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Research Papers

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A STUDY ON EXPONENTIAL GROWTH IN INDEX FUTURES AND INDEX OPTIONS OF NSE

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ABSTRACT
Introduced in 2000, financial derivatives market in India has shown a remarkable growth both in terms of volumes and numbers of traded contracts. Financial derivatives have earned a well deserved and extremely significant place among 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. The growth of derivatives in the recent years has surpassed the growth of its counterpart globally. The study reveals that there has been an exponential growth in turnover of contracts traded in index futures and options from 2001-02 to 2017-18 and the growth has been much more in index options as compared to index futures.
Keywords: Derivatives, Growth, Index Futures, Index Options, NSE, contracts traded and turnover.

INTRODUCTION
Derivatives trading in the stock market have been a subject of enthusiasm of research in the field of finance. The derivatives are defined as the future contracts whose value depends upon the underlying assets.
Financial markets are, by nature, extremely volatile and hence the risk factor is an important concern for financial agents. To reduce this risk, the concept of derivatives comes into the picture. The primary objectives of any investor are to maximise returns and minimise risks. Derivatives are contracts that originated from the need to minimise risk.

SIGNIFICANCE OF THE STUDY
India's experience with the launch of equity derivatives market has been extremely positive, by world standards. NSE is now one of the prominent exchanges, amongst all emerging markets, in terms of equity derivatives turnover. There is an increasing sense that the equity derivatives.

REVIEW OF LITERATURE
Gong-meng Chen, Michael Firth and Oliver Rui (2001) have examined the dynamic relationshipbetween returns, volume, and volatility for major nine national stock indexes for the period from 1973to 2000. Their results show a positive correlation between trading volume and absolute value of stock price change. The results of the study were found robust across all nine major stock markets, implying that there are similar returns, trading volume, and volatility patterns across all markets under study.

Pilar and Rafael (2002), examined the effect of introduction of derivatives on the volatility andtrading volume of underlying Ibex-35 index by using GJR model and result that trading volume increased significantly but conditional volatility decreased after introduction of derivatives

NathGolaka C(2003), his paper on —Behaviour of Stock Market Volatility after Derivatives‖, examined the behaviour of volatility in equity market in pre and post derivatives period in India using static and conditional variance. It observed that for most of the stocks, the volatility had come down in the post derivative period while for only few stocks in the sample, the volatility in the post derivatives has either stayed more or less same or has increased marginally.

Mukherjee and Mishra's[9] (2006) study empirically investigated the usefulness and impact of twonon-price variables-open interest and trading volume from option market preceding the Nifty index in underlying cash market in India. The empirical findings confirm that the open interest based predictors are significant in predicting the spot price index in underlying cash market in both the periods, just after the initiation of the index option in the market and in the later sub period.

OBJECTIVES OF THE STUDY
The following are the objectives of the study
1. To study the in growth Index Future and Index Option in terms of number of contracts traded.
2. To study the growth in Index Future and Index Option in terms in terms of turnover.
3. To explore the various reasons for the growth in Index Future and Index Option in NSE.

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4. To study CAGR of Index Future and Index Option.

Hypothesis

Ho- There is not tremendous growth in Index Future and Index Option in terms of number of contracts traded.

Ho- There is not tremendous growth in Index Future and Index Option in terms of turnover.

Research methodology- To carry the study of the growth in Index Futures and Index Options of NSE, CAGR (Cumulative Average Growth Rate is studied from 2000-01 to 2017-18.The data is collected from secondary source. Growth in terms of turnover and number of contracts traded is obtained from NSE website.

DATA ANALYSIS

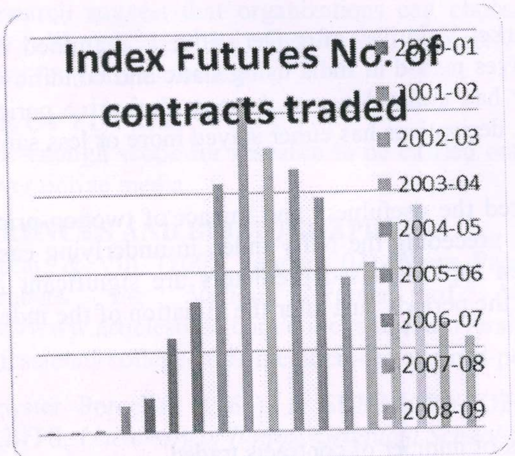
I. Growth of Index Futures and Index Options of NSE on the bases of number of contracts traded

Table – 1: No. of contracts traded in Index Futures and Options

Year	Index Futures No. of contracts traded	CAGR	Index Options No. of contracts	CAGR
2000-01	90580		-	
2001-02	1025588	1032.25%	175900	
2002-03	2126763	107.37%	442241	151.42%
2003-04	17191668	708.35%	1732414	291.74%
2004-05	21635449	25.85%	3293558	90.11%
2005-06	58537886	170.56%	12935116	292.74%
2006-07	81487424	39.20%	25157438	94.49%
2007-08	156598579	92.18%	55366038	120.08%
2008-09	210428103	34.37%	212088444	283.07%
2009-10	178306889	-15.26%	341379523	60.96%
2010-11	165023653	-7.45%	650638557	90.59%
2011-12	146188740	-11.41%	864017736	32.80%
2012-13	96100385	-34.26%	820877149	-4.99%
2013-14	105252983	9.52%	928565175	13.12%
2014-15	129303044	22.85%	1378642863	48.47%
2015-16	140538674	8.69%	1623528486	17.76%
2016-17	66535070	-52.66%	1067244916	-34.26%
2017-18	57674584	-13.32%	1515034222	41.96%

Source: Complied and calculated from the data taken from www.nseindia.com

Graph 1.1



Graph 1.2

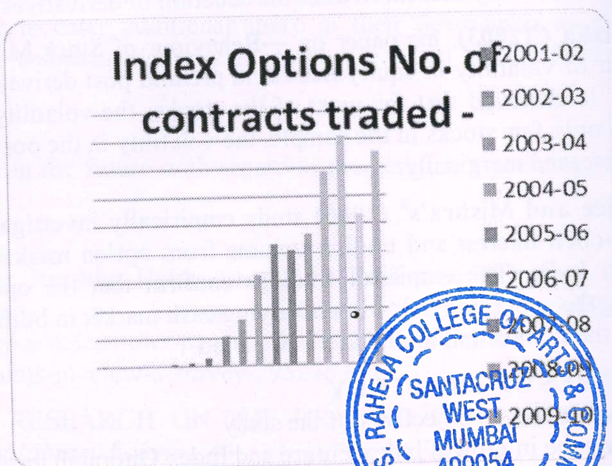


Table 1.1, Graph 1.1 and 1.2 depicts the exponential growth Index futures and options in terms of number of contracts traded. In case of index futures, the contracts traded has risen from 1025588 in 2001-02 to 57674584

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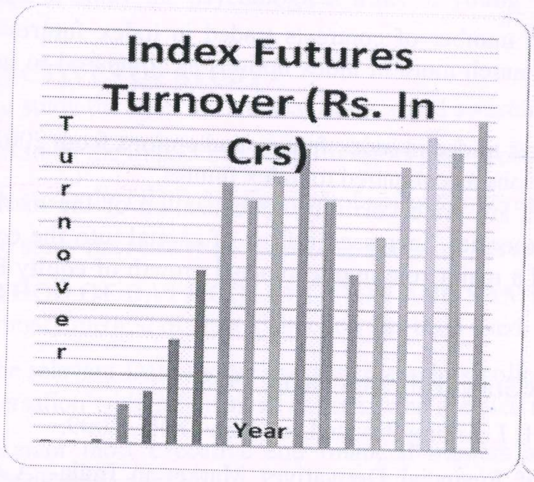
has risen from 175900 in 2001-02 to 1515034222 in 2017-18 which translates into phenomenal growth of 861204%. Thus it is evident that there has been an exponential growth in number of contracts traded in index futures and options from 2001-02 to 2017-18 and the growth has been much more in index options as compared to index futures

Table 2 -Growth of Index Futures and Index Options of NSE on the bases of number of contracts traded

Year	Index Futures Turnover (Rs. In crore)	CAGR	Index Options Premium Turnover**Turnover (Rs. In crore)	CAGR
2000-01	2365			
2001-02	21483	808.37%	1299	
2002-03	43952	104.59%	112.7	-91.32%
2003-04	554446	1161.48%	991.48	779.75%
2004-05	772147	39.26%	2356.98	137.72%
2005-06	1513755	96.04%	5770.52	144.83%
2006-07	2539574	67.77%	17650.87	205.88%
2007-08	3820667.27	50.45%	29286.09	65.92%
2008-09	3570111.4	-6.56%	91715.58	213.17%
2009-10	3934388.67	10.20%	124416.58	35.65%
2010-11	4356754.53	10.74%	192637.87	54.83%
2011-12	3577998.41	-17.87%	253068.22	31.37%
2012-13	2527130.76	-29.37%	184383.24	-27.14%
2013-14	3083103.23	22.00%	244090.71	32.38%
2014-15	4107215.2	33.22%	265315.63	8.70%
2015-16	4557113.64	10.95%	351221.01	32.38%
2016-17	4335940.78	-4.85%	350021.53	-0.34%
2017-18	4810454.34	10.94%	460653.71	31.61%

Graph 2.1



Graph 2.2

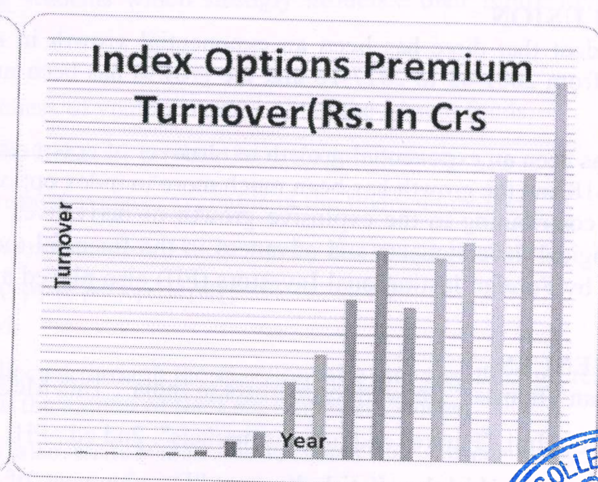


Table 2, Graph 2.1 and 2.2 depicts the exponential growth Index futures and options in terms of turnover. In case of index futures, the turnover has risen from Rs. 21483 crs in 2001-02 to Rs. 4810454 in 2017-18 which translates into phenomenal growth of 22292%. In case of index options, the turnover has increased from Rs. 1299 Crs in 2001-02 to Rs. 460653 crs in 2017-18 which translates into phenomenal growth of 35362%. Thus it is evident that there has been an exponential growth in turnover of contracts traded in index futures and options from 2001-02 to 2017-18

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FACTORS CONTRIBUTING TO THE EXPLOSIVE GROWTH OF DERIVATIVES

1. Price Volatility

The changes in demand and supply influencing factors culminate in market adjustments through price changes. These price changes expose individuals, producing firms and governments to significant risks. The advent of telecommunication and data processing bought information very quickly to the markets. Information which would have taken months to impact the market earlier can now be obtained in matter of moments. Even equity holders are exposed to price risk of corporate share fluctuates rapidly.

This price volatility risk pushed the use of derivatives like futures and options increasingly as these instruments can be used as hedge to protect against adverse price changes in commodity, foreign exchange, equity shares and bonds.

2. Globalization of the Markets

Earlier, managers had to deal with domestic economic concerns; what happened in other part of the world was mostly irrelevant. Now globalization has increased the size of markets and as greatly enhanced competition .it has benefited consumers who cannot obtain better quality goods at a lower cost. It has also exposed the modern business to significant risks and, in many cases, led to cut profit margins

3. Technological Advances

In recent times India has seen the introduction of algorithmic trading. Many brokers provide facility of online trading through the mobile. These facilitated the more rapid movement of information and consequently its instantaneous impact on market price.Derivatives can help a firm manage the price risk inherent in a market economy. To the extent the technological developments increase volatility, derivatives and risk management products become that much more important.

4. Advances in Financial Theories

Advances in financial theories gave birth to derivatives. Initially forward contracts in its traditional form, was the only hedging tool available. Option pricing models developed by Black and Scholes in 1973 were used to determine prices of call and put options. The work of economic theorists gave rise to new products for risk management which led to the growth of derivatives in financial markets.

5. Entry of Foreign Institutional Investors (FII)

India's policy stance has changed towards attracting foreign direct investment (FDI. The Indian Govt also adopted a steady FII policy to encourage them to invest in Indian equity markets. Huge amount of inflows in Indian Equities necessitated the use of derivative instruments such as Index futures, index options, Stock Futures & Stock Options by the FII to hedge their portfolio of Indian Equity against global and domestic headwinds.

CONCLUSION

It is evident that there has been an exponential growth in number of contracts traded in index futures and options from 2001-02 to 2017-18 and the growth has been much more in index options as compared to index futures

There has been an exponential growth in turnover of contracts traded in index futures and options from 2001-02 to 2017-18 and the growth has been much more in index options as compared to index futures.
Factors contributing to the explosive growth of derivatives are price volatility, globalization of the markets, technological developments and advances in the financial theories. Increased inflow of capital into the equity markets by Foreign Institutional Investors (FII) also played a major role in phenomenal growth of equity F&O in India.

REFERENCES

1. Sushan Thomas: “Derivatives markets in India”. Tata McGraw- Hill, New Delhi. 1998.
2. John C. Hull, "Futures and options markets", 2nd ed., PHI Learning Private Ltd., New Delhi, 2009.
3. Ashutosh Vashishtha, Satish Kumar, “Development of Financial Derivatives Market in India- A Case Study”, International Research Journal of Finance and Economics, ISSN 1450-2887 Issue 37 (2010).
4. Juhi Ahuja (2012), “Indian Capital Market: An Overview with Its Growth” VSRD International Journal of Business & Management Research.