A Study of Derivative Market in India

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Abstract

Since 1991, due to liberalization of economic policy, the Indian economy has entered an era in which Indian companies cannot ignore global markets. Before the nineties, prices of many commodities, metals and other assets were controlled. Others, which were not controlled, were largely based on regulated prices of inputs. As such there was limited uncertainty, and hence, limited volatility of prices. But after 1991, starting the process of deregulation, prices of most commodities are decontrolled. It has also resulted in partly deregulating the exchange rates, removing the trade controls, reducing the interest rates, making major changes for the capital market entry of foreign institutional investors, introducing market based pricing of government securities, etc. All these measures have increased the volatility of prices of various goods and services in India to producers and consumers alike. Further, market determined exchange rates and interest rates also created volatility and instability in portfolio values and securities prices. Hence, hedging activities through various derivatives emerged to different risks. This paper will study the capital market in India with reference to Derivatives.
1. Introduction to Capital Market

Capital Market is the market for long term finance with the maturity period more than one year. The Capital Market deals with the stock markets which provide financing through the issuance of shares or common stock in the primary market, and enable the subsequent trading in the secondary market. Capital Markets also deals with Bond Market which provide financing through issuance of Bonds in the primary market and subsequent trading thereof in the secondary market\(^1\).

Financial system is a complex set up for any country, which includes financial institutions like banks, NBFCs (Non Banking Financial Companies), regulators, products etc. Broadly the Indian Financial System can be classified in to two heads, viz, the institutions and regulators in the filed of banking and allied services and the institution and regulators in the filed of financial market. Banking sector institutions include Reserve Bank of India, Pubic Sector Banks, Private Sector Banks, Co-operative Banks, and Foreign Banks. NBFCs and organizations like LIC, GIC etc also play a major role in the financial system.

The past decade has witnessed the multiple growths in the volume of international trade and business due to the wave of globalization and liberalization all over the world. As a result, the demand for the international money and financial instruments increased significantly at the global level. In this respect, changes in the interest rates, exchange rates and stock market prices at the different financial markets have increased the financial risks to the corporate world. Adverse changes have even threatened the very survival of the business world. It is, therefore, to manage such risks; the new financial instruments have been developed in the financial markets, which are also popularly known as financial derivatives. The basic purpose 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. Not only this, they also provide opportunities to earn profit for those persons who are ready to go for higher risks. In other words, these instruments, indeed, facilitate to transfer the risk from those who wish to avoid it to those who are willing to accept the same.

2 Objectives and Research Methodology

Objectives of study:

1. To explore the evolution of Capital Market in India.
2. To assess performance of Indian Derivative Market.
3. To analyze the factors contributing towards the growth of Derivative Markets.

Research Methodology

It is always important to be critical of the information presented in sources, especially since the material might have been gathered to address a different problem area. Moreover, many secondary sources do not clearly describe issues such as the purpose of a study, how the data has been gathered, analysed and interpreted making it difficult for the researcher to assess their usefulness. In order to address this problem I have tried to triangulate the secondary data by using numerous independent sources.

The information about the problem is collected from the Research Journals, Trade Magazines, Annual Reports of Banks and the Internet. For evaluating ‘Evolution of derivatives and important factors!’, I have focused on as recent material as possible. In order to get access to the
latest developments in this area I have used a number of articles published in academic journals and trade magazines. We have also used secondary information from Internet based discussion forums.

3. Findings and Discussions

Since 1991, due to liberalization of economic policy, the Indian economy has entered an era in which Indian companies cannot ignore global markets. Before the nineties, prices of many commodities, metals and other assets were controlled. Others, which were not controlled, were largely based on regulated prices of inputs. As such there was limited uncertainty, and hence, limited volatility of prices. But after 1991, starting the process of deregulation, prices of most commodities are decontrolled. It has also resulted in partly deregulating the exchange rates, removing the trade controls, reducing the interest rates, making major changes for the capital market entry of foreign institutional investors, introducing market based pricing of government securities, etc. All these measures have increased the volatility of prices of various goods and services in India to producers and consumers alike. Further, market determined exchange rates and interest rates also created volatility and instability in portfolio values and securities prices. Hence, hedging activities through various derivatives emerged to different risks.

**Futures trading** offer a risk-reduction mechanism to the farmers, producers, exporters, importers, investors, bankers, trader, etc. which are essential for any country. In the words of Alan Greenspan, Chairman of the US Federal Reserve Board, "The array of derivative products that has been developed in recent years has enhanced economic efficiency. The economic function of these contracts, is to allow risks that formerly had been combined to be unbundled and transferred to those most willing to assume and manage each risk components." Development of futures markets in many countries has contributed significantly in terms of
invisible earnings in the balance of payments, through the fees and other charges paid by the foreigners for using the markets.

Further, economic progress of any country, today, much depends upon the service sector as on agriculture or industry. Services are now backbone of the economy of the future. India has already crossed the roads of revolution in industry and agriculture sector and has allowed the same now m services like financial futures. India has all the infrastructure facilities and potential exists for the whole spectrum of financial futures trading in like stock market indices, treasury bills, gilt-edged securities, foreign currencies, cost of living index, stock market index, etc. For all these reasons, there is a major potential for the growth of financial derivatives markets in India.

3.1 EVOLUTION OF DERIVATIVES IN INDIA may be tracked starting from a controlled economy, India has moved towards a world where prices fluctuate every day. The introduction of risk management instruments in India gained momentum in the last few years due to liberalisation process and Reserve Bank of India’s (RBI) efforts in creating currency forward market. Derivatives are an integral part of liberalisation process to manage risk. NSE gauging the market requirements initiated the process of setting up derivative markets in India. In July 1999, derivatives trading commenced in India.²

Evolution of Derivatives

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>14 December 1995</td>
<td>NSE asked SEBI for permission to trade index futures.</td>
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<td>18 November 1996</td>
<td>SEBI setup L. C. Gupta Committee to draft a policy framework for index futures.</td>
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<tr>
<th>Date</th>
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<tr>
<td>7 July 1999</td>
<td>RBI gave permission for OTC forward rate agreements (FRAs) and interest rate swaps</td>
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<tr>
<td>24 May 2000</td>
<td>SIMEX chose Nifty for trading futures and options on an Indian index.</td>
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<tr>
<td>25 May 2000</td>
<td>SEBI gave permission to NSE and BSE to do index futures trading.</td>
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<tr>
<td>9 June</td>
<td>2000 Trading of BSE Sensex futures commenced at BSE.</td>
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<tr>
<td>12 June 2000</td>
<td>Trading of Nifty futures commenced at NSE.</td>
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<tr>
<td>31 August 2000</td>
<td>Trading of futures and options on Nifty to commence at SIMEX.</td>
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<tr>
<td>June 2001</td>
<td>Trading of Equity Index Options at NSE</td>
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<tr>
<td>July 2001</td>
<td>Trading of Stock Options at NSE</td>
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<tr>
<td>NSE November 9, 2002</td>
<td>Trading of Single Stock futures at BSE</td>
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<tr>
<td>June 2003</td>
<td>Trading of Interest Rate Futures at NSE</td>
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<tr>
<td>September 13, 2004</td>
<td>Weekly Options at BSE</td>
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<tr>
<td>January 1, 2008</td>
<td>Trading of Chhota(Mini) Sensex at BSE</td>
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<tr>
<td>January 1, 2008</td>
<td>Trading of Mini Index Futures &amp; option at BSE</td>
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<tr>
<td>NSE August 29,2008</td>
<td>Futures at NSE</td>
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<tr>
<td>October 2,2008 Futures at BSE</td>
<td>Trading of Currency</td>
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Commodities futures trading in India were initiated long back in 1950s; however, the 1960s marked a period of great decline in futures trading. Market after market was closed usually because different commodities' prices increases were attributed to speculation on these markets. Accordingly, the Central Government imposed the ban on trading in derivatives in 1969 under a notification issue. The late 1990s shows this
signs of opposite trends—a large scale revival of futures markets in India, and hence, the Central Government revoked the ban on futures trading in October, 1999. The Civil Supplies Ministry agreed, in principle for starting of futures trading in Basmati rice, further, in 1996 the Government granted permission to the Indian Pepper and Spice Trade Association to convert its Pepper Futures Exchange into an International Pepper Exchange. As such, on November 17, 1997, India's first international futures Exchange at Kochi, known as the India Pepper and Spice Trade Association-International Commodity Exchange (IPSTA-ICE) was established.

Similarly, the Cochin Oil Millers Association, in June 1996, demanded the introduction of futures trading in coconut oils. The Central Minister for Agriculture announced in June 1996 that he was in favour of introduction of futures trading both domestic and international. Further, a new coffee futures exchange (The Coffee Futures Exchange of India) is being started at Bangalore. In August, 1997, the Central Government proposed that Indian companies with commodity price exposures should be allowed to use foreign futures and option markets. The trend is not confined to the commodity markets alone, it has initiated in financial futures too.

The Reserve Bank of India set up the Sodhani Expert Group which recommended major liberalization of the forward exchange market and had urged the setting up of rupee based derivatives in financial instruments. The RBI accepted several of its recommendations in August, 1996. A landmark step taken in this regard when the Securities and Exchange Board of India (SEBI) appointed a Committee named the Dr. LC. Gupta Committee (LCGC) by its resolution, dated November 18, 1996 in order to develop appropriate regulatory framework for derivatives trading in India. While the Committee's focus was on equity derivatives but it had maintained a broad perspective of derivatives in general.
The Board of SEBI, on May 11, 1998, accepted the recommendations of the Dr. L C. Gupta Committee and approved introduction of derivatives trading in India in the phased manner\(^3\). The recommendation sequence is stock, index futures, index options and options on stocks. The Board also approved the 'Suggestive Bye-Laws' recommended by the Committee for regulation and control of trading and settlement of derivatives’ contracts in India. Subsequently, the SEBI appointed J.R. Verma Committee to look into the operational aspects of derivatives markets. To remove the roadblock of non-recognition of derivatives as securities under Securities Contract Regulation Act, the Securities Law (Amendment) Bill, 1999 was introduced to bring about the much needed changes. Accordingly, in December, 1999, the new framework has been approved and 'Derivatives' have been accorded the status of 'Securities', however, due to certain completion of formalities, the launch of the Index Futures was delayed by more than two years. In June, 2000, the National Stock Exchange and the Bombay Stock Exchange started stock index based futures trading in India. Further, the growth of this market did not take off as anticipated. This is mainly attributed to the low awareness about the product and mechanism among the market players and investors.

3.2 FACTORS CONTRIBUTING TO THE GROWTH OF DERIVATIVES: Factors contributing to the explosive growth of derivatives are price volatility, globalization of the markets, technological developments and advances in the financial theories.

**Price Volatility:** A price is what one pays to acquire or use something of value. The objects having value maybe commodities, local currency or foreign currencies. The concept of price is clear to almost everybody when we discuss commodities. There is a price to be paid for the purchase of food grain, oil, petrol, metal, etc. the price one pays for use of a unit of another persons money is called interest rate. And the price one pays in

one’s own currency for a unit of another currency is called as an exchange rate.

Prices are generally determined by market forces. In a market, consumers have ‘demand’ and producers or suppliers have ‘supply’, and the collective interaction of demand and supply in the market determines the price. These factors are constantly interacting in the market causing changes in the price over a short period of time. Such changes in the price are known as ‘price volatility’. This has three factors: the speed of price changes, the frequency of price changes and the magnitude of price changes.\(^4\)

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 break down of the BRETTON WOODS agreement brought and end to the stabilizing role of fixed exchange rates and the gold convertibility of the dollars. The globalization of the markets and rapid industrialization of many underdeveloped countries brought a new scale and dimension to the markets. Nations that were poor suddenly became a major source of supply of goods. The Mexican crisis in the south east-Asian currency crisis of 1990’s has also brought the price volatility factor on the surface. 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.

Globalisation of 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. In Indian context, south East Asian currencies crisis of 1997 had affected the competitiveness of our products vis-à-vis depreciated currencies. Export of certain goods from India declined because of this crisis. Steel industry in 1998 suffered its worst set back due to cheap import of steel from south East Asian countries. Suddenly blue chip companies had turned in to red. The fear of china devaluing its currency created instability in Indian exports. Thus, it is evident that globalization of industrial and financial activities necessitates use of derivatives to guard against future losses. This factor alone has contributed to the growth of derivatives to a significant extent.

Technological Advances:

A significant growth of derivative instruments has been driven by technological breakthrough. Advances in this area include the development of high speed processors, network systems and enhanced method of data entry. Closely related to advances in computer technology are advances in telecommunications. Improvement in communications allow for instantaneous world wide conferencing, Data transmission by satellite. At the same time there were significant advances in software programmed without which computer and telecommunication advances

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would be meaningless. These facilitated the more rapid movement of information and consequently its instantaneous impact on market price.

Although price sensitivity to market forces is beneficial to the economy as a whole resources are rapidly relocated to more productive use and better rationed overtime the greater price volatility exposes producers and consumers to greater price risk. The effect of this risk can easily destroy a business which is otherwise well managed. 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.

**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. In late 1970’s, work of Lewis Edeington extended the early work of Johnson and started the hedging of financial price risks with financial futures. The work of economic theorists gave rise to new products for risk management which led to the growth of derivatives in financial markets. 

4. Conclusion

A derivative product, or simply 'derivative', is to be sharply distinguished from the underlying cash asset. Cash asset is the asset which is bought or sold in the cash market on normal delivery terms. Thus, the term 'derivative' indicates that it has no independent value. It means that its value is entirely 'derived' from the value of the cash asset. The main point is that derivatives are forward or futures contracts, i.e., contracts for delivery

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and payment on a-specified future date. They are essentially to facilitate hedging of price risk of the cash asset. In the market term, they are called as ‘Risk Management Tools’.\(^7\)

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5. References


