Conclusion

The current work tries to present an overall view of derivatives trading in the context of Indian economy and the emerging derivatives market in India since the adoption of neoliberal economic reform programmes in 1991. The study is based on the Indian stock market. The major findings of the study are as follows:

1. **Indian OTC derivatives market:**

   In India, the OTC derivatives market is completely regulated by the Reserve Bank of India. Though India achieved several milestones in OTC derivatives market, the percentage share of the total global OTC market turnover is far from satisfactory. In the foreign exchange market, the percentage share of average daily turnover of Indian rupee was only 0.9% in the year 2010\(^{31}\). In the case of interest rate derivatives, the foreign banks are the major player in Indian OTC derivatives market for hedging interest rate risk. One important OTC derivative product is Credit Default Swap (CDS) is currently not permitted in India. However it is in the process of being introduced to provide the participants an instrument to manage their credit risk. The more common criticism about CDS is that it is liable for recent global financial crisis. So, the RBI has to be stronger in regulation of OTC derivatives market in coming future. According to the global standard, the Indian OTC market is still in primary stage.

2. **Indian Exchange traded derivatives market:**

   In case of exchange traded derivatives, India commands a respectable position in the international front. In terms of the variety of derivative products, The National Stock Exchange of India Ltd. exceeded many other regional markets. Indian derivatives market is dominated by the index options. More than 50 percent contracts were traded on index options followed by index future, stock futures and stock options. After introducing the world’s most followed equity indices, the S&P 500 and the Dow Jones Industrial Average (DJIA) on August 29, 2011, The NSE created a history in the Indian derivatives market. However, the Indian exchange traded derivatives market is mainly dominated by the retail participants. To continue the growth path, NSE has to educate the market participants and SEBI needs to welcome more Foreign Institutional Investors (FII). The total number of contracts traded increased to nearly 68 crores during 2009-10. Out of which, 50.26% of the contracts were traded on index options followed by index futures on which 26.25% of the contracts were traded. In case of stock futures, 21.45% contracts were traded while only 2.06% of the total contracts were traded on stock options.

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\(^{31}\) The BIS Triennial Central Bank Survey of foreign exchange and derivatives market activity in 2010
3. Trend of basis in different market scenarios in India:

The basis becomes more positive when market is in boom. It become more negative when market is moving in a particular range and the basis becomes volatile with the increase in the volatility of the stock market.

This is justified by the reason that in boom market the investment demand for stocks increased in the cash market. So the cash prices of the stocks increased relative to its futures prices, causing the basis more positive. In the range bound market the market participants preferred speculation rather than investment. Thus the speculative demand for stocks caused to increase the futures market price to its cash market price and in the volatile market the market participants can’t predict the actual trend of the market. So the volatility of basis increases with increase in the volatility of the stock market.

4. Performance of Black & Scholes option pricing model in different market scenarios in India:

When market is in bearish trend and time to maturity is high the Black and Scholes model gives a higher price than the actual market price for all in-the-money, at-the-money and out-of-money call options. The variation rises with the rise in strike prices (i.e., the variation is lowest for deep in the money option and the variation is highest for deep out of money options) of the call options. However, when time to maturity is low, the Black & Scholes model quotes a higher price for in- the- money call options and gives a lower price for at-the-money and out-of-money options.

In case of range bound market Black & Scholes model gives a zigzag price movement for all the call options.

When the equity market is in bullish trend and time to maturity is high or time to maturity is low, the Black and Scholes model quotes a lower price than the actual market price for all the call options. The variation again rises with the rise in strike prices.

It is also observed that the Black and Scholes option pricing model gives better result for deep in-the-money options in both bull and bear market and the variation rises with the rise in the options strike prices.

5. The impact of derivatives trading on underlying spot price volatility in Indian stock market:

The introduction of derivatives trading has reduced spot price volatility. This is justified by the reason that derivatives-trading improves the market depth which leads to a reduction in bid-ask spread and hence reduce the price volatility. The results also suggest that in the post derivatives period the importance of ‘present
news’ has gone up in determining the stock price volatility. However importance of ‘old news’ reduce significantly.