

## Growth of Financial Derivatives in National Stock Exchange of India

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### ABSTRACT

*Derivatives plays a major role in development of Indian Economy. Major players in derivative markets are hedgers, arbitragers and speculators. Derivatives are the weapon commonly used for risk management in both commodity and financial market. In India standardized derivative trading started since 2000 even though the customized trading in various commodities had its root in olden years. This study mainly focus on trading in financial derivatives through National Stock Exchange of India. Through this study, an attempt has been made to know what kind of derivatives are trading in National stock exchange and what is the pattern of growth of derivative trading in NSE.*

**Keywords:** Indian economy, markets, risk management, trading etc.

### INTRODUCTION:

The last two decades have witnessed substantial increase in the volume of international trade and business due to the wave of globalization and liberalization across the world. This has led to rapid and unpredictable variations in financial asset prices, interest rate and exchange rates. In the present highly uncertain business scenario, the importance of risk management has much greater than ever before. This led to the growth of derivative market in India and other countries. Derivative markets provide an effective and less costly solution to the problem of risk faced by the individuals and institutions. The players in derivative market are not only individuals who are exposed to risk, but also speculators and arbitrages who wants to make profit from price differential and short term market movements. Increased financial risk causes loss to even profitable organizations. This leads to the importance of derivatives. Derivatives provide an effective risk management tools that help an organization to effectively transfer risk.

### Financial derivatives-An overview:

A derivative is a financial instrument whose value is based on one or more underlying assets. In practice, it is a contract between two parties that specifies conditions-especially maturity dates of the contracts, resulting values of the underlying assets etc. Derivatives are broadly classified on the basis of the underlying asset. The most common types of derivatives are forwards, futures, options and swaps. The most common underlying asset include commodities, stock, bonds, interest rates and currencies. If the underlying asset of a derivative contracts are financial asset such as interest rate, stock index, equities or currencies, such derivatives are known as financial derivatives. Derivatives plays a crucial role in managing risk in both financial and commodity markets. The major players in derivative markets are speculators, hedgers and arbitragers. The Financial derivatives plays a major role for the growth of share market. The following functions are performed by derivatives market which helps in developing of financial markets.

1. Discovery of price:
2. Risk Transfer
3. Link to cash market
4. Check on speculation
5. Increase savings and investment

6. Increase liquidity in the market
7. Make the stock market vibrant and active

### **Derivatives Trading in India:**

Now-a-days in the worldwide scenario financial market has undergone massive changes due to amazing development of derivatives which play a remarkable place in implementing various financial policies. The emergence of derivatives market is an ingenious achievement of financial trade with an intend of providing a proficient explanation to the problem of risk that is surrounded in the price impulsiveness of the underlying asset. Derivatives market is reasonably a latest occurrence In India since its commencement in June 2000; it has exhibited exceptional improvement both in terms of volume and number of traded contracts. It is found out that in recent times derivatives trading in India has surpassed cash segment in terms of turnover and number of traded contracts. India's assignation with derivatives began in 2000 when both the NSE and the BSE commenced trading in equity derivatives .In June 2000, index futures became the first type of derivate instruments to be launched in the Indian markets, followed by index options in June 2001, options in individual stocks in July 2001, and futures in single stock derivatives in November 2001. Since then, equity derivatives have come a long way. In NSE, the trading in currency derivative trading started only in 2008. Only trading currency futures were introduced at the beginning. Later on in 2010 the currency options were also started in NSE.

In case of Bombay stock exchange of India , the derivative trading started in 2003 only. The trading were started with index and stock futures. Later on Currency options were also started in 2013. Whereas option trading in index and equities were started only in 2014. Securities Exchange Board of India gave permission to NSE and BSE to start trading in commodity derivatives in 2018 in Gold and silver.

### **OBJECTIVES OF THE STUDY:**

Through a detailed analysis of derivative trading take place in NSE, the study aims to achieve the following objectives.

1. To get a clear picture regarding the types of derivative products trading in National Stock Exchange of India
2. To measure the growth pattern of trading in financial derivatives in National stock exchange of India

### **LITERATURE REVIEW:**

S Subbalakshimi(2016) conducted a study to analyze derivative trading in India, rules and regulation in relation to Indian stock market. It is an endeavor to demonstrate the growth and expansion of financial derivative of NSE in India in the time period 13 years. The result of the study shows that Average daily turnover of NSE derivative segment turnover was 11 crore in 2000-01 and it reaches to 1200550.59 in 2012-13 which depicts a mounting trend in the Indian financial market. The growth of derivative is enhanced due to various factors like increased volatility in financial assets, development of risk management tools and strategies.

Divya Verma Khakar (2016) conducted a study about derivative trading in India. The objective of the study is to examine the impact of financial derivatives (futures and options) on the underlying market volatility. The paper also analyses derivatives awareness level of Indian investor and perception of investor about future of derivatives market in India. Data has been collected for a period of 18 years from January 1, 1997 to February 5, 2015. The questionnaire was distributed to 1000 respondents but 522 filled questionnaires were received and have been analyzed in this study. The final AR (1)-GARCH (1,1) model show that overall volatility has reduced in the spot market after the introduction of derivatives. The results of Structural Equation Modelling reveals perception of investors about future of derivatives market in India includes having an investor grievance redressal mechanism which is approachable under trading hours, steps to be taken by regulators to increase investments, conducting investor training and awareness programmes, global integration will happen, derivatives market will affect growth of the economy and consolidation of exchanges is required.

Dr. Anand Sharma, Dr. Namita Rajput and Dr. Anurag Agnihotri(2011) This paper analyses the introduction of the Derivative segment trading in India and its impact on the cash segment. It studies the relationship of turnover in Cash and Derivative segment. When Derivative segment was launched in 2000, it was a new segment for Indian investors but within one year it took momentum and in 2001-02 traders/participants because India is the country cash segment trading dropped around 60% and it is almost equal to this decline was the turnover of the derivative segment.

Dr Satya Swaroop Debasis ( 2008) confirmed, in his study of lead lag analysis in futures and spot market, co integration and lead lag relationship between spot and futures market in Indian stock market. It was observed that futures market plays price discovery role in market. Futures market are more efficient than spot market in

reflecting new Objectives information and spot market follow the same. Indian traders buy and sell stocks rather than index futures and they exploit information about future trend from futures market.

#### **METHODOLOGY:**

The research design of the study is descriptive in nature based on secondary data. The data required to measure the growth of derivative trading in NSE were taken from the website of National stock exchange of India. The period of data covers from 2001 to 2018 in case of stock derivatives. At the same time trading in currency futures were started only in 2008. Where as currency options were started only in 2010. Hence the data from the respective period were collected to know the growth of financial derivatives trading in NSE.

#### **Introduction of derivative trading in NSE:**

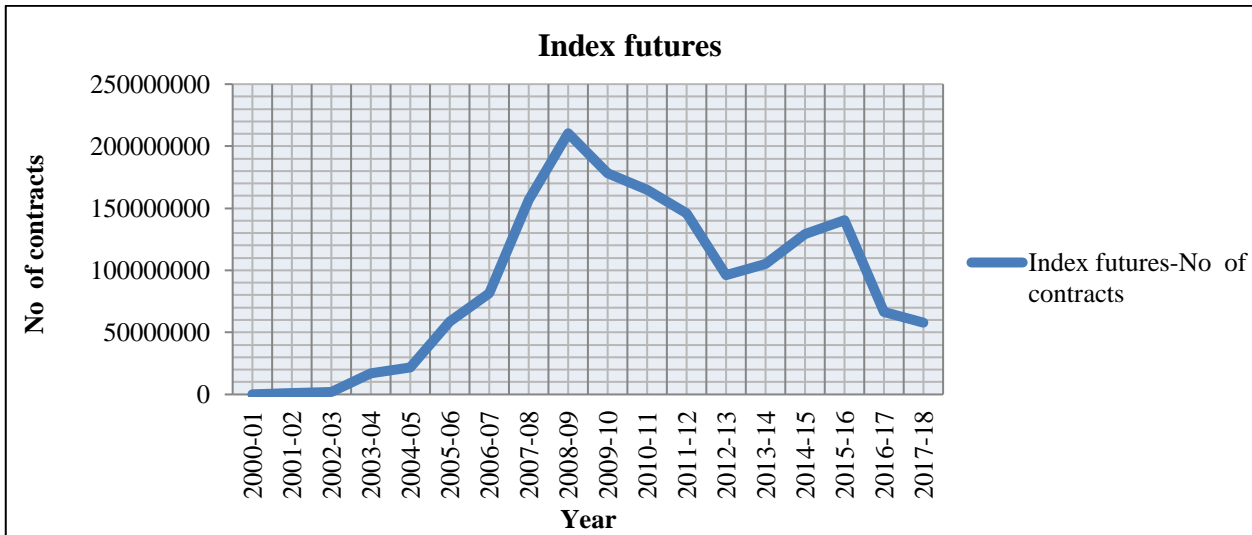
The NSE commenced trading derivatives with the launch of Index futures on June 12,2000 The future contracts are based on popular benchmark Nifty50 index The exchange introduced trading index option also based on Nifty 50 on June 4, 2001. NSE also became the first exchange to launch trade in option on Individual security from July 2, 2001. Futures on individual securities were introduced on November 9. 2001. Futures and option on individual securities are available on 175 securities stipulated by SEBI. The exchange has also introduced trading in futures and options contracts based NIFTY IT, NIFTY Bank and, NIFTY MIDCAP 50, Nifty infrastructure, Nifty PSE, Nifty CPSE indices.

NSE was the first exchange to have received and in-principle approval from SEBI for setting up currency derivative segment . The exchange launched its currency futures trading platform on 29<sup>th</sup> August 2008. Currency futures on USD-INR were introduced for trading and subsequently the Indian rupee was allowed to trade against other currencies such as Euro, Pound Sterling, and the Japanese Yen. Currency Future Contracts allow investors to hedge against foreign exchange risk. Currency derivatives are available on four currency pairs Viz.US Dollar (USD) Euro (EUR) Great Britain Pound (GBP) and Japanese Yen (JPY) Currency option was introduced on October 29, 2010.

NSE launched the commodities derivatives segment on October 12, 2018. Currently futures on commodity derivatives are available on bullion

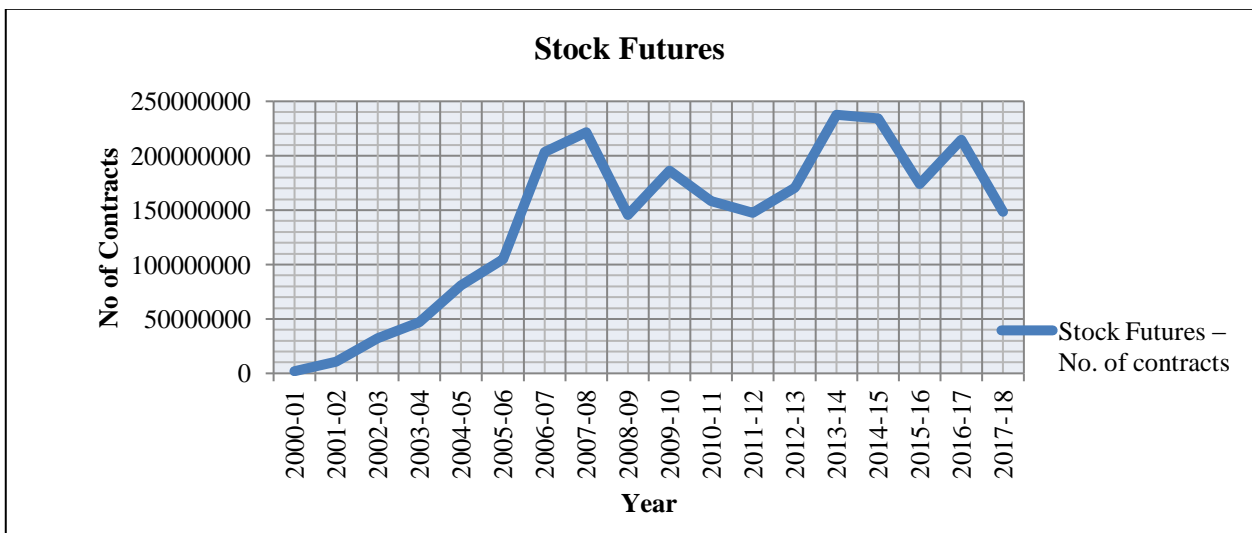
**Table 1: Growth of stock index futures**

<b>Year</b>	<b>Number of contracts</b>
2000-01	90580
2001-02	1025588
2002-03	2126763
2003-04	17191668
2004-05	21635449
2005-06	58537886
2006-07	81487424
2007-08	156598579
2008-09	210428103
2009-10	178306889
2010-11	165023653
2011-12	146188740
2012-13	96100385
2013-14	105252983
2014-15	129303044
2015-16	140538674
2016-17	66535070
2017-18	57674584



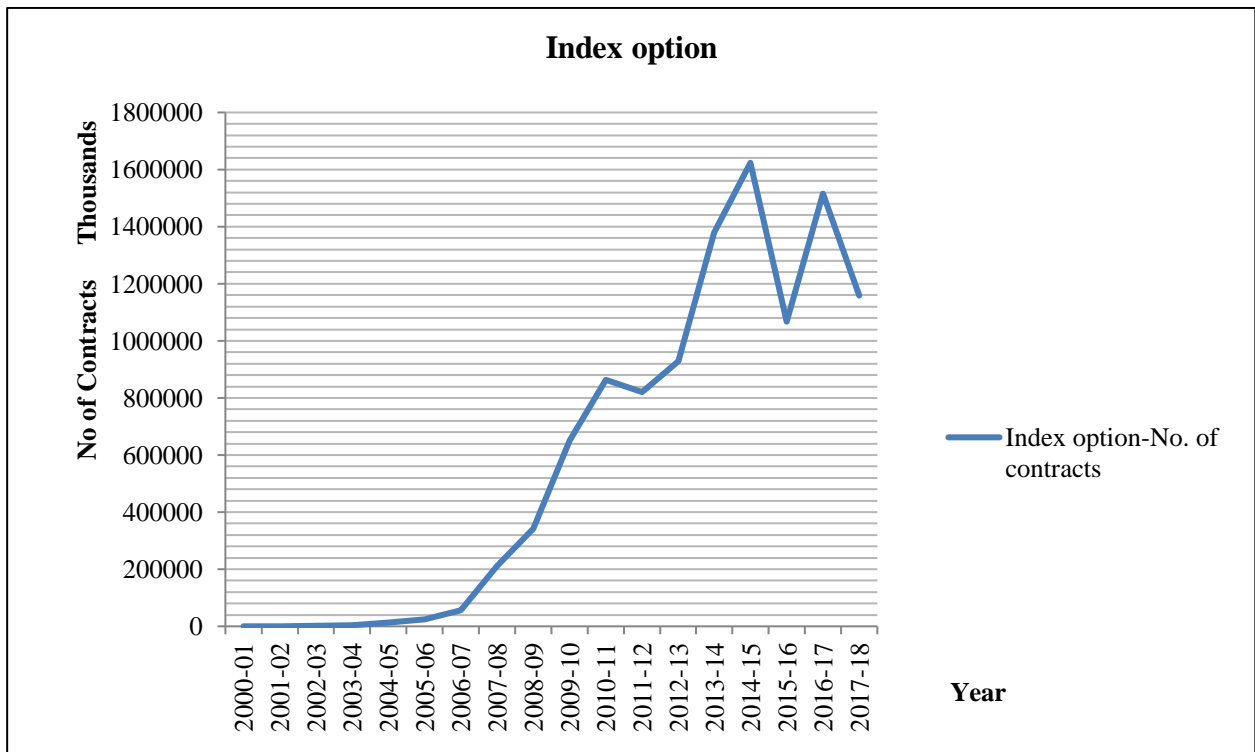
**Table 2: Growth of Stock Futures**

Year	Number of contracts
2000-01	1957856
2001-02	10676843
2002-03	32368842
2003-04	47043066
2004-05	80905493
2005-06	104955401
2006-07	203587952
2007-08	221577980
2008-09	145591240
2009-10	186041459
2010-11	158344617
2011-12	147711691
2012-13	170414186
2013-14	237604741
2014-15	234243967
2015-16	173860130
2016-17	214758300
2017-18	148616981



**Table No 3: Growth of Index options**

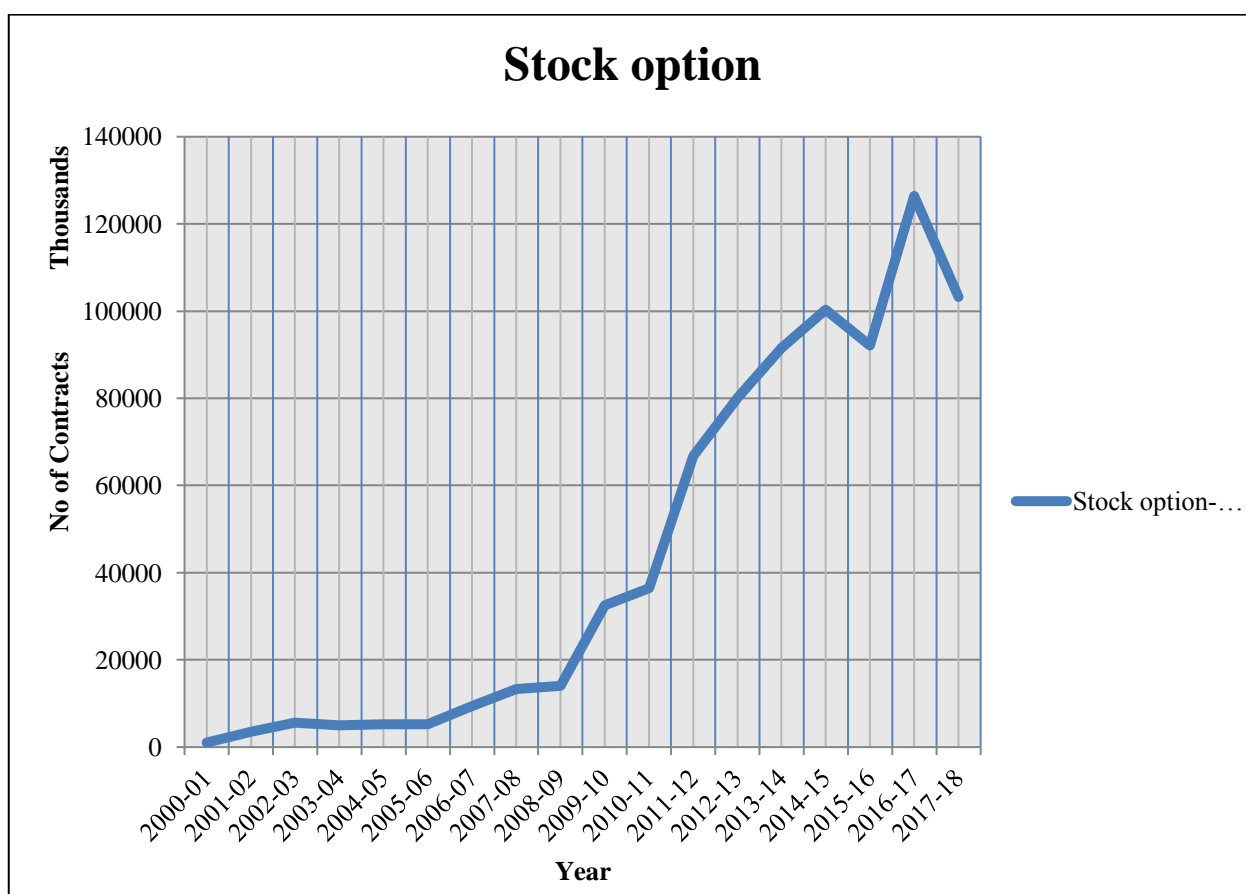
Year	Number of contracts
2000-01	175900
2001-02	442241
2002-03	1732414
2003-04	3293558
2004-05	12935116
2005-06	25157438
2006-07	55366038
2007-08	212088444
2008-09	341379523
2009-10	650638557
2010-11	864017736
2011-12	820877149
2012-13	928565175
2013-14	1378642863
2014-15	1623528486
2015-16	1067244916
2016-17	1515034222
2017-18	1158549316



**Table No 4: Growth of Stock Option**

Year	Number of contract
2000-01	1037529
2001-02	3523062
2002-03	5583071
2003-04	5045112
2004-05	5240776
2005-06	5283310

Year	Number of contract
2006-07	9460631
2007-08	13295970
2008-09	14016270
2009-10	32508393
2010-11	36494371
2011-12	66778193
2012-13	80174431
2013-14	91479209
2014-15	100299174
2015-16	92106012
2016-17	126411376
2017-18	103229702



**Table No 5: Growth of Currency Futures**

Year	Number of contracts
2008-09	32672768
2009-10	378606983
2010-11	712181928
2011-12	701371974
2012-13	684159263
2013-14	478301579
2014-15	355588963

2015-16	409759364
2016-17	362615931
2017-18	390433137

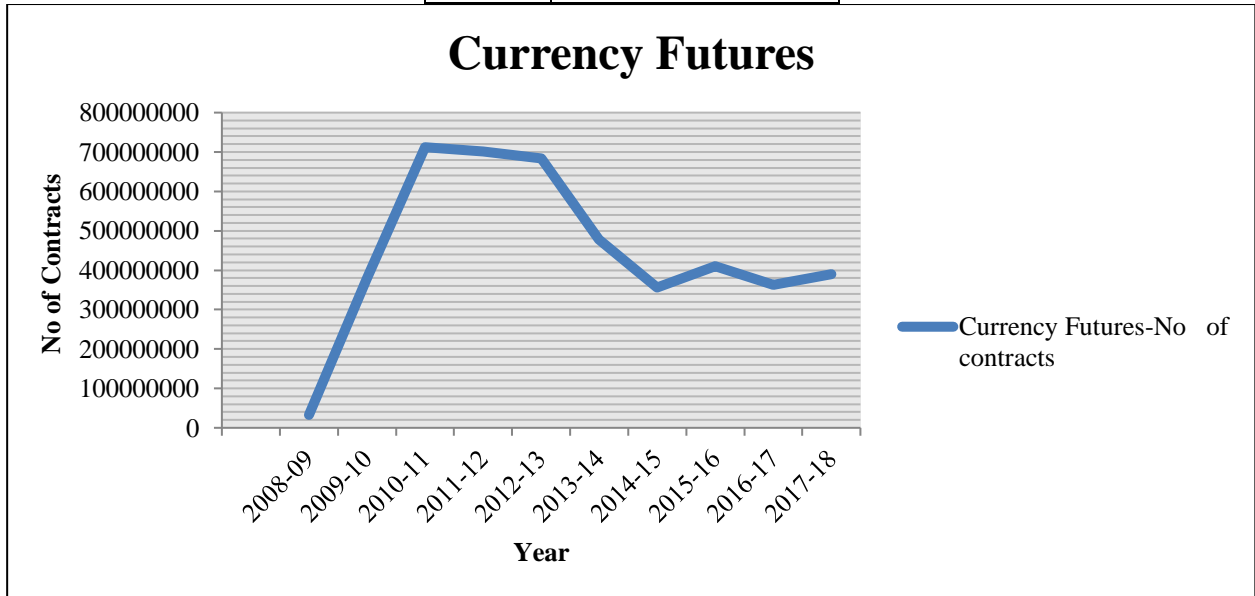
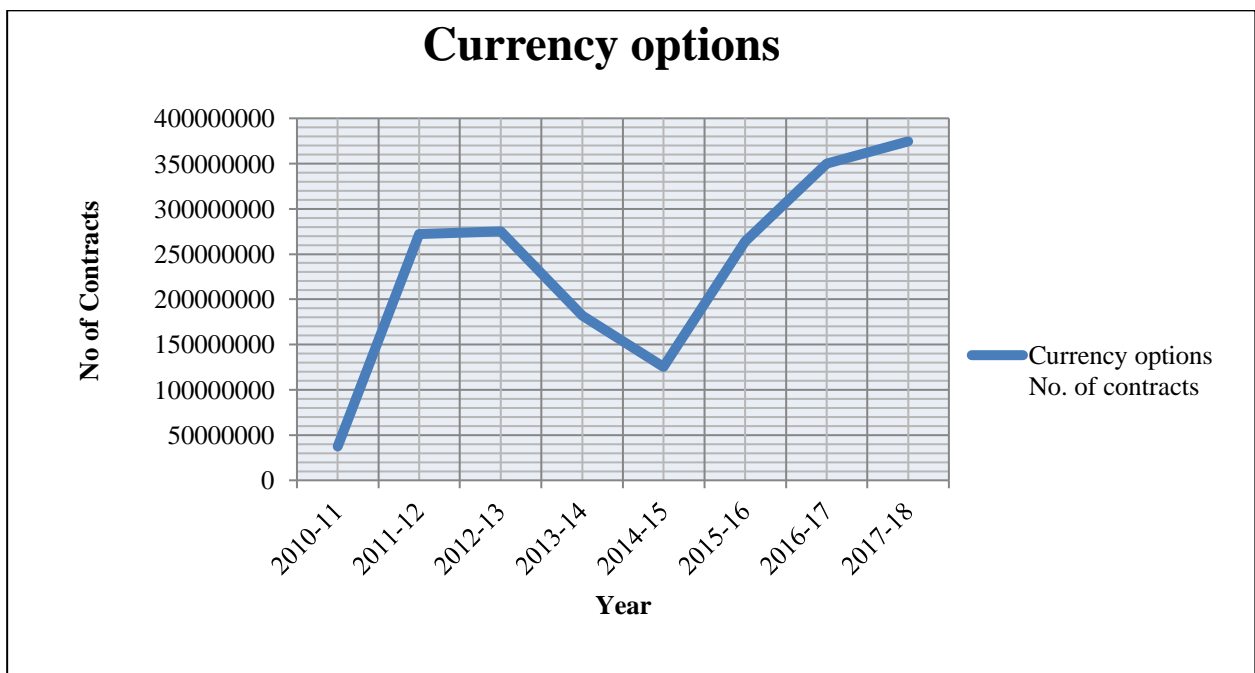


Table No 6: Growth of Currency Options

Year	Number of contracts
2010-11	37420147
2011-12	271972258
2012-13	275084185
2013-14	181890951
2014-15	125075731
2015-16	263823800
2016-17	349835508
2017-18	374530592



**Table No 7: Commodity Derivative in National Stock Exchange of India**

Year	No.of Contracts in commodity futures	Turnover
2018-19	3269	793.26

**CONCLUSION:**

Derivative trading in India is growing in an unprecedented manner during recently. The most commonly traded financial derivative products in National stock exchange are index futures, stock futures, stock options, index options, currency futures and currency options. The transactions in currency derivatives are started in India only in 2008. Even though separate stock exchanges like MCX, NCEX etc. are there in India for trading commodity derivatives, recently National stock exchange of India has been witness commodity derivative trading also. Around 3269 commodity derivative contracts are traded in National Stock Exchanges in Gold and Silver. Only future trading has been take place in commodity derivatives. As far as number of derivative contracts and volume of trade are concerned, substantial growth can be witnessed from the beginning to the end of 2018. At the same time the growth in derivative trading is not consistent during the period beginning from 2001 to 2018. Hence it can be concluded that the derivative contracts in National stock exchange of India in terms of number of contracts and volume are increasing significantly but not consistently.

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