futures markets trading of various commodities and securities to the society which enable to discoverer form suitable or correct or true equilibrium prices in the markets. As a result, they assist in appropriate and superior allocation of resources in the society.

Assist investors: The derivatives assist the investors, traders and managers of large pools of funds to devise such strategies so that they may make proper asset allocation increase their yields and achieve other investment goals.

Catalyse growth of financial markets: The derivatives trading encourage the competitive trading in the markets, different risk taking preference of the market operators like speculators, hedgers, traders, arbitrageurs, etc. resulting in increase in trading volume in the country.

Brings perfection in market: Complete market concept refers to that situation where no particular investors can be better off than others, or patterns of returns of all additional securities are spanned by the already existing securities in it, or there is no further scope of additional security.

Enhance liquidity: As we see that in derivatives trading no immediate full amount of the transaction is required since most of them are based on margin trading. As a result, large number of traders, speculators arbitrageurs operate in such markets. So, derivatives trading enhance liquidity and reduce trans-action costs in the markets for underlying assets.

Classification of derivative

Types of Derivatives in India

- **Commodity Derivatives and financial derivatives**
- **Basic Derivatives and Complex Derivatives**
- **Exchange Traded Derivatives and OTC Derivatives**

Commodity Derivatives and financial derivatives

Derivative contract are made into the different types of commodities such as juts. Sugar, tea, oil. These derivative contracts are traded in commodity exchanges. The major commodity exchanges in India are three:

- National Commodity & Derivatives Exchange Limited (NCDEX)
- Multi- Commodity Exchange of India Limited (MCX)
- National Multi commodity Exchange of India Limited (NMCEIL)

These exchanges provide different types of contracts (Which are called future contracts). The derivatives in currencies gilt-edged debt securities, share, share indices, etc. are known as financial derivatives. These are traded at different exchanges all over the world. Financial derivatives can be broadly classified into currency derivatives, interest rate derivatives and stock and stock index derivatives. In India, stock future, stock Index Futures, Stock Options and Stock Index Options are traded at BSE OR NSE. Interest rate derivative have also been allowed by the Government of India.

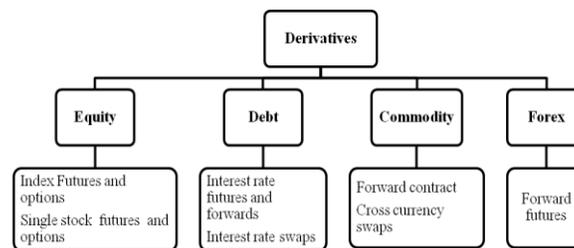
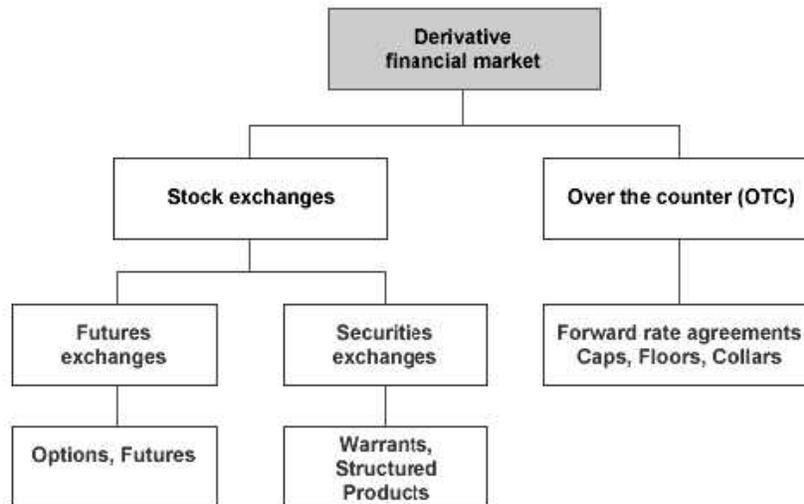
Basic Derivatives and Complex Derivatives

- **Basic Types:** Those financial assets under which underlying assets are binding in an agreement by any one of the contract I.e. Forwards , future, Options, warrants etc.
- **Complex Derivatives:** Those financial assets under which underlying assets are binding an agreement by the any one of the contract. Example Swap etc.

Exchange Traded and OTC Derivatives

Derivatives which are made and regulated by some market mechanism and trade on an exchange are called exchange traded derivatives. Exchange traded derivatives are well standardized and organized in nature and available in a well set financial or commodity market. Exchange traded derivatives are available in NSE, BSE, NCDEX, MCX etc.

- All exchange traded derivatives can be financial or commodity derivatives and they are based upon underlying assets such as stock, debt or foreign currency and different contracts which has basic of some underlying assets and designed to trade into exchange market I.e . Forwards, futures, options, warrant swaps etc.
- Any derivative contracts if traded outside the exchange market and privately negotiated are called **over the counter** contracts. Which is not bonded by rules and regulations of exchange markets. They offer customized products and which are very much tailor made in nature



Forwards: A forward contract is a customized contract between two entities, where settlement takes place on a specific date in the future at today's pre agreed price.

A forward contract is an agreement between two parties to buy or sell an asset at a specified point of time in the future. The price of the underlying instrument, in whatever form, is paid before control of the instrument changes.

Futures: A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. A futures contract is a financial contract obligating the buyer to purchase an asset, such as a physical commodity or a financial instrument, at a pre-determined future date and price, futures contracts detail the quantity and quality of the underlying asset; they are standardized to facilitate trading on a futures exchanges. Some future contracts may call for physical delivery of the asset, while others are settled in cash. The futures markets are characterized by the ability to use very high leverage relative to stock markets.

Examples of international futures contracts are

- Corn future(CBOT)
- Gold future(COMEX)
- Crude oil futures (NYMEX)
- Stock index futures(CME)
- Eurodollar future(IMM)

- Bond futures (CBOT)

Options: Options are of two types - calls and puts. Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date. Puts give the buyer the right, but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

Swaps: Swaps are private agreements between two parties to exchange cash flows in the future according to a pre arranged formula. They can be regarded as portfolios of forward contracts. The two commonly used swaps are :

Interest rate swaps: These entail swapping only the interest related cash flows between the parties in the same currency.

Currency swaps: These entail swapping both principal and interest between the parties, with the cash flows in one direction being in a different currency than those in the opposite direction.

Swaptions: Swaptions are options to buy or sell a swap that will become operative at the expiry of the options. Thus a swaption is an option on a forward swap. Rather than havecalls and puts, the swaptions market has receiver swaptions and payer swaptions. Areceiver swaption is an option to receive fixed and pay floating. A payer swaption is an option to pay fixed and receive floating.

VII. GROWTH OF EQUITY DERIVATIVE MARKET IN INDIA

Growth in FO segment

TABLE NO. 1

Year	total No. of contract	Total turnover (in Cr.)	Average daily turnover (in Cr.)
2017-18	1896548351	163539816.12	678588.45
2016-17	1399746129	94370301.61	389959.92
2015-16	2098610395	64825834.30	267875.34
2014-15	1837041131	55606453.39	233640.56
2013-14	1284424321	38211408.05	155557.68
2012-13	1131467418	31533003.96	126638.57
2011-12	1205045464	31349731.74	125902.54
2010-11	1034212062	29248221.09	115150.48
2009-10	679293922	17663664.57	72392.07

Source: Compiled from NSE website.

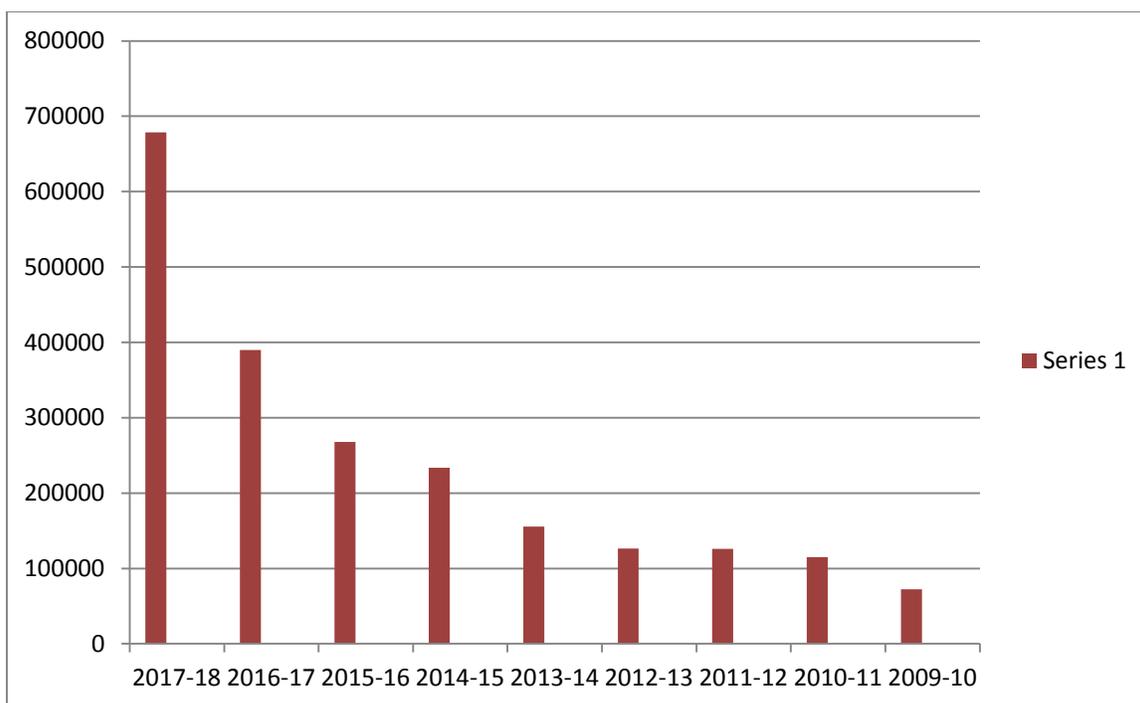


Chart 1

The above chart depicts continuous growth in derivative market in FO segment.

From year 2010 to 2018 which increase 72392.07 cr. to 678588.45 cr. It is a tremendous growth and good sign for Indian economy.

**Business Growth in CD Segment
Table No. 2**

Year	Currency future		Currency options			Total		Average daily turnover (in Cr.)
	No. of contracts	Turnover	No. of contracts	Notional turnover	Premium turnover	No. of contract	turnover *	
2017-18	38,82,42,290	25,80,761.67	37,29,27,263	24,22,309.33	7,533.79	76,11,69,553	50,03,071.00	20,759.63
2016-17	36,26,15,931	24,89,778.94	34,98,35,508	23,67,296.92	7,153.09	71,24,51,439	48,57,075.85	20,070.56
2015-16	40,97,59,364	27,49,332.96	26,38,23,800	17,52,552.62	6,059.00	67,35,83,164	45,01,885.58	18,602.83
2014-15	35,55,88,963	22,47,992.34	12,50,75,731	7,75,915.32	3,164.45	48,06,64,694	30,23,907.67	12,705.49
2013-14	47,83,01,579	29,40,885.92	18,18,90,951	10,71,627.54	7,297.15	66,01,92,530	40,12,513.45	16,444.73
2012-13	68,41,59,263	37,65,105.33	27,50,84,185	15,09,359.32	10,109.99	95,92,43,448	52,74,464.65	21,705.62
2011-12	70,13,71,974	33,78,488.92	27,19,72,158	12,96,500.98	7,100.69	97,33,44,132	46,74,989.91	19,479.12
2010-11	71,21,81,928	32,79,002.13	3,74,20,147	1,70,785.59	946.70	74,96,02,075	34,49,787.72	13,854.57
2009-10	37,86,06,983	17,82,608.04	-	-	-	37,86,06,983	17,82,608.04	7,427.53

Source: Compiled from NSE website

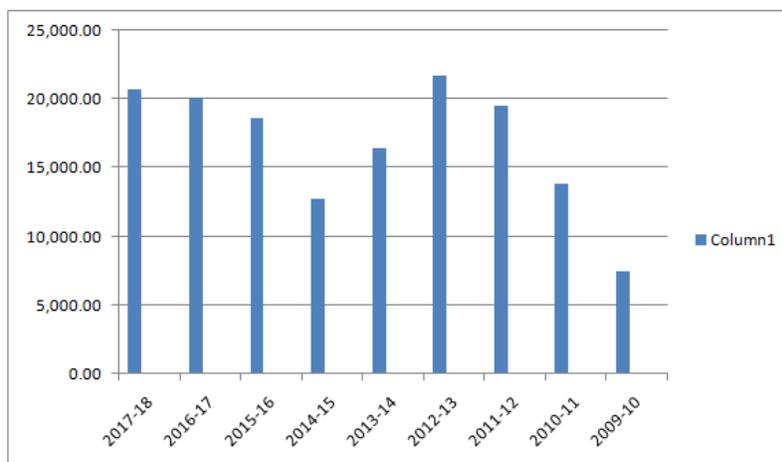


Chart 2

The chart no. 2 depicts growth of derivative market in CD segment. It shows fluctuations in market growth. In year 2012-13 the average daily turnover was 21,705.62. Which reduced in 2014 and 2015 by 16,444.73 cr. and

12,705.49 cr. afterwards it increases continuously in 2016, 2017 and 2018 by 18,602.83, 20,070.56, 20,759.63 cr. It is a positive indicator for derivative market, investors as well as Indian economy.

**Product wise growth in FO segment
TABLE NO. 3**

Year	Index Futures		Stock Futures		Index Options		Stock Options		Total	
	No. of contracts	Turnover (₹ cr.)	No. of contracts	Turnover (₹ cr.)	No. of contracts	Premium Turnover r** (₹ cr.)	No. of contracts	Premium Turnover r** (₹ cr.)	No. of contracts	Turnover* (₹ cr.)
2017-18	57674584	4810454.34	214758366	15597519.71	151503422	460653.71	126411376	148217.50	1913878548	164984859.05
2016-17	66535070	4335940.78	173860130	11129587.14	106724491	350021.53	92106012	95570.09	1399746129	94370301.61

2015-16	140538674	4557113.64	234243967	7828606.00	1623528486	351221.01	100299174	61118.39	2098610395	64825834.30
2014-15	129303044	4107215.20	237604741	8291766.27	1378642863	265315.63	91479209	61732.59	1837041131	55606453.39
2013-14	105252983	3083103.23	170414186	4949281.72	928565175	244090.71	80174431	46428.41	1284424321	38211408.05
2012-13	96100385	2527130.76	147711691	4223872.02	820877149	184383.24	66778193	34288.56	1131467418	31533003.96
2011-12	146188740	3577998.41	158344617	4074670.73	864017736	253068.22	36494371	19612.93	1205045464	31349731.74
2010-11	165023653	4356754.53	186041459	5495756.70	650638557	192637.87	32508393	20474.97	1034212062	29248221.09
2009-10	178306889	3934388.67	145591240	5195246.64	341379523	124416.58	14016270	15272.89	679293922	17663664.57

Source: Compiled from NSE website.

VIII. CONCLUSION

There is an increasing sense that financial derivative market has a vital role in risk management and economic growth. Financial derivatives have earned a significant place in all the financial instruments (products), due to innovation and revolutionized the landscape. Derivatives are tool for managing risk. Derivatives provide an opportunity to transfer risk from one to another. Launch of equity derivatives in Indian market has been extremely encouraging and successful. Finally we can say there is big significance and contribution of derivatives to financial system.

REFERENCES

- [1] R.P. Rustagi. (2007). *Investment analysis and portfolio management*. (1st ed.). New Delhi: Sultan Chand & Sons, 459-596.
- [2] D. Vasant. (2012). *The Indian financial system and development*. (4th ed.). New Delhi: Himalaya Publishing House, 398-412.

[3] B. Brahmaiah & Rao P. Subba. (1998). *Financial futures and option*. (1st ed.). New Delhi: Himalaya Publishing House, 25-147.

[4] Ms. Shalini H S & Dr. Raveendra P V. (2014). A study of derivatives market in india and its current position in global financial derivatives markets. *IOSR Journal of Economics and Finance*, 3(3), 25-42.

[5] Ashutosh Vashishtha & Satish Kumar. (2010). Development of financial derivatives market in india- a case study. *International Research Journal of Finance and Economics*, 37, 15-29.

[6] Reddy, Y. V. & Sebastin, A. (2008). Interaction between equity and derivatives markets in india: An entropy approach. *The ICFAI Journal of Derivatives Markets*, 5(1), 18-32.

[7] Shunmugam, V., & Dey, D. (2011). Taking stock of commodity derivatives and their impact on the indian economy. *International Journal of Economics and Management Science*, 1(1), 8-16.