Indian Derivatives Market: A Perspective

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Introduced with a view to refashion the capital markets to attract foreign investment, the trading volumes in the derivatives segment have shown dismal results when compared to its compatriot, the cash markets. Some of the reasons for the lack of depth in these markets happen to be poor understanding and awareness among the investors about these instruments and lack of clarity on the accounting and taxation related issues. What are the other reasons for decline in volumes in these markets? Is there a need for developing a clear-cut action plan to ensure vibrancy in these markets?

The introduction of index futures trading on NSE at the beginning of 2000 was described as India's derivatives explosion. Much of that hoopla has died now. Contrary to their initial promise, derivatives never really picked up in the country. What went wrong?

Derivative instruments hedge risk in transactions and bring depth and vibrancy to the capital markets. There are numerous variants of derivatives currently traded in the world. Table 1 gives a brief profile of the global derivatives industry.

Background Note

The L C Gupta Committee was appointed in November 1996 to develop the appropriate regulatory framework for derivatives trading. The committee's main focus was on financial derivatives and in particular, equity derivatives. In March 1998, the committee submitted its report, which was approved by SEBI in May and circulated in June 1998. The important findings of the report were:

- Both hedgers and speculators are required for efficient markets.
- Equity derivatives could begin with index futures.
- Derivatives market must be developed in phased manner.
- Index options and options on shares will be introduced at a later stage.
- Regulatory emphasis will be at the exchange-level.
- Derivatives market will have stricter governance by SEBI compared to cash segment.
- The entry into the derivatives markets will be stringent.
- Mutual funds should be allowed to hedge their positions using derivatives.
- Derivatives should be declared as securities.

The committee has also suggested that the notification in June 1969 under Section 16 of SCRA banning forward trading be revoked in March 2000. Derivatives trading in India finally got under way in 2000. The response from the investor community was mixed; There were a few, doubting the future for derivatives in India. But many predicted a great boom in derivatives trading and involvement with them. All that excitement died out prematurely as the trading volumes in derivatives are not as vibrant as thought to be expected earlier.

Current Scenario

The NSE and the BSE are the two exchanges on which financial derivatives are traded. The combined notional value of the daily volumes on both the bourses stand at around Rs. 400 cr. In developed markets trading volume in the derivatives segment are thrice as large as in the cash market. In India, the figure is hardly 20% of cash market. Quite clearly our derivatives markets have a long way to go.

According to the Executive Director of Association of NSE Members of India (Anmi), Vinod Jain[1], "Volumes in derivatives segment are stagnating due to lack of growth in the number of market participants.

[1] As quoted in *The Financial Express* March 13, 2002.

Table 1: The Global Derivatives Industry: Outstanding Contracts (in $ billion)	1995	1996	1997	1998	1999	2000
Exchange traded instruments	9283	10018	12403	13932	13522	14302
Interest rate futures and options	8618	9257	11221	12643	11669	12626
Currency futures and options	154	171	161	81	59	96
Stock Index futures and options	511	591	1021	1208	1793	1580
Some OTC instruments	17713	25453	29035	80317	88201	95199
Interest rate swaps and options	16515	23894	27211	44259	53316	58244
Currency swaps and options	1197	1560	1824	5948	4751	5532
Other instruments	-	-	-	30110	30134	31423
Total	**26996**	**35471**	**41438**	**94249**	**101723**	**109501**

Source: Bank for International Settlements

Besides, these products are still to catch up with the masses who are keeping away from this segment due to lack of understanding of the products and high contract price." Other reasons for the lack of depth in derivatives markets have also been identified.

- Problems regarding infrastructure
- No clarity on the taxation and accounting front.
- Minimum contract size of Rs. 2 lakhs, which is beyond the means of a typical investor.
- Bearing trends in the stock markets.
- Faulty regulatory framework, for example, FIs are allowed to invest only in index futures and no other derivatives. There are stringent disclosure requirements for MFs if they want to invest in derivatives.

Like our stock markets, the Indian derivatives markets are also becoming heavily dependent on a few instruments. For instance, futures in three blue-chip companies such as Satyam Computers, Reliance Industries and Infosys Technologies, have accounted for as much as 42% of the total turnover in the derivatives segment of the National Stock Exchange in June, 2002. Stock futures of Satyam Computers, Infosys Technologies and HPCL accounted for 37% of the total turnover in May 2002, 35% in April 2002 and 34% in March 2002[2].

These highly speculative stock futures instruments accounted for about 69% of the total turnover. This may lead to price manipulations. Meanwhile, option contracts are witnessing a decline in trading interest. The turnover in individual stock options plunged to Rs. 4,642 cr in June compared with Rs. 5,133 cr in May. Similarly, the turnover in index options also declined from Rs. 463 cr in May to Rs. 389 cr in June.

Derivatives on BSE

Things are so bad that BSE is now looking at the option of terminating its derivatives trading. In the past two years, the BSE has invested over Rs. 10 cr in derivatives business. In addition, it has also incurred annual expenses of around Rs. 2-3 cr. With the NSE capturing the bulk of the volumes in the derivatives segment, the BSE has been left with virtually no business. Consequently, the exchange is finding it difficult to sustain itself and hence is looking at the option of withdrawing from the derivatives segment and leveraging its advantages in the cash segment.

According to a senior BSE official[3], things have come to this state of affairs owing to the inability of SEBI to permit the exchange to expand its operations to other cities for almost four years. Meanwhile, rival NSE has been permitted to increase its reach. More than 60% of NSE's derivatives

Table 2: The Derivatives Lexicon

Derivatives is a common name given to a class of instruments whose value is derived from another asset called the underlying asset. The three most popular classes of derivative instruments are options, futures and swaps.

- **Forwards:** A forward contract is a customized contract between two entities, where settlement takes place on a specific date in the future at today's pre-agreed price.
- **Futures:** A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Futures contracts are standardized exchange-traded contracts unlike forwards, which are customized OTC instruments. Index futures are the future contracts for which underlying is the cash market index.
- **Options:** These instruments give the buyer the right but not the obligation to buy or sell an asset. Options are of two types—calls and puts. Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date. Puts give the buyer the right, but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

Derivatives markets are made up of the following players:

- **Hedgers:** These are operators, who want to transfer a risk component of their portfolio and thus, hedge it with the buying or selling of other instruments.
- **Speculators:** These are operators, who intentionally take the risk from hedgers in pursuit of profit.
- **Arbitrageurs:** These are operators who operate in different markets simultaneously, in pursuit of profit and eliminate mis-pricing in securities across different markets.

[2] Source: *The Financial Express*, August 05, 2002.
[3] Source: *The Business Standard*, December 13, 2002.

Table 3: Business Growth of Futures and Options Market: NSE Turnover

(Rs. cr)

Month	Index Futures	Stock Futures	Index options	Stock options	Total
June-00	35	-	-	-	35
July-00	108	-	-	-	108
August-00	90	-	-	-	90
September-00	119	-	-	-	119
October-00	153	-	-	-	153
November-00	247	-	-	-	247
December-00	237	-	-	-	237
January-01	471	-	-	-	471
February-01	524	-	-	-	524
March-01	381	-	-	-	381
April-01	292	-	-	-	292
May-01	230	-	-	-	230
June-01	590	-	196	-	785
July-01	1309	-	326	396	2031
August-01	1305	-	284	1107	2696
September-01	2857	-	559	2012	5281
October-01	2485	-	559	2433	5477
November-01	2484	2811	455	3010	8760
December-01	2339	7515	405	2660	12919
January-02	2660	13261	338	5089	21348
February-02	2747	13939	430	4499	21616
March-02	2185	13989	360	3957	20490
2001-02	21482	51516	3766	25163	101925

Source: National Stock Exchange

business comes from outside Mumbai.

Derivatives on NSE

The following are some of the major trends in derivatives trading on NSE:

- Single-stock futures continue to account for a sizable proportion of the trading. These instruments constituted 70% of the total turnover during June 2002. Traders seem to be more comfortable with single-stock futures than equity options, as the former closely resembles the erstwhile badla system.
- On relative terms, volumes in the index options segment continue to remain poor. This may be due to the low volatility of the spot index. Typically, options are considered more valuable when the volatility of the underlying asset (in this case, the index) is high. A related issue is that, brokers do not earn high commissions by recommending index options to their clients.
- Put volumes in the index options and equity options segment have increased since January 2002. The ratio call-put volumes in index options have decreased from 2.86 in January, 2002 to 1.32 in June. The fall in call-put volumes ratio suggests that the traders are increasingly becoming pessimistic in the market.
- Farther, month futures contracts are still not actively traded. Trading in equity options on most stocks for even the next month is non-existent.
- Daily option price variations suggest that traders use derivatives as a less risky alternative (read substitute) to generate profits from the stock price movements. The fact that the option premiums tail intra-day stock prices is an evidence to this. Calls on Satyam fall, while puts rise when Satyam falls intra-day. If calls and puts are not looked as just substitutes for spot trading, the intra-day stock price variations should not have a one-to-one impact on the option premiums.

Commodity Derivatives[4]

Trading in futures contracts in pepper, turmeric, *gur* (jaggery), hessian (jute fabric), jute sacking, castor seed, potato, coffee, cotton, and *soyabean* and its derivatives is done in 18 commodity exchanges located in various parts of the country. Futures trading in other edible oils, oilseeds and oil-cakes have also started. The sugar industry is exploring the merits of introducing futures contracts. Meanwhile, Government of India has constituted a committee to evaluate issues relevant to the establishment of the proposed national commodity exchange for the nationwide trading of commodity futures contracts. The Government is also studying issues relating to warehousing and clearing houses.

Concluding Remarks

Derivatives have been in use for many decades in sophisticated markets such as the US. When compared to the millions of investors there and the number of institutional investors, India is far behind. Some of the reasons for the poor performance of derivatives in India have been discussed in this article.

A few important steps that will help the growth of derivatives markets in India are summarized below[5].

[4] This section draws from the study "Financial Derivatives Market and its Development in India" by Anuj Thakur, Rahul Karkun, Sameer Kalra, IIM, Calcutta which can be found at "www.iimcal.ac.in/community/FinClub/art16-idm.pdf".

[5] This section draws from the interview with Vinnet Bhatnagar, MD, Refco India Pvt. Ltd., appeared in *The Financial Express*, March 24, 2002.

- ***Participation of Mutual Funds in Derivatives:*** The biggest stumbling block for this is the definition of the term portfolio balancing. To encourage participation by financial institutions in derivatives, SEBI must clearly specify what the term portfolio hedging and rebalancing means. Currently, the term is defined vaguely and this is impeding the investors from investing in derivatives.
- Increase the limits on trading of derivatives by foreign institutional investors.
- Increase the number of stocks on which options and futures are traded.
- Reduce in the minimum contract size from Rs. 200,000 to say, Rs. 100,000.
- Introduce options and futures on sector indices like the BSE IT index, BSE Pharma index, etc.
- Introduce options on futures.

Derivatives bring vibrancy to the capital markets. They help investors across industry to hedge their risk. They eliminate mis-pricing in transactions. Indian investors can benefit tremendously from a much vibrant derivatives market. Hence, derivatives markets should be nurtured and supported.

Infrastructural issues in derivatives should be addressed immediately by the regulatory bodies and the Government. More clarity is required in the areas of accounting and taxation of derivatives. SEBI should promote the use of derivatives and educate the investors on how derivatives can reduce risk if used wisely. New trading exchanges for derivative instruments should be promoted. Proper infrastructure for clearing and settlement is needed. Marked to market mechanisms need sophisticated IT platforms. A committed action plan is badly necessary to ensure the long-term vibrancy of derivatives markets in India.

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