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## **Full Length Research Article**

### **AN ANALYSIS OF THE GROWTH OF DERIVATIVES MARKET IN INDIA**

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#### **ABSTRACT**

Risk is a characteristic feature of most commodity and capital markets. Variations in the prices of agricultural and non-agricultural commodities are induced, over time, by demand-supply dynamics. The last two decades have witnessed many-fold increase in the volume of international trade and business due to the wave of globalization and liberalization sweeping across the world. This has led to rapid and unpredictable variations in financial assets prices, interest rates and exchange rates, and subsequently, to exposing the corporate world to an unwieldy financial risk. In the present highly uncertain business scenario, the importance of risk management is much greater than ever before. The emergence of derivatives market is an ingenious feat of financial engineering that provides an effective and less costly solution to the problem of risk that is embedded in the price unpredictability of the underlying asset. In India, the emergence and growth of derivatives market is relatively a recent phenomenon. Since its inception in June 2000, derivatives market has exhibited exponential growth both in terms of volume and number of traded contracts. The market turn-over has grown from Rs.2365 crore in 2000-2001 to Rs. 11010482.20 crores in 2008-2009. Within a short span of eight years, derivatives trading in India has surpassed cash segment in terms of turnover and number of traded contracts. The present study encompasses in its scope an analysis of historical roots of derivative trading, types of derivative products, regulation and policy developments, trend and growth, future prospects and challenges of derivative market in India, global derivatives markets vis-a-vis the Indian derivatives market. Some space is devoted also to a brief discussion of the status of Commodity Derivatives market and OTC Derivatives segment.

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#### **INTRODUCTION**

Risk is a characteristic feature of all commodity and capital markets. Over time, variations in the prices of agricultural and non-agricultural commodities occur as a result of interaction of demand and supply forces. The last two decades have witnessed a many-fold increase in the volume of international trade and business due to the ever growing wave of globalization and liberalization sweeping across the world. As a result, financial markets have experienced rapid variations in interest and exchange rates, stock market prices thus exposing the corporate world to a state of growing financial risk. Increased financial risk causes losses to an otherwise profitable organisation. This underlines the importance of risk management to hedge against uncertainty. Derivatives provide an effective solution to the problem of risk caused by uncertainty and volatility in underlying asset.

Derivatives are risk management tools that help an organisation to effectively transfer risk. Derivatives are instruments which have no independent value. Their value depends upon the underlying asset. The underlying asset may be financial or non-financial. The present study attempts to discuss the genesis of derivatives trading by tracing its historical development, types of traded derivatives products, regulation and policy developments, trend and growth, future prospects and challenges of derivative market in India.

##### **Concept of Derivatives**

The term 'derivatives, refers to a broad class of financial instruments which mainly include *options* and *futures*. These instruments derive their value from the price and other related variables of the underlying asset. They do not have worth of their own and derive their value from the claim they give to their owners to own some other financial assets or security.

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A simple example of derivative is butter, which is derivative of milk. The price of butter depends upon price of milk, which in turn depends upon the demand and supply of milk. *The general definition of derivatives means to derive something from something else.* Some other meanings of word derivatives are:

- A derived function: the result of mathematical differentiation; the instantaneous change of one quantity relative to another;  $df(x)/dx$ ,
- derivative instrument: a financial instrument whose value is based on another security, (linguistics) a word that is derived from another word; "electricity' is a derivative of 'electric'. The asset underlying a *derivative* may be commodity or a financial asset. Derivatives are those financial instruments that derive their value from the other assets. For example, the price of gold to be delivered after two months will depend, among so many things, on the present and expected price of this commodity.

### Definition of Financial Derivatives

Section 2(ac) of Securities Contract Regulation Act (SCRA) 1956 defines Derivative as:

- "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;
- "A contract which derives its value from the prices, or index of prices, of underlying securities".

A derivative is a risk transfer agreement whose value is derived from the value of an underlying asset. The underlying asset could be a physical commodity, an interest rate, a company's stock, a stock index, a currency, or virtually any other tradable instrument upon which two parties can agree.<sup>2</sup> Derivatives fall into two major categories. One consists of customised, privately negotiated derivatives, which are known generically as over-the-counter (OTC) derivatives. The other category consists of standardised, exchange-traded derivatives, known generically as *futures*.

### Derivatives Market in India

Derivatives markets have been in existence in India in some form or other for a long time. In the area of commodities, the Bombay Cotton Trade Association started futures trading in 1875 and, by the early 1900s India had one of the world's largest futures industry. In 1952 the government banned cash settlement and options trading and derivatives trading shifted to informal forwards markets. In recent years, government policy has changed, allowing for an increased role for market-based pricing and less suspicion of derivatives trading. The ban on futures trading of many commodities was lifted starting in the early 2000s, and national electronic commodity exchanges were created. In the equity markets, a system of trading called "badla" involving some elements of forwards trading had been in existence for decades. However, the system led to a number of undesirable practices and it was prohibited off and on till the Securities and Exchange Board of India (SEBI) banned it for good in 2001.

A series of reforms of the stock market between 1993 and 1996 paved the way for the development of exchange-traded equity derivatives markets in India. In 1993, the government created the NSE in collaboration with state-owned financial institutions. NSE improved the efficiency and transparency of the stock markets by offering a fully automated screen-based trading system and real-time price dissemination.

In 1995, a prohibition on trading options was lifted. In 1996, the NSE sent a proposal to SEBI for listing exchange-traded derivatives. The report of the L. C. Gupta Committee, set up by SEBI, recommended a phased introduction of derivative products, and bi-level regulation (i.e., self-regulation by exchanges with SEBI providing a supervisory and advisory role). Another report, by the J. R. Varma Committee in 1998, worked out various operational details such as the margining systems. In 1999, the Securities Contracts (Regulation) Act of 1956, or SC (R) A, was amended so that derivatives could be declared "securities." This allowed the regulatory framework for trading securities to be extended to derivatives. The Act considers derivatives to be legal and valid, but only if they are traded on exchanges. Finally, a 30-year ban on forward trading was also lifted in 1999.

The economic liberalization of the early nineties facilitated the introduction of derivatives based on interest rates and foreign exchange. A system of market-determined exchange rates was adopted by India in March 1993. In August 1994, the rupee was made fully convertible on current account. These reforms allowed increased integration between domestic and international markets, and created a need to manage currency risk. Figure 1 shows how the volatility of the exchange rate between the Indian Rupee and the U.S. dollar has increased since 1991.<sup>7</sup> The easing of various restrictions on the free movement of interest rates resulted in the need to manage interest rate risk.

### Derivatives Segment of BSE

The BSE created history on June 9, 2000 when it launched trading in Sensex based futures contract for the first time. It was followed by trading in index options on June 1, 2001; in stock options and single stock futures (31 stocks) on July 9, 2001 and November 9, 2002, respectively. Currently, the number of stocks under single futures and options is 1096. BSE achieved another milestone on September 13, 2004 when it launched Weekly Options, a unique product unparalleled worldwide in the derivatives markets.

It permitted trading in the stocks of four leading companies namely; Satyam, State Bank of India, Reliance Industries and TISCO (renamed now Tata Steel). *Chhota* (mini) SENSEX7 was launched on January 1, 2008. With a small or 'mini' market lot of 5, it allows for comparatively lower capital outlay, lower trading costs, more precise hedging and flexible trading. Currency futures were introduced on October 1, 2008 to enable participants to hedge their currency risks through trading in the U.S. dollar-rupee future platforms. Table 2 summarily specifies the derivative products and their date of introduction on the BSE

**Table 1. Derivatives in India: A Chronology**

| Date               | Progress   |
|--------------------|--|
| 14 December 1995   | NSE asked SEBI for permission to trade index futures.                              |
| 18 November 1996   | SEBI setup L. C. Gupta Committee to draft a policy framework for index futures.    |
| 11 May 1998        | L. C. Gupta Committee submitted report.  |
| 7 July 1999        | RBI gave permission for OTC forward rate agreements (FRAs) and interest rate swaps |
| 24 May 2000        | SIMEX chose Nifty for trading futures and options on an Indian index.              |
| 25 May 2000        | SEBI gave permission to NSE and BSE to do index futures trading.                   |
| 9 June 2000        | Trading of BSE Sensex futures commenced at BSE.                                    |
| 12 June 2000       | Trading of Nifty futures commenced at NSE.   |
| 31 August 2000     | Trading of futures and options on Nifty to commence at SIMEX.                      |
| June 2001          | Trading of Equity Index Options at NSE   |
| July 2001          | Trading of Stock Options at NSE  |
| November 9, 2002   | Trading of Single Stock futures at BSE   |
| June 2003          | Trading of Interest Rate Futures at NSE  |
| September 13, 2004 | Weekly Options at BSE  |
| January 1, 2008    | Trading of Chhota(Mini) Sensex at BSE  |
| January 1, 2008    | Trading of Mini Index Futures & Options at NSE                                     |
| August 29,2008     | Trading of Currency Futures at NSE   |
| October 2,2008     | Trading of Currency Futures at BSE   |

Source: Compiled from BSE and NSE

**Table 2. Products Traded in Derivatives Segment of the BSE**

| S. No | Product Traded with underlying asset   | Introduction Date |
|-------|--|-------------------|
| 1     | Index Futures- Sensex  | June 9,2000       |
| 2     | Index Options- Sensex  | June 1,2001       |
| 3     | Stock Option on 109 Stocks   | July 9, 2001      |
| 4     | Stock futures on 109 Stocks  | November 9,2002   |
| 5     | Weekly Option on 4 Stocks  | September 13,2004 |
| 6     | Chhota (mini) SENSEX   | January 1, 2008   |
| 7     | Futures & Options on Sectoral indices namely BSE TECK BSE FMCG, BSE Metal, BSEBankex and BSE Oil & Gas | .N.A.             |
| 8     | Currency Futures on US Dollar Rupee  | October 1,2008    |

Source: Compiled from BSE website

**Table 3. Products Traded in F&O Segment of NSE**

| S.no | Product Traded with underlying asset               | Introduction Date |
|------|--|-------------------|
| 1    | Index Futures- S&P CNX Nifty                       | June 12,2000      |
| 2    | Index Options- S&P CNX Nifty                       | June 4,2001       |
| 3    | Stock Option on 233 Stocks                         | July 2, 2001      |
| 4    | Stock futures on 233 Stocks                        | November 9,2001   |
| 5    | Interest Rate Futures- T – Bills and 10 Years Bond | October 23,2003   |
| 6    | CNX IT Futures & Options                           | August 29,2003    |
| 7    | Bank Nifty Futures & Options                       | June 13,2005      |
| 8    | CNX Nifty Junior Futures & Options                 | June 1,2007       |
| 9    | CNX 100 Futures & Options                          | June 1,2007       |
| 10   | Nifty Midcap 50 Futures & Options                  | October 5,2007    |
| 11   | Mini index Futures & Options - S&P CNX Nifty index | January 1, 2008   |
| 12   | long Term Option contracts on S&P CNX Nifty Index  | March 3,2008      |
| 13   | Currency Futures on US Dollar Rupee                | August 29,2008    |
| 14   | S& P CNX Defty Futures & Options                   | December 28, 2008 |

### Derivatives Products Traded in Derivatives Segment of NSE

NSE started trading in index futures, based on popular S&P CNX Index, on June 12, 2000 as its first derivatives product. Trading on index options was introduced on June 4, 2001. Futures on individual securities started on November 9, 2001. The futures contracts are available on 2338 securities stipulated by the Securities & Exchange Board of India (SEBI). Trading in options on individual securities commenced from July 2, 2001. The options contracts are American style and cash settled and are available on 233 securities. Trading in interest rate futures was introduced on 24 June 2003 but it was closed subsequently due to pricing problem.

The NSE achieved another landmark in product introduction by launching Mini Index Futures & Options with a minimum contract size of Rs 1 lac. NSE created history by launching currency futures contract on US Dollar-Rupee on August 29, 2008 in Indian Derivatives market. Table 3 presents a description of the types of products traded at F& O segment of NSE.

### Regulation of Derivatives Trading in India

The regulatory framework in India is based on the L.C. Gupta Committee Report, and the J.R. Verma Committee Report. It is mostly consistent with the IOSCO (International Organization of Securities Commission (IOSCO) is an international organization) principles and addresses the

common concerns of investor protection, market efficiency and integrity and financial integrity. The L.C. Gupta Committee Report provides a perspective on division of regulatory responsibility between the exchange and the SEBI. It recommends that SEBI's role should be restricted to approving rules, bye laws and regulations of a derivatives exchange as also to approving the proposed derivatives contracts before commencement of their trading. It emphasises the supervisory and advisory role of SEBI with a view to permitting desirable flexibility, maximizing regulatory effectiveness and minimizing regulatory cost.

Regulatory requirements for authorization of derivatives brokers/dealers include relating to capital adequacy, net worth, certification requirement and initial registration with SEBI. It also suggests establishment of a separate clearing corporation, maximum exposure limits, mark to market margins, margin collection from clients and segregation of clients' funds, regulation of sales practice and accounting and disclosure requirements for derivatives trading. The J.R. Varma committee suggests a methodology for risk containment measures for index-based futures and options, stock options and single stock futures. The risk containment measures include calculation of margins, position limits, exposure limits and reporting and disclosure.

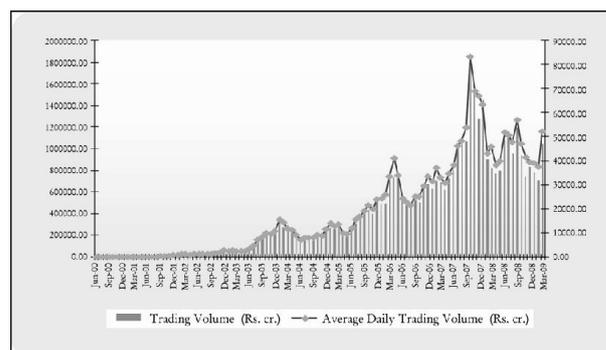
### Growth of Derivatives Market in India

Equity derivatives market in India has registered an "explosive growth" (see Fig. 1) and is expected to continue the same in the years to come. Introduced in 2000, financial derivatives market in India has shown a remarkable growth both in terms of volumes and numbers of traded contracts. NSE alone accounts for 99 percent of the derivatives trading in Indian markets. The introduction of derivatives has been well received by stock market players. Trading in derivatives gained popularity soon after its introduction. In due course, the turnover of the NSE derivatives market exceeded the turnover of the NSE cash market.

For example, in 2008, the value of the NSE derivatives markets was Rs. 130, 90,477.75 Cr. whereas the value of the NSE cash markets was only Rs. 3,551,038 Cr. (see Table 4 through Table 7). If we compare the trading figures of NSE and BSE, performance of BSE is not encouraging both in terms of volumes and numbers of contracts traded in all product categories (see Table 8 through Table 10).

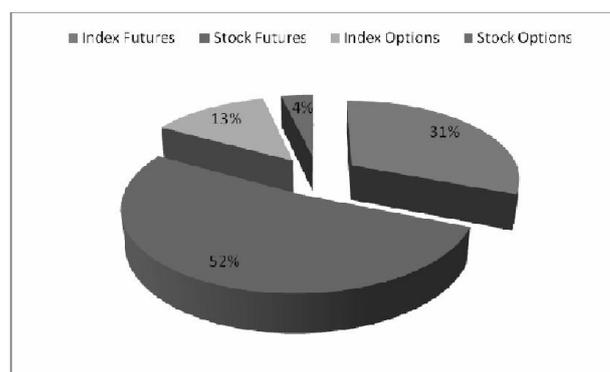
Among all the products traded on NSE in F& O segment, single stock futures also known as equity futures, are most popular in terms of volumes and number of contract traded, followed by index futures with turnover shares of 52 percent and 31 percent, respectively (Fig. 3). In case of BSE, index futures outperform stock futures. An important feature of the derivative segment of NSE which may be observed from Table 6 and Table 7 is the huge gap between average daily transactions of its derivatives segment and cash segment. In sharp contrast to NSE, the situation at BSE is just the opposite: its cash segment outperforms the derivatives segment.

### Business Growth of Derivatives at NSE from 2000-2009



Source: NSE fact book 2008 issue

Figure 2. Product wise Turnover of F&O at NSE from 2000-2008



Source: Author's calculation based on data compiled from NSE

Despite encouraging growth and developments, industry analyst feels that the derivatives market has not yet, realized its full potential in terms of growth & trading. Analysts points out that the equity derivative markets on the BSE and NSE has been limited to only four products- index futures, index options and individual stock futures and options, which in turn, are limited to certain select stocks only. Although recently NSE and BSE has added more products in their derivatives segment (Weekly Options, Currency futures, Mini Index etc.) but still it is far less than the depth and variety of products prevailing across many developed capital markets.

### Status of Indian Derivatives Market vis-a vis Global Derivatives Market

The derivatives segment has expanded in the recent years in a substantial way both globally as well as in the Indian capital market. The figures revealed by Futures Industry Association (FIA) Annual Volume Survey and reported here under Table 8 bring out the fact that more than 15 billion futures and options contracts were traded during 2007 on the 54 important exchanges that report to the FIA, reflecting a remarkable increase of 28% from the previous year. Looking back at the last four years, it can be worked out that these figures reflect that the growth rate was 29 % in 2006, 19% in 2006, 12% in 2005, and 9% in 2004. From the same table it also follows that of the total volume traded globally over the period 2000-07, the US exchanges alone constituted as much as 35 percent share. After North America with a share of about 40 percent, Asia-Pacific occupies the second slot with a share of 28 percent and Europe falls at the third place with its contribution of 24 percent.

**Table 4. NSE Derivatives Segment Turnover (Rs. Cr.)**

| Year    | Index Futures | Stock Futures | Index Options | Stock Options | Interest Rate Futures | Total       | Average Daily Turnover |
|---------|---------------|---------------|---------------|---------------|-----------------------|-------------|------------------------|
| 2008-09 | 2583617.92    | 2558863.55    | 2358916.90    | 149498.40     | 0.00                  | 7650896.80  | 46938.02               |
| 2007-08 | 3820667.27    | 7548563.23    | 1362110.88    | 359136.55     | 0.00                  | 13090477.75 | 52153.30               |
| 2006-07 | 2539574       | 3830967       | 791906        | 193795        | 0                     | 7356242     | 29543                  |
| 2005-06 | 1513755       | 2791697       | 338469        | 180253        | 0                     | 4824174     | 19220                  |
| 2004-05 | 772147        | 1484056       | 121943        | 168836        | 0                     | 2546982     | 10107                  |
| 2003-04 | 554446        | 1305939       | 52816         | 217207        | 202                   | 2130610     | 8388                   |
| 2002-03 | 43952         | 286533        | 9246          | 100131        | -                     | 439862      | 1752                   |
| 2001-02 | 21483         | 51515         | 3765          | 25163         | -                     | 101926      | 410                    |
| 2000-01 | 2365          | -             | -             | -             | -                     | 2365        | 11                     |

Source: Compiled from NSE website

**Table 5. NSE Cash & Derivatives Segment Turnover (Rs. in Cr.)**

| Year    | Cash Segment | Derivative Segment |
|---------|--------------|--------------------|
| 2007-08 | 3,551,038    | 13090477.75        |
| 2006-07 | 1,945,285    | 7356242            |
| 2005-06 | 1,569,556    | 4824174            |
| 2004-05 | 1,140,071    | 2546982            |
| 2003-04 | 1,099,535    | 2130610            |
| 2002-03 | 617,989      | 439862             |
| 2001-02 | 513,167      | 101926             |
| 2000-01 | 1,339,510    | 2365               |

Source: Compiled from NSE website

**Table 6. Number of contract Traded at NSE Derivatives Segment**

| Year    | Index Futures | Stock Futures | Index Options | Stock Options | Interest Rate Futures | Total     |
|---------|---------------|---------------|---------------|---------------|-----------------------|-----------|
| 2008-09 | 136476747     | 149159997     | 116790708     | 7826231       | 0                     | 410253683 |
| 2007-08 | 156598579     | 203587952     | 55366038      | 9460631       | 0                     | 425013200 |
| 2006-07 | 81487424      | 104955401     | 25157438      | 5283310       | 0                     | 216883573 |
| 2005-06 | 58537886      | 80905493      | 12935116      | 5240776       | 0                     | 157619271 |
| 2004-05 | 21635449      | 47043066      | 3293558       | 5045112       | 0                     | 77017185  |
| 2003-04 | 17191668      | 32368842      | 1732414       | 5583071       | 10781                 | 56886776  |
| 2002-03 | 2126763       | 10676843      | 442241        | 3523062       | -                     | 16768909  |
| 2001-02 | 1025588       | 1957856       | 175900        | 1037529       | -                     | 4196873   |
| 2000-01 | 90580         | -             | -             | -             | -                     | 90580     |

Source: complied from NSE website

**Table 7. Average Daily Transaction at NSE in Derivatives and Cash Segment**

| Year    | Derivatives Segment | Cash Segment |
|---------|---------------------|--------------|
| 2007-08 | 52153.30            | 14,148       |
| 2006-07 | 29543               | 7812         |
| 2005-06 | 19220               | 6,253        |
| 2004-05 | 10107               | 4,506        |
| 2003-04 | 8388                | 4,328        |
| 2002-03 | 1752                | 2,462        |
| 2001-02 | 410                 | 2,078        |
| 2000-01 | 11                  | 5,337        |

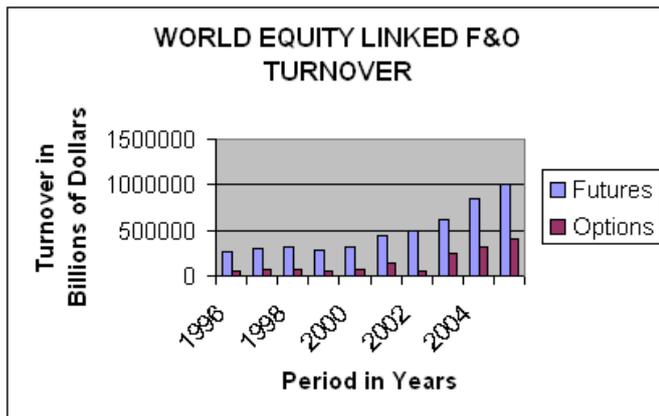
Source: Compiled from NSE website and NSE fact book 2008

**Table 8. Global Trend in Turnover of Derivatives Trading**

| Year    | (in millions) |                   |             |
|---------|---------------|-------------------|-------------|
|         | US Exchanges  | Non- US Exchanges | Global      |
| 2000    | 1313.65       | 1675.80           | 2989.45     |
| 2001    | 1578.62       | 2768.70           | 4347.32     |
| 2002    | 1844.90       | 4372.38           | 6217.28     |
| 2003    | 2172.52       | 5990.22           | 8162.54     |
| 2004    | 2795.21       | 6069.50           | 8864.71     |
| 2005    | 3525.00       | 6448.67           | 9973.67     |
| 2006    | 4616.73       | 7245.48           | 11862.21    |
| 2007    | 6137.20       | 9049.47           | 15186.67    |
| 2000-07 | 23983 (35.48) | 43620 (64.52)     | 67604 (100) |

Source: FI Futures Industry, March/April 2008

If we compare the turnover-wise performance of the derivatives segments over the last five years, it may be noticed from an inspection of the relevant columns of Table 5 and Table 8 that the Indian segment has expanded phenomenally as compared to the global segment. The turnover of the NSE derivatives segment in 2003-04 stood at Rs. 2130610 crores. It grew to an astonishing level of Rs.13090477 crores during the year 2007-08, displaying a more than six-time increase over the five year period. In marked contrast, at the global level the increase was less than even two-fold: the turnover was \$ 8163 million in 2003 and \$ 15187 million in 2007.



## COMMODITIES MARKET IN INDIA

Organized commodity derivatives in India started as early as 1875, barely about a decade after they started in Chicago. However, many feared that derivatives fuelled unnecessary speculation and were detrimental to the healthy functioning of the markets for the underlying commodities. As a result, after independence, commodity options trading and cash settlement of commodity futures were banned in 1952.

|                 |  |
|-----------------|--|
| METAL           | Aluminium, Copper, Lead, Nickel, Sponge Iron, Steel Long (Bhavnagar), Steel Long (Govindgarh), Steel Flat, Tin, Zinc   |
| BULLION         | Gold, Gold HNI, Gold M, i-gold, Silver, Silver HNI, Silver M   |
| FIBER           | Cotton L Staple, Cotton M Staple, Cotton S Staple, Cotton Yarn, Kapas  |
| ENERGY          | Brent Crude Oil, Crude Oil, Furnace Oil, Natural Gas, M. E. Sour Crude Oil   |
| SPICES          | Cardamom, Jeera, Pepper, Red Chilli, Turmeric  |
| PLANTATIONS     | Areca nut, Cashew Kernel, Coffee (Robusta), Rubber   |
| PULSES          | Chana, Masur, Yellow Peas  |
| PETROCHEMICALS  | HDPE, Polypropylene(PP), PVC   |
| OIL & OIL SEEDS | Castor Oil, Castor Seeds, Coconut Cake, Coconut Oil, Cotton Seed, Crude Palm Oil, Groundnut Oil, Kapasia Khalli, Mustard Oil, Mustard Seed (Jaipur), Mustard Seed (Sirsa), RBD Palmolein, Refined Soy Oil, Refined Sunflower Oil, Rice Bran DOC, Rice Bran Refined Oil, Sesame Seed, Soy meal, Soy Bean, Soy Seeds |
| CEREALS         | Maize  |
| OTHERS          | Guargum, Guar Seed, Gurchaku, Mentha Oil, Potato (Agra), Potato (Tarkeshwar), Sugar M-30, Sugar S-30   |

A further blow came in 1960s when, following several years of severe draughts that forced many farmers to default on forward contracts (and even caused some suicides), forward trading was banned in many commodities considered primary or essential. Consequently, the commodities derivative markets dismantled and remained dormant for about four decades until the new millennium when the Government, in a complete change in policy, started actively encouraging the commodity derivatives market. Since 2002, the commodities futures market in India has experienced an unprecedented boom in terms of the number of modern exchanges, number of commodities allowed for derivatives trading as well as the value of futures trading in commodities.

## REGULATING BODY

The commodity futures traded in commodity exchanges are regulated by the Government under the Forward Contracts Regulations Act, 1952 and the Rules framed there under. The regulator for the commodities trading is the Forward Markets Commission, situated at Mumbai, which comes under the Ministry of Consumer Affairs Food and Public Distribution

### Forward Markets Commission (FMC)

It is statutory institution set up in 1953 under Forward Contracts (Regulation) Act, 1952. Commission consists of minimum two and maximum four members appointed by Central Govt. Out of these members there is one nominated chairman. All the exchanges have been set up under overall control of Forward Market Commission (FMC) of Government of India.

## COMMODITIES TRADED

World-over one will find that a market exists for almost all the commodities known to us. These commodities can be broadly classified into the following:

## BENEFITS OF COMMODITY FUTURES MARKETS

The primary objectives of any futures exchange are authentic price discovery and an efficient price risk management. The beneficiaries include those who trade in the commodities being offered in the exchange as well as those who have nothing to do with futures trading. It is because of price discovery and risk management through the existence of futures exchanges that a lot of businesses and services are able to function smoothly.

- **Price Discovery:-**Based on inputs regarding specific market information, the demand and supply equilibrium, weather forecasts, expert views and comments, inflation rates, Government policies, market dynamics, hopes and fears, buyers and sellers conduct trading at futures exchanges. This transforms in to continuous price discovery mechanism. The execution of trade between buyers and sellers leads to assessment of fair value of a particular commodity that is immediately disseminated on the trading terminal.
- **Price Risk Management:** - Hedging is the most common method of price risk management. It is strategy of offering price risk that is inherent in spot market by taking an equal

but opposite position in the futures market. Futures markets are used as a mode by hedgers to protect their business from adverse price change. This could dent the profitability of their business. Hedging benefits who are involved in trading of commodities like farmers, processors, merchandisers, manufacturers, exporters, importers etc.

- **Import- Export competitiveness:** - The exporters can hedge their price risk and improve their competitiveness by making use of futures market. A majority of traders which are involved in physical trade internationally intend to buy forwards. The purchases made from the physical market might expose them to the risk of price risk resulting to losses. The existence of futures market would allow the exporters to hedge their proposed purchase by temporarily substituting for actual purchase till the time is ripe to buy in physical market. In the absence of futures market it will be meticulous, time consuming and costly physical transactions.
- **Predictable Pricing:** - The demand for certain commodities is highly price elastic. The manufacturers have to ensure that the prices should be stable in order to protect their market share with the free entry of imports. Futures contracts will enable predictability in domestic prices. The manufacturers can, as a result, smooth out the influence of changes in their input prices very easily. With no futures market, the manufacturer can be caught between severe short-term price movements of oils and necessity to maintain price stability, which could only be possible through sufficient financial reserves that could otherwise be utilized for making other profitable investments.
- **Benefits for farmers/Agriculturalists:** - Price instability has a direct bearing on farmers in the absence of futures market. There would be no need to have large reserves to cover against unfavorable price fluctuations. This would reduce the risk premiums associated with the marketing or processing margins enabling more returns on produce. Storing more and being more active in the markets. The price information accessible to the farmers determines the extent to which traders/processors increase price to them. Since one of the objectives of futures exchange is to make available these prices as far as possible, it is very likely to benefit the farmers. Also, due to the time lag between planning and production, the market-determined price information disseminated by futures exchanges would be crucial for their production decisions.
- **Credit accessibility:** - The absence of proper risk management tools would attract the marketing and processing of commodities to high-risk exposure making it risky business activity to fund. Even a small movement in prices can eat up a huge proportion of capital owned by traders, at times making it virtually impossible to payback the loan. There is a high degree of reluctance among banks to fund commodity traders, especially those who do not manage price risks. If in case they do, the interest rate is likely to be high and terms and conditions very stringent. This poses a huge obstacle in the smooth functioning and competition of commodities market. Hedging, which is possible through futures markets, would cut down the discount rate in commodity lending.
- **Improved product quality:** - The existence of warehouses for facilitating delivery with grading facilities along with

other related benefits provides a very strong reason to upgrade and enhance the quality of the commodity to grade that is acceptable by the exchange. It ensures uniform standardization of commodity trade, including the terms of quality standard: the quality certificates that are issued by the exchange-certified warehouses have the potential to become the norm for physical trade.

#### TURNOVER

| Exchanges     | 2004-05 | 2005-06   | 2006-07   | 2007-08   |
|---------------|---------|-----------|-----------|-----------|
| MCX           | 165,147 | 961,633   | 1,621,803 | 2,505,206 |
| NCDEX         | 266,338 | 1,066,686 | 944,066   | 733,479   |
| NMCE          | 13,988  | 18,385    | 101,731   | 24,072    |
| NBOT          | 58,463  | 53,683    | 57,149    | 74,582    |
| Others        | 67,823  | 54,735    | 14,591    | 37,997    |
| All Exchanges | 571,759 | 2,155,122 | 2,739,340 | 3,375,336 |

Total value of trading at the Commodity Exchanges during the fortnight from 1st March 2010 to 15th March 2010 was Rs. 3, 78,758.22 crore. The cumulative value of trades from 1st April, 2009 upto 15th March, 2010 for the financial year 2009-10 was Rs. 73,50,974.95 crore. The corresponding figures for the previous year were Rs. 2, 62,813.49 crore and Rs. 49, 07,310.41 crore respectively.

#### Summary and Concluding Remarks

Innovation of derivatives have redefined and revolutionized the landscape of financial industry across the world and derivatives have earned a well deserved and extremely significant place among all the financial products. Derivatives are risk management tool that help in effective management of risk by various stakeholders. Derivatives provide an opportunity to transfer risk, from the one who wish to avoid it; to one, who wish to accept it. India's experience with the launch of equity derivatives market has been extremely encouraging and successful. The derivatives turnover on the NSE has surpassed the equity market turnover. Significantly, its growth in the recent years has surpassed the growth of its counterpart globally.

The turnover of derivatives on the NSE increased from Rs. 23,654 million (US \$ 207 million) in 2000-01 to Rs. 130,904,779 million (US \$ 3,275,076 million) in 2007-08. India is one of the most successful developing countries in terms of a vibrant market for exchange-traded derivatives. This reiterates the strengths of the modern development of India's securities markets, which are based on nationwide market access, anonymous safe and secure electronic trading, and a predominantly retail market.

There is an increasing sense that the equity derivatives market is playing a major role in shaping price discovery. Factors like increased volatility in financial asset prices; growing integration of national financial markets with international markets; development of more sophisticated risk management tools; wider choices of risk management strategies to economic agents and innovations in financial engineering, have been driving the growth of financial derivatives worldwide and have also fuelled the growth of derivatives here, in India.

There is no better way to highlight the significance and contribution of derivatives but the comments of the longest serving Governor of Federal Reserve,

**Alan Greenspan:** "Although the benefits and costs of derivatives remain the subject of spirited debate, the performance of the economy and the financial system in recent years suggests that those benefits have materially exceeded the costs."

## REFERENCES

- 'Indian Securities Market, A Review' (ISMR)-2008 available at: <http://www.nseindia.com> (accessed on May 27, 2009)
- 'International Options Market Association (IOMA) Derivatives Market Survey' 2007, available at: <http://www.world-exchanges.org/ioma> (accessed on May 30, 2009).
- 'Introduction to derivatives in India', available at: <http://business.mapsofindia.com/investmentindustry/introduction-to-derivatives.html> (accessed on May 27, 2009).
- 'Trading statistics of Derivatives segment at BSE', available at: [www.bseindia.com](http://www.bseindia.com) (accessed on May 30, 2009)
- Bodla, B. S. and Jindal, K. 2008. 'Equity Derivatives in India: Growth Pattern and Trading Volume Effects', *The Icfai Journal of Derivatives Markets*, Vol. V, No. 1, pp.62-82.
- Growth of Derivatives Market In India, available at: [http://www.valuenotes.com/njain/nj\\_derivatives\\_15sep03.asp?ArtCd=33178&Cat=T&Id=10](http://www.valuenotes.com/njain/nj_derivatives_15sep03.asp?ArtCd=33178&Cat=T&Id=10) (accessed on May 30, 2008).
- Harish, A. S. 2001. 'Potential of Derivatives Market in India', *The ICFAI Journal of Applied Finance*, Vol. 7, No.5, pp 1-24.
- Hirani, Kapil 2007. 'Understanding Derivatives', available at: <http://kapilhirani.com/News5.php> (accessed on May 20, 2009)
- <http://www.indiainfoline.com/news/showleader.asp?lmm=1&storyId=344> (accessed on May 20, 2009)
- [http://www.valuenotes.com/njain/nj\\_derivatives\\_15sep03.asp?ArtCd=33178&Cat=T&Id=10](http://www.valuenotes.com/njain/nj_derivatives_15sep03.asp?ArtCd=33178&Cat=T&Id=10) (accessed on May 28, 2009)
- Kannan, R. 2008. 'Onset of Derivatives Trading in Derivatives market', available at: [www.geocities.com/kstability/content/derivatives/first.html](http://www.geocities.com/kstability/content/derivatives/first.html) (accessed on May 20, 2009).
- Kaur, P. 2004. 'Financial derivatives: Potential of derivative market in India and emerging derivatives market structure in India' available at: [www.icwai.org/icwai/knowledgebank](http://www.icwai.org/icwai/knowledgebank) (accessed on May 28, 2009)
- Misra Dheeraj and Misra Sangeeta D (2005), 'Growth of Derivatives in the Indian Stock Market: Hedging v/s Speculation', *The Indian Journal of Economics*, Vol. LXXXV, No. 340.
- NSE fact book, 2008 Issue, available at: <http://www.nseindia.com> (accessed on May 15, 2009)
- Reddy, Y. V. and Sebastin, A. 2008. 'Interaction between Equity and Derivatives Markets in India: An Entropy Approach', *The Icfai Journal of Derivatives Markets*, Vol. V, No.1, pp.18-32.
- Sarkar, A. 2006. 'Indian Derivatives Markets' available at: [www.newyorkfed.org/research/economists/sarkar/derivatives\\_in\\_india.pdf](http://www.newyorkfed.org/research/economists/sarkar/derivatives_in_india.pdf) (accessed on May 10, 2009).
- Srivastava, P. (2004), 'Financial and legal aspect of derivative trading in India', available at: [www.taxmann.net/Datafolder/Flash/article0412\\_4.pdf](http://www.taxmann.net/Datafolder/Flash/article0412_4.pdf) (accessed on May 10, 2009).

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