

# **REPORT**

## **DERIVATIVES MARKET REVIEW COMMITTEE**

**Securities and Exchange Board of India**

**December 2008**

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## **Executive Summary**

Markets have always played a central role in the economic development and ensuring orderly conduct of markets had been a constant endeavor. Various theories have provided an essential backdrop to analyze and understand market behavior. In the case of financial markets, the prominent ones are: Efficient Market Hypothesis, Agency Theory, and Information Theory. Whenever, the assumptions of these theories are not met fully – there begins a case for regulation.

The key concerns of financial market regulators are: market integrity, systemic safety and customer protection. These three concerns are intertwined and inter-related.

As it is evident from the growth pattern of the international markets that developed countries have maintained their position, while the emerging markets are also coming forward with full strength.

A few prominent emerging trends are: the investors are becoming more market savvy, information and communication technology is revolutionizing the way transactions are carried out, world is becoming a financial village, emergence of trans-national businesses demands better coordination among regulators, etc.

In the future, Indian markets are expected to become more vibrant and attain a leading position in the global financial system. With increasing role of information and communication technology (ICT) information asymmetry is expected to reduce at an increasing rate. Organized exchanges are likely to become one-stop financial shopping malls.

The Committee held a series of interactions – both formal and informal – with market participants to appreciate their views, concerns, and expectations, and numerous informal discussions with knowledgeable persons while arriving at these recommendations.

The Committee has noted recent introduction of new products based on its interim recommendations and it has further recommended to widen the range of ‘New Products’. It is expected that these new products, namely, mini-contracts on equity indexes, options contracts with longer life/tenure, creation of volatility index and F&O contracts on it, options on futures, creation of bond indexes and F&O contracts on them, exchange-traded currency (foreign exchange) F&O contracts, exchange-traded products involving different strategies, exchange-traded credit derivatives, over-the-counter (OTC) products, and exchange-traded

third-party products will be able to meet the needs of various classes of investors. Each class of these products needs to be carefully designed and risk management specified by the exchanges with due approval by SEBI.

The Committee believes that, with experience generated, more and more operating parameters for the markets should be left to exchanges and intermediaries, that is, India needs to move from rule-based regulation to principle-based regulation at a faster pace. This also means developing the organized exchanges as self-regulatory organizations (SROs) at an increasing pace, since the exchanges, due to their proximity to the markets, are better placed to respond to the issues, on a day-to-day basis, that keep emerging on a regular basis.

While this empowerment of the exchanges is taking place, as an interim measure, the Committee had also made recommendations on various operational issues like revision of eligibility criteria for introduction of F&O on stocks and indexes, upward revision of position limits, revisiting Securities Transaction Tax (STT) and basing it on premium instead of strike price, making legal definitions of net worth of a broker / member and role of 'sub-brokers' consistent across cash and derivatives segment, asking exchanges to realign contract size on a monthly basis, bringing in physical settlement – first in options and then in futures segment, simplification of margin requirements including introduction of cross-margining, introduction of direct market access, off-shoring of terminals, program trading, algorithmic trading, etc. The Committee has noted the operational changes introduced by SEBI relating to some of the operational issues.

Among the other issues considered by the Committee were: reporting of exposure by the issuers of Overseas Derivative Instruments (ODIs) as per internationally accepted accounting standards, training and enhancing skill of Exchange and SEBI officers dealing with derivatives, information dissemination to market on various aspects of derivatives trades, investor education and profiling to protect small individual investors, etc.

Finally, the Committee feels that while the small individual investors could best protect their investments by hedging their positions in options markets, they should carefully consider taking positions on futures markets because mark-to-market losses resulting in margin calls could wipe out small individual investors.

## **Preface**

The Derivatives Market Review Committee was set up by SEBI to review the developments in the Indian Derivatives Market and to suggest future course of action.

The Committee was headed by Professor M Rammohan Rao. The members were: Professor Prakash G Apte, Dr. Nachiket Mor, Ms. Chitra Ramkrishna, and Ms. Deena Mehta. Dr. Sanjeevan Kapshe was the Member Secretary and Convener.

The first meeting of the Committee was with the then SEBI Chairman Mr. M Damodaran and Wholetime Member Mr. G Anantharaman. This meeting helped the Committee in outlining the task ahead of the Committee.

The Committee had its meetings – informal and formal – on several occasions with various market participants and noted their views, concerns, and aspirations. The Committee also had several meetings to discuss the issues in detail and arrive at consensus. This report is an effort to address some concerns of the market participants, to meet some of their aspirations, and at the same time envision the future of the Indian markets.

The Committee had submitted its interim recommendations on the new products and operational issues in October 2007 and January 2008 to SEBI for consideration. With regard to recommendations on the new products SEBI Board had given in-principle approval and some of these products are already introduced in the market. The Committee had submitted its draft report to SEBI in February 2008.

The Committee would like to sincerely thank SEBI Board for providing this unique opportunity to review the past and envision the future of the derivatives market in India.

The Committee is thankful to the market participants and academic colleagues for free-and-frank exchange of views on various complex issues and for providing deeper insights.

The Committee would like to place on record its appreciation for the background support provided by Mr. Ashish Kumar Singh, Mr. Navpreet Singh, Ms. Rajeswari Rath, Mr. Sujit Prasad, and Ms. V Divyaveda of SEBI and Mr. Sundar Raman of NSE.

The Committee could not have functioned smoothly without the untiring efforts of Mr. A Ramesh, Ms. Beena Alex, Ms. Cheryl D'Souza, Ms. Lourdes D'Souza, Ms. Nilufer Charna, and Ms. Vasudha Kamat.

The Committee sincerely hopes that this document will be able to provide direction for the future development of derivatives market in India.

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Professor M. Rammohan Rao  
Chairman

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Professor Prakash G. Apte  
Member

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Dr. Nachiket Mor  
Member

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Ms. Chitra Ramkrishna  
Member

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Ms. Deena Mehta  
Member

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Dr. Sanjeevan Kapshe  
Member Secretary and Convener

# Chapter 1

## Conceptual Framework

With progress of civilization, ‘orderly’ conduct of markets became the focus of many scholarly works and wide range of efforts were made towards this end. All along, a range of views were expressed from absolute freedom of an individual in *laissez-faire* sense to command-and-control approach to ‘tame’ the markets. However, over a period of time, middle path has gained currency where attempts were made to strike a balance between the two polar positions and the approach was to get ‘control to have freedom’ or ‘freedom to have control’; what is often termed as the path of ‘regulation’.

Initial developments in the theory of regulation were embedded within the context of a nation-state. For example, George Stigler in his paper ‘The Theory of Economic Regulation’ had said “The state – the machinery and power of the state – is a potential resource or threat to every industry in the society. With its power to prohibit or compel, to take or give money, the state can and does selectively help or hurt a vast number of industries.” He went on to add “We propose the general hypothesis: every industry or occupation that has enough political power to utilize the state will seek to control entry. In addition, the regulatory policy will often be so fashioned as to retard the rate of growth of new firms.”

However, today, with globalization of markets, regulation is no more confined to a nation-state. It has gained ‘supra-national’ or ‘global’ flavour. Some scholars are of the opinion that a formal coordination among regulators in various countries could help in reducing uncertainties associated with international transactions and contribute towards enhancement of public good at the global level.

Many scholars say that two leading theories for understanding financial markets are: the Efficient Market Hypothesis and the Agency Theory. If the assumptions made under either of them are not fully met then there exists a cause for ‘regulation’ of financial markets.

The scholars who take an information theoretic view of the markets are essentially talking about price discovery and gradual release of information in the market. The basic assumption in these models is that one party to a transaction has some information that is not available to the counter party. This gives rise to two situations: (a) adverse selection – one party lacks information while negotiating a contract and makes sub-optimal choice, and (b) moral

hazard – one party lacks information about possibility of non-performance or non-enforceability of the contract being negotiated. Typical example is: high risk individuals being more likely to buy insurance – adverse selection, and reckless behavior on getting insured – moral hazard.

Some scholars argue that, in general, information asymmetry is on decline with advent of information and communication technology. However, the fact does remain that a majority of market participants (read individual investors) neither have access to information nor have the capability to assimilate and arrive at an appropriate decision.

Building on the information asymmetry view, some scholars also describe regulation as a process of ‘forced disclosure’ so that better sharing of information takes place by bringing more information in public domain from private domain. In effect, as long as information asymmetry exists (the degree could vary) the markets will remain weak-form / semi-strong form efficient. As such, in some sense, ultimate goal of regulation could be stated as to achieve strong-form efficiency.

In the real world some issues do arise because regulators often have limited knowledge of the industry that they are expected to regulate. In practice, a regulator seldom has perfect information about the demand in the industry or about the technological capabilities of regulated firms. In particular, the regulator typically has less information about such key industry data than does the regulated firm(s). Thus, the issue is: how best the regulator can create incentives for the regulated firms to bring ‘exclusive’ information to the public domain.

Information asymmetry has a link with entropy and uncertainty. Entropy is also linked with disorder and in extreme sense with chaos. Therefore, mere availability of information with a person does not necessarily reduce entropy. The reduction in entropy will be manifest by the actions of the person. In view of this discussion, some may like to define ‘regulation’ as egalitarian access to information so that supernormal gains arising out of information asymmetry could be minimized. This may often require ‘forcing’ market participants to part with (disclose) information.

While this may be true in a theoretical world but mere availability / access to information will not make markets strong-form efficient because one needs capacity to absorb, assimilate, process, infer and then to arrive at a decision. Therefore ‘capacity building’ is also an important role for the real world regulator.

An interesting impact of this increase in ‘capability’ of market participants would be: as soon as information is made available to a participant, that participant is expected to take a quick decision. [Often, after a latency period (this includes – processing time and / or strategic delay)]. However, in most of the cases, the alacrity with which the decision is taken makes its impact visible through price movement. Therefore, some scholars believe that as the information starts reaching more participants, at a faster pace, with response time becoming shorter, thereby making the speed of decisions faster, possibility of having higher volatility of prices in the market increases. However, some scholars do believe that with higher frequency of implementation of decisions, the size of sudden jumps in the prices will go down progressively.

Often, in financial markets, volatility is measured and reported (statistically) as annualized value of standard deviation of natural logarithm of daily returns generated over a fixed number of days, on rolling basis. This number is also used as a proxy for uncertainty and/or risk. As the uncertainty about future goes down volatility is expected to go down, however, as mentioned earlier as response/reaction time becomes shorter, volatility is expected to increase. However, in the equilibrium, a state of finite turbulence could prevail. Under the circumstances, some people do believe that reducing/containing volatility in the markets is also a role of the regulators.

With this theoretical backdrop, the task is to have a working implementation of all these concepts within the constraints of real world. The body of knowledge that has emerged, which studies implementation of concepts, is called ‘market microstructure’.

Maureen O’Hara in her book ‘Market Microstructure Theory’ defines market microstructure as “the study of the process and outcomes of exchanging assets under a specific set of rules. While much of economics abstracts from the mechanics of trading, microstructure theory focuses on how specific trading mechanisms affect the price formation process.” Some scholars add – definition, measurement, control, and determinants of liquidity and transactions costs, and their implications for the efficiency, welfare, and regulation of alternative trading mechanisms and market structures – to the scope of market microstructure. Essentially, it deals with issues of market structure & design, price formation & price discovery, transaction & timing cost, and information & disclosure.

The final issue in markets is about making a wide range of choices available to the market participants. The products range from simple, standard, plain-vanilla, here-and-now (read exchange-traded spot) kind of products to complex, made-to-order, looking deep into the future (read OTC derivatives). As the markets

evolve and become mature, that is, participants, exchanges, and regulators feel more confident and develop deeper understanding of risks involved they graduate from compliance-based supervision to risk-based supervision. As such, a move from rule-based regulation to principle-based regulation becomes a natural corollary.

In summary, the key concerns of financial market regulators are: market integrity, systemic safety and customer protection. However, all these three concerns are intertwined and inter-related. Therefore, any regulation that has an impact on, say, market integrity will have to address systemic safety and customer protection simultaneously. Since, the markets are dynamic and it may not be always possible for a regulator to have its staff ahead of markets in all respect, therefore it may be appropriate to formally engage academicians and consultants from time to time.

## Chapter 2

### Derivatives Markets

Last decade was one of the most eventful decades in the International markets. On one side, just a few derivatives disaster stories were enough to bring entire business of derivatives under the limelight, make every one worry about unknown risks associated with derivatives, and elevate derivatives into mysterious 'something'; while, on the other side, there were people who started understanding the derivatives and used the derivatives for hedging and mitigating risks while adding liquidity to the markets.

#### 2.1 International Markets

A comparison of the derivatives markets, over last few years, among various countries gives rise to an interesting pattern. The exchanges of the developed markets have shown robust growth and maintained their leadership position over last 5 years; at the same time, developing / emerging market exchanges have gained a position of eminence with strong growth trends. It is evident from the data presented in the Tables 2.1 to 2.4 given below that Indian market has emerged forth strongly along with markets in Korea, Spain, and Israel.

**Table 2.1: Top Five Exchanges  
(by number of Stock Index Futures contracts traded)**

Exchange	Number of contracts traded in 2008*	Number of contracts traded in 2003	% Change
1 EUREX	371,504,525	155,988,661	138.16%
2 <i>National Stock Exchange India</i>	<b>141,261,516</b>	<b>10,557,024</b>	<b>1238.08%</b>
3 Osaka SE	90,965,674	13,231,287	587.50%
4 Euronext.liffe	76,525,955	56,898,050	34.50%
5 Singapore Exchange	45,256,382	8,609,973	425.63%

Source: World Federation of Exchanges

\* January to October 2008

**Table 2.2: Top Five Exchanges  
(by number of Stock Index Options contracts traded)**

Exchange	Number of contracts traded in 2008*	Number of contracts traded in 2003	% Change
1 Korea Exchange	2,011,059,741	3	#
2 Chicago Board Options Exchange	435,860,762	110,822,096	293.30%
3 EUREX	371,155,699	108,504,304	242.07%
4 <i>National Stock Exchange India</i>	<b>89,099,694</b>	<b>1,332,417</b>	<b>6587.07%</b>
5 TAIFEX	77,154,336	21,720,084	255.22%

Source: World Federation of Exchanges

\* January to October 2008

# Very large figure due to very small base.

**Table 2.3: Top Five Exchanges  
(by number of Single Stock Futures contracts traded)**

Exchange	Number of contracts traded in 2008*	Number of contracts traded in 2003	% Change
1 JSE	307,836,600	4,585,919	6,612.65%
2 <i>National Stock Exchange India</i>	<b>165,706,741</b>	<b>25,572,505</b>	<b>547.99%</b>
3 EUREX	121,656,741	7,004,235	1,636.90%
4 Euronext.liffe	94,223,989	N.A	N.A.
5 BME Spanish Exchanges	35,301,142	12,492,568	182.58%

Source: World Federation of Exchanges

\* January to October 2008

Note: The 2003 data pertains to that of Euronext

**Table 2.4: Top Five Exchanges  
(by number of Single Stock Options contracts traded)**

Exchange	Number of contracts traded in 2008*	Number of contracts traded in 2003	% Change
1 International Securities Exchange	767,805,138	220,988,837	247.44%
2 Chicago Board Options Exchange	463,710,159	173,033,965	167.99%
3 Philadelphia SE	409,010,094	89,458,901	357.20%
4 EUREX	276,165,919	188,239,823	46.71%
5 Sao Paulo SE	260,696,612	175,622,679	48.44%
16 <i>National Stock Exchange India</i>	<b>8,009,365</b>	<b>5,607,990</b>	<b>42.82%</b>

Source: World Federation of Exchanges

\* January to October 2008

## 2.2 Indian Markets

It is a well known fact that ‘derivatives’ were traded in Indian market, as private contracts, long before introduction of exchange-traded contracts. Being private contracts these contracts faced the usual problems associated with such contracts. The pathway for exchange-traded, cleared, and settled derivatives contracts was laid out with removal of prohibition of options on securities *vide* Securities Laws (Amendment) Ordinance, 1995.

Subsequently, SEBI set up a Committee under Chairmanship of Dr. L. C. Gupta to recommend the appropriate regulatory framework for derivatives trading in India. The committee submitted its report in December 1997.

In June 1998, SEBI set up a committee under the Chairmanship of Prof. J. R. Varma, to recommend measures for risk containment in derivatives market in India. This Committee submitted its report in October 1998 giving operational details of margining system, methodology for charging initial margins, broker net worth, deposit requirement, and real-time monitoring requirement.

In December 1999, amendment to SC(R)A was notified, making way for derivatives trading in India. In June 2000, Futures contracts on Nifty and Sensex were launched, followed by Options contracts on Nifty and Sensex (European style), Options contracts on stocks (American style) and Futures contracts on stocks in June, July and November 2001, respectively. The number of underlying stocks and indexes has increased over the years. [Table 2.5]

In the Indian market, the Index option contracts are cash settled European style options. Stock options are also cash settled American style Contracts. Interest rate derivatives are based on notional 10-year bond and 91-days T-bill. All exchange-traded equity derivative contracts are cash settled contracts.

**Table 2.5 F&O Contracts Traded on NSE & BSE**

Financial Year	NSE - Stocks	NSE – Index(es)	BSE - Stocks	BSE – Index(es)
2001-02	31	1	31	1
2002-03	41	1	38	1
2003-04	53	2	42	1
2004-05	52	2	46	1
2005-06	117	3	76	7
2006-07	155	3	89	7
2007-08	265	7	126	7

Source: BSE, NSE.

**Table 2.6 Total Derivatives turnover since inception (in Rs. Crore)<sup>#</sup>**

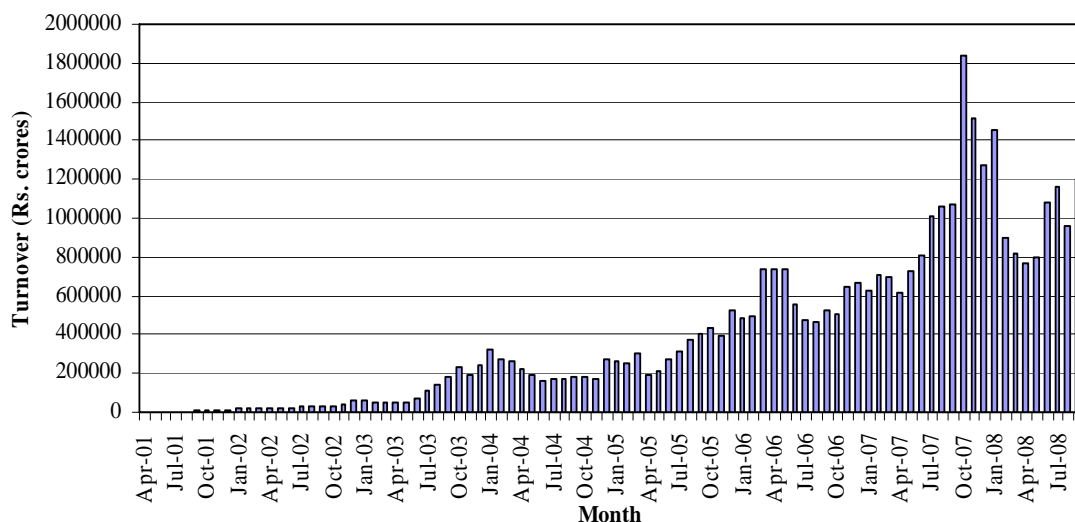
Period	NSE	BSE	Total
2001-02	101,925	1,917	103,842
2002-03	439,865	2,475	442,340
2003-04	2,130,447	12,074	2,142,521
2004-05	2,547,053	16,112	2,563,165
2005-06	4,824,245	9	4,824,254
2006-07	7,356,271	59,007	7,415,278
2007-08	13,090,478	242,308	13,332,786
04/2008 to 09/2008	5,963,894	11,491	5,975,385

<sup>#</sup>Excluding Currency Derivatives

Source: BSE, NSE

Turnover in the derivatives segment, since inception, is presented in Table 2.6 and Graphs 2.1. During 2001-02, turnover on NSE was Rs. 101,925 Crore and during 2007-08 it was Rs. 13,090,478 Crore. Likewise, during 2001-02, turnover on BSE was Rs. 1,917 Crore and during 2007-08 it was Rs. 242,308 Crore. Turnover on BSE increased till 2004-05 but during 2005-06 there was a noticeable decrease in turnover. The turnover on BSE has started increasing since 2006-07.

**Graph 2.1 Total Derivatives turnover on NSE since inception<sup>#</sup>**



<sup>#</sup>Excluding Currency Derivatives  
Source: NSE

At NSE, during the period April 2001 to September 2008, turnover was highest for the month of October 2007, i.e., Rs. 1,833,663 Crore. At BSE, practically, no derivatives trading took place in the period May 2005 to January 2006, however, since November 2006 the turnover has started increasing. Over the given time period, maximum turnover was in the month of October 2007 (Rs. 23,985 crore)

**Table 2.7 Product-wise volume and turnover in NSE since inception**

Calendar Year	Index Futures		Index Options		Stock Options		Single Stock Futures	
	No. of Contracts	Value of contracts (Rs. Cr)	No. of Contracts	Value of contracts (Rs. Cr)	No. of Contracts	Value of contracts (Rs. Cr)	No. of Contracts	Value of contracts (Rs. Cr)
2002	1,641,779	34,322	314,478	6,633	2,773,524	77,279	8,557,332	227,207
2003	10,557,024	296,736	1,332,417	34,940	5,607,990	194,296	25,573,756	904,968
2004	23,354,782	813,026	2,812,109	99,488	4,874,958	175,332	44,051,780	1,498,892
2005	47,375,214	1,233,364	10,140,239	264,612	5,224,485	177,484	68,911,754	2,251,384
2005	70,286,227	2,330,311	18,702,248	638,077	5,214,191	201,146	100,285,737	3,877,131
2007	138,794,235	3,381,599	52,707,150	1,284,499	9,048,495	348,809	179,324,970	6,925,970
01/2008 – 09/2008	141,261,516	3,164,560	89,099,694	2,051,669	8,009,365	186,147	165,706,741	3,735,830

Source: NSE

Futures on Interest Rate priced-off a zero coupon yield curve were introduced in June 2003. Futures and options contracts on sectoral Indexes were introduced in the Indian derivatives market in August 2003. This was followed by permission for introduction of Futures Contracts on a basket of GoI securities in January 2004. However, this segment has seen very little activity.

The introduction of new products based on the interim recommendations of this Committee has also resulted in market activity. For example, mini-contacts and longer-dated options have shown that specific segments of markets have specific interests.

## **2.3 Expectations of the Market Participants**

The Committee had a series of interactions – both formal and informal – with market participants to appreciate their views, concerns, and expectations. A wide range of topics were covered during these interactions. For example, possible causes of low liquidity in the options market and measures that may be taken to popularize options, physical settlement in derivatives market, contract size and its impact on market, new derivatives products for Indian market, current margining system and efficiency in utilization of capital, measures to increase participation of the retail investors in the derivatives market, enhancing skill and competency at the dealer and client level, possible revision of eligibility criteria for stock and indices, etc. The responses by the market participants could be summarized as:

### **2.3.1 New Products**

The market participants felt that within a given framework, as enunciated by SEBI, the exchanges to be given more freedom to introduce more derivatives products. For example, F&O contracts could be introduced: on more indices; with longer duration; on more underlying, such as, volatility, composite indexes; as third-party structured products, such as, covered call writing, third party warrants, etc.; as well as over-the-counter (OTC) products with clearing and settlement through exchanges.

### **2.3.2 Operational Issues**

A large number of operational issues took away a considerable part of interaction with the market participants. The views of the market participants on these issues could be summarized as:

- **Participation:** A separate segment for structured products may be created with participation only from institutions; banks and insurance companies to be allowed to participate in the derivatives market and mutual funds to be encouraged to provide liquidity on the sell side; hedge funds to be allowed to participate in the options market; market making to be encouraged.
- **Eligibility Criteria for Introduction of F&O on Stocks and indexes:** Higher liquidity/volume; more sectoral indexes.
- **Position Limits:** For single stock derivative contracts, separate position limits for futures and options; position limits on futures to be increased to provide for delta hedging for option writers; the position limits for

proprietary trading and client trading to be segregated; common position limits for the FIIs as well as the sub-accounts; higher position limits to be made applicable for investors having higher capital or net worth.

- **Securities Transaction Tax (STT):** More clarity for taxation of NRIs, which can encourage potentially large untapped market to participate in derivatives trading in India; on options, STT to be charged on the premium at the time of trade and on the notional value at the time of exercise / assignment.
- **Contract Size:** Shifting from value terms to number of shares per underlying; periodic realignment of market lot size, smaller size to increase retail participation.
- **Physical Settlement:** Establish a vibrant securities lending and borrowing system; expected to help in efficient price discovery; provide inter-linkage between the cash and derivative prices.
- **Margin requirements:** Options margins are too high; Gross Exposure Margin to be made a percentage of Initial Margin, as in certain cases Gross Exposure Margin is more than the Initial Margin; additional margin to be charged only on highly concentrated positions; margin on calendar spread to be kept the same, irrespective of the number of days left for expiry; netting of positions as well as cross margining to be introduced; time period of trading halt when a stock reaches its market wide position limit (MWPL) needs to be standardized or disclosed upfront; regulatory requirements and margining structure to be made easier to facilitate writing of options.
- **Collateral:** Permit direct pledge by clients to Clearing Corporation; all forms of collateral to be accepted from clients. The condition of at least 50% cash or cash equivalents in liquid net worth to be removed; brokers to be given more freedom to handle the stocks of the clients, as in US. Such a procedure need not be at the exchange level.
- **Legal Definitions in the Derivatives Segment:** The basis for computation of liquid net worth needs to be revisited; role of 'Sub-brokers' to be made available in F&O segment
- **Direct Market Access / off-shoring of terminals / program trading / algorithmic trading / market making:** Direct Market Access to be provided for traders to enter and review orders on options; algorithmic trading / program trading to be permitted to facilitate quick revision of orders in different strikes and maturities; market making to be permitted, with various incentives for market makers.
- **Overseas Derivative Instruments (ODIs) and definitions and role of FIIs:** Certain categories of foreign participants, such as market makers, do not qualify as FIIs, separate regulations need to be framed to allow their participation in the Indian derivatives market; expanding the

eligibility criteria of FIIs for wider participation; disclosure by FIIs for their trading in derivatives market to be made more elaborate.

- ***Investor Education and Profiling:*** Effective education for retail investors; more investor education programs to popularize and to increase awareness about derivatives among retail investors; periodic revision of certification exams for ensuring dealer efficiency.

### **2.3.3 Additional Suggestions**

In addition to the suggestions noted above, the market participants made the following suggestions:

- Concept of opening price to be introduced in the derivatives market.
- Increasing time period for computation of the closing price could be increased from present 30 minutes to around 45-60 minutes.
- Instead of one settlement account, members to be permitted to open multiple settlement accounts.
- Similar to the cash market, a post-clearing session may be started in derivatives segment, so that investors get additional time to square-off their positions.

## Chapter 3

### Recommendations of the Committee

The Committee was guided by the conceptual framework as mentioned in the first chapter, interactions with market participants, and numerous informal discussions with knowledgeable persons while arriving at these recommendations.

Keeping in view aspirations of participants in an emerging market, need for safety-stability-integrity of market, and protection of an individual investor the Committee has strived to achieve a balance between this 'impossible trinity', which makes the Committee open to criticism from all the three sides of 'not having done enough' or 'gone too far'.

Before coming to specific recommendations relating to new products and addressing operational issues, the Committee would like to mention some of the emerging trends in financial markets and the articulate its vision for the markets in India.

#### 3.1 Emerging Trends

There are a few clearly emerging trends in the International as well as Indian market.

- Investors are becoming, slowly and gradually, more market savvy. They are asking difficult questions to investment advisors and regulators.
- Spread of information and communication technology (ICT) has started revolutionizing financial markets. Higher bandwidth and access to relatively cheaper computing power has made it possible for individual investors to take timely investment decisions.
- Electronic trading is replacing pit-trading all over the world at an increasing rate.
- The world is becoming a financial village – with breaking of inter-country boundaries. Mobility of capital is becoming faster making volatility spillovers more frequent.
- The need for better cooperation / coordination among regulators (both within a country and across countries) is increasing to understand cross-border movement of funds of ambiguous origin and purpose.
- Emergence of TNC / MNC / supra-national financial institutions has brought about financial integration. It is also, sometimes, perceived as a threat by emerging markets.

### **3.2 Envisioning the Future**

It is always an interesting exercise to envision the future. As it is said, sky is not the limit to create a vision; therefore, it is better to err on the side of having a grand vision than having a vision that is not big enough. Accordingly, the Committee sees:

- Indian markets becoming vibrant and achieving a leading status in the global financial system,
- Information and communication technology (ICT) becoming all pervasive, and playing a critical role in minimizing information asymmetry in the markets leading to an efficient price-discovery and investor protection,
- Organized exchanges becoming the institutions that help in achieving efficiencies of scale, transparency in price-discovery, orderly conduct of transactions, and evolving as a one-stop ‘financial shopping malls’ of the future where made-to-order products, across all asset-classes, are traded through a single interface,
- Organized exchanges becoming ‘self-regulatory’ in the true sense of word with complete shift to principle-based regulation, away from today’s rule-based regulation,
- Market participants building enough knowledge base so as to shift from compliance-based supervision to risk-based supervision,
- Operational aspects of the business being given to the organized exchanges. The dynamic nature of the market needing constant revision of several parameters relating to day-to-day working of the markets. Stock exchanges defining the parameters for margins, positions, exposures etc. Thereby, making the rules of trading more responsive to changing market dynamics.
- The regulators to play the role of enablers in a true sense, moving away from day-to-day directions to the participants and interventions in the markets.

### **3.3 New Products**

The Committee interacted with market participants, noted emerging trends in international markets, and took aspirations of common investors into consideration while arriving at the recommendations relating to new products. In the following sections, each new product is described with rationale for its introduction and Committee’s recommendations.

### **3.3.1 Mini Contracts on Equity Indexes**

Trading in Index F&O enables participation in broader market moves with one trading decision, in an efficient and cost-effective way, without having to select individual stocks. It also helps individual investors to hedge an underlying portfolio. Index F&O contracts closely follow the price movement of their respective underlying indexes. These products are widely used by financial professionals as well as individual investors for portfolio protection as well as to gain from market movements.

For example, Chicago Mercantile Exchange (CME), one of the leading derivatives exchanges in the world, provides wide range of E-mini future contracts on broad based and liquid indices such as the Nasdaq 100, S&P 500, S&P MidCap 400 and Russell 2000. It is noted that the E-mini S&P 500 futures contract, which is one of the broad-based and most liquid contracts, is one-fifth the size of the standard S&P 500 futures contract.

It is also noted that the global experience has been encouraging in the mini contracts. Overall market liquidity and participation generally increases with introduction of mini contracts. Popularity of mini contracts has been increasing due to the higher liquidity, that is, the ability to get in and out of a trade quickly with low impact cost. Smaller contract size means greater affordability for individual investors. Smaller contract size, apart from helping the individual investor to hedge risks of a smaller portfolio, offers lower levels of risk in terms of smaller level of possible downside compared to a big size contract.

The Committee has noted that based on its interim recommendations and as accepted by SEBI the trading of mini-contracts in Index-futures and Index-options based on Sensex/NIFTY has started.

*The Committee further recommends that based on the experience with mini contracts in index futures and options introduction of mini contracts in single stock F&O could be considered. Mini contract size could be one-fourth to one-tenth of a normal derivative contract.*

### **3.3.2 Options Contracts with Longer Life/Tenure**

Structurally, long-term options are no different from short-term options, but the longer expiration dates offer the opportunity for longer-term investors to take a view on price changes without combinations of shorter-term option contracts. The premiums for long-term options tend to be higher than that of short-term options because the increased expiration period means increased possibility of larger movement in the price of the underlying. However, they differ from short-term options in several ways including availability, pricing, time erosion vs. delta effect, and strategies.

During the interactions with various market participants, it was noted that the options contracts traded on Indian stock exchanges having a maximum life/tenure of 3 months make it difficult to take a longer-term exposure due to frequent rollovers required.

The Committee has noted that, based on its interim recommendations, SEBI Board has approved the introduction of Nifty options with tenure up to three years.

*The Committee further recommends that longer-term options to be made available on more equity indexes and single stocks. To begin with, at any point of time, the available contracts could be for three years or so. Based on the experience generated, the tenure could be extended up to five years or so.*

### **3.3.3 Volatility Index and F&O Contracts**

Volatility Index is a measure of market expectations of near term volatility conveyed by the prices of stock index options or a basket of options on stocks. The Volatility Index is considered to be some kind of indicator of investor sentiment, with high values implying pessimism and low values implying optimism. A negative correlation is often noticed between Volatility Index and market movement.

Volatility Index provides a series of snapshots of expected stock market volatility over a specified time period. The Volatility Index is calculated in real-time and is continuously disseminated throughout each trading day. Investors also use the implied volatility information given by the index, in identifying mis-priced options.

World over, rapid changes in volatility are witnessed in securities markets from time to time. It is increasingly felt that an openly available and quoted measure of market volatility in the form of an index will help market participants. There are few exchanges that compute and disseminate volatility index. For example, in 1993, the Chicago Board Options Exchange (CBOE) introduced the CBOE Volatility Index (VIX) and it quickly became the benchmark for stock market volatility. CBOE has a family of derivative products based on this index as well.

The Committee has noted that based on its interim recommendations SEBI Board has given in-principle approval. Accordingly, a volatility index based on Nifty options has been created and is being disseminate to the market.

*The Committee further recommends introduction of futures and options on volatility indexes to be considered with passage of time.*

### **3.3.4 Options on Futures**

‘Options on futures’ are derivative products where on-exercise the options position is converted into a futures position instead of delivery of the underlying. That is, a put option on futures is an option to sell a futures contract, and a call option on futures is an option to buy a futures contract. For both, the option strike price is the specified futures price at which the futures contract is acquired if the option is exercised. ‘Options on futures’ are generally of American style. These contracts offer a wide and diverse range of investment opportunities and provide an additional tool for risk management to the investors.

Although futures contracts have been traded on U.S. exchanges since 1865, options on futures contracts were not introduced until 1982. Initially offered as a part of a government pilot program, their success eventually led to widespread use of options on agricultural as well as financial futures contracts. Now, these are available on various underlying such as energy, interest rate, commodities, currency, etc. The options on futures are traded on CBOT, CME, NYMEX, EUREX, EURONEXT. For example, EUREX has options on futures on money market instruments. Options on futures have been observed to have significant volumes on underlying(s) such as energy and interest rate.

Options on futures with interest rate as underlying contributed 12% of the total options on futures volume for 2006 in US. Some of the prominent options on interest rate futures in US are: Euro-dollar, 10-Year Treasury Note, 30-Year Treasury Bond, 5-Year Treasury Note. Options on Fixed Income Futures are traded on Eurex. The exercise of an option on Fixed Income Futures results in the creation of a corresponding position in the Fixed Income Futures for the option buyer as well as the seller to whom the exercise is assigned. The position is established after the Post-Trading Full Period of the exercise day, and is based on the agreed exercise price. It is increasingly felt in the Indian market that a broader range of risk management products is needed in the fixed-income segment to improve liquidity in this segment.

The Committee has noted that based on its interim recommendations SEBI Board has given in-principle approval for introduction of ‘options on futures’.

***The Committee further recommends that, to begin with, ‘options on futures’ could be introduced on currency futures traded on exchanges. Based on the experience generated, introduction of ‘options on futures’ on other underlying, i.e., index futures, stock futures, and interest rate futures could also be considered.***

### **3.3.5 Bond Indexes and F&O Contracts**

A bond index is used to measure the performance of bond markets. This index could be used as a benchmark against which investment managers measure their performance. Worldwide, the two popular indexes for bonds are: Sovereign Bond Index and Corporate Bond Index.

A Sovereign Bond Index is an index that tracks the performance of the bonds issued by a national government. Corporate Bond Index reflects the market performance, on a total-return basis, of investment-grade bonds issued by companies in the corporate bond market.

Presently, bond indexes and derivatives on them are traded on Eurex, Chicago Mercantile Exchange, Euronext, Hong Kong exchange, Tokyo stock exchange, Chicago Board of trade, Singapore exchange, etc. Some of the popular corporate bond indexes are issued by Dow Jones, Morgan Stanley, etc.

In India, at present, there is little activity in corporate bonds segment and in interest rate derivatives. It is expected that, futures and options of wide variety based on the bond indexes could increase liquidity in this segment.

The Committee has noted that based on its interim recommendations the in-principle approval is given by SEBI Board and the enabling provision is made by SEBI in this regard.

*The Committee further recommends that a Corporate Bond Index and a GoI Bond Index should be constructed and suitably disseminated to the market. Introduction of F&O on these indexes can be considered with passage of time.*

### **3.3.6 Exchange-traded Currency (Foreign Exchange) F&O Contracts**

A currency futures is a contract in which the parties agree to exchange cash flows in two different currencies at an agreed upon date in the future. A currency option is a contract that gives the buyer the right, but not the obligation, to exchange one currency for another at a predetermined exchange rate on or until the maturity date. These contracts when traded on the exchanges become exchange-traded currency F&O contracts.

The foreign exchange or Forex market is the largest market in the world, with trades amounting to more than USD 3.5 trillion every day (mainly OTC). The high risk due to exchange rate fluctuations is dealt with effectively by undertaking hedging transactions using derivatives on a currency.

Many prominent exchanges offer exchange-traded currency derivatives products. On CBOT and CME, many banks often use exchange-traded currency futures contracts to hedge the positions acquired in OTC forward market. NYSE Euronext is also a prominent exchange that deals with the cross-currency futures and options.

It is known that trading of products on organized exchanges helps in concentrating order flow and provide a transparent venue for price discovery. The role of clearing corporation means minimal margin requirements, further mitigation of credit risks by daily marking to market of all futures positions, and general lowering of transaction costs for the participants. Further, in India, small and medium enterprises need help in hedging their foreign currency exposure. This could be achieved through exchange-traded small denomination currency (foreign exchange) F&O contracts. These contracts will also help banks to improve their risk management in relation to positions taken in the over-the-counter (OTC) currency forwards market.

The Committee has noted that its interim recommendation in this regard was accepted in-principle by the SEBI Board and introduction of currency derivatives also found a mention in the Union Finance Minister's budget speech. Subsequently, based on RBI-SEBI technical Committee's report trading in INR-USD futures has started on three exchanges.

*With the possibility of capital account convertibility at some time in future, the Committee further recommends that suitable INR/USD options, INR/JPY, INR/EUR, INR/GBP and cross-currency futures and options to be introduced as the market participants and regulators gain more experience.*

### **3.3.7 Exchange-traded Products Involving Different Strategies**

An individual investor may want to create a strategy using options on a broad based index. Given the market conditions, it may not be very convenient for an individual investor. This may be due to the fact that the cost of buying all components of the stock and margin requirement on individual options may turn out to be fairly large. Further, buying of all stocks in the index may have a tracking error and would require re-shuffling of portfolio for changes in the Index. In addition to this, selling of near-the-money option on expiry of existing option in the portfolio may also be time consuming and costly for an investor. To meet these requirements some exchange-traded products are available. The following two examples illustrate the point.

- **Buy-Write Index:** For example, an individual investor wants to write covered call options on a broad based index but does not have all the resources required to track the performance of this strategy. In this situation, a 'buy-write index' works like a benchmark for the

performance of hypothetical covered call, i.e., buying of the underlying index portfolio and selling of the call option on the same portfolio in same notional amounts.

- **Put-Write Index:** Now, say, another individual investor wants to create a strategy through buying short-term treasury bills and selling put options on a broad based index. But this individual investor may not be able to do this, due to the fact the money-market in India is mostly institutional in nature and an individual investor may not be able to have a small portfolio of investment in the treasury bills. Further, selling of near-the-money option on expiry of existing option in the portfolio may also be time consuming and costly for the investor. In effect, it may not be feasible for the investor to track this portfolio in a cost-effective and efficient manner.

The Committee has noted that based on its interim recommendations SEBI Board has given in-principle approval to introduction of exchange-traded products involving different strategies.

*The Committee further recommends that exchange-traded derivatives products which involve different strategies for an investor, that is products (indexes) with features like 'buy-write index', 'put-write index', or similar may be created and disseminated to the market. With progress of time and based on experience gained futures and options based on these products could also be introduced.*

### **3.3.8 Exchange-traded Credit Derivatives**

There are privately negotiated bilateral contracts that provide some kind of insurance against credit risk. The buyer of protection pays a fixed fee or premium to the seller of protection for a period of time. If certain pre-specified 'credit event' occurs, the protection seller pays compensation to the protection buyer. A credit event could be, say, bankruptcy of a company, called the 'reference entity', or a default of a bond, or other debt issued by the reference entity, etc. If no credit event occurs during the term of the contract, the protection buyer continues to pay the premium until maturity. In contrast, if a credit event occurs at some point before the contract's maturity, the protection seller owes a payment to the buyer of protection, thus insulating the buyer from a financial loss.

If these products are traded on an organized exchange under transparent, anonymous, price-time priority based trade matching system then the mystery will be taken out of the OTC product making it more accessible to the treasury desks of many mid-sized banks and mutual funds. It will also allow dealing desks of the large banks to concentrate on structuring more need-based and

tailor-made products while plain-vanilla contracts will be traded on the exchanges.

According to a report, based on a survey among 30 market leaders, published by the British Bankers' Association (BBA), the notional amount traded in global credit derivatives markets had increased from USD 180 bn in 1997 to USD 5 trillion in 2004 and is expected to rise to USD 10 trillion by the end of 2008. Nearly half of the instruments traded in the credit derivative market are related to credit default swap (CDS) contracts.

There is a growing need to have exchange-traded credit derivatives market in India, as it is expected to bring more activity to dormant corporate debt market. It is expected that an active credit-default swap (CDS) market will help in more efficient price discovery on corporate bond segment, facilitate hedging of positions, and reduce counter-party risk assumed through OTC credit derivatives contracts.

The Committee has noted that based on its interim recommendations SEBI Board has given in-principle approval to introduction of credit derivatives. It has also noted the Union Finance Minister's budget speech in this regard.

*The committee recommends introduction of various exchange-traded credit derivatives, in a phased manner, in consultation with appropriate regulatory authorities.*

### **3.3.9 Over-the-Counter (OTC) Products**

Over-the-counter (OTC) products are derivative contracts that are traded (and privately negotiated) directly between two parties, without going through an organized exchange or other intermediary. Products such as swaps, forward rate agreements, and structured notes are mostly traded in this way. The OTC derivatives market is huge. According to the Bank for International Settlements, the total outstanding notional amount is more than USD 300 trillion.

Traditionally, equity derivatives have a long history in India in the OTC market. However, SCRA banned all kind of derivatives in 1956. The prohibition on derivatives in SCRA was removed in 1995. Foreign currency forwards and options in currency pairs other than Rupee were the first options contracts permitted by RBI. The RBI has permitted options, interest rate swaps, currency swaps, and other risk reduction OTC derivative products.

*The Committee is of the opinion that for a well functioning market a wide array of choices should be available to the investors, without compromising market wide risk management and other related systems. Accordingly, the*

*Committee recommends that Over-the-Counter (OTC) products may be introduced in the Indian market with adequate safeguards, such as:*

- *OTC contracts are to be used for non-standard products,*
- *Full and transparent reporting of value, quantity, and term-sheet of the OTC products to the exchanges/clearing corporations,*
- *Appropriate risk management to be carried out by the exchanges/clearing corporations, and*
- *Clearing, settlement, and guarantee to be provided through the exchanges/clearing corporations.*

*The committee is of the opinion that a gradual and step-by-step approach for introduction of OTC products will be more appropriate for Indian markets. Therefore the committee, further, recommends that, to begin with, OTC products are to be:*

- *Based on indexes, index futures, and index options as underlying; depending on the experience generated, the OTC products maybe permitted to be based on the stocks, single stock futures, and single stock options,*
- *Traded among SEBI / RBI / IRDA regulated entities only; based on market performance, the list may be expanded to permit other market participants as well, and*
- *Handled by Clearing Member having net worth of Rs 50 crore or more and each client who is a party to an OTC contract shall have capital+ free reserve of Rs 500 Crore or more.*

**While, there is complete agreement on the points mentioned above, one member [Ms. Chitra Ramkrishna] is of the opinion that OTC contracts shall not be identical to the contracts trading on exchanges, and the clearing corporation shall have a net worth of at least Rs. 100 crore and should have been in existence for at least five years.**

### **3.3.10 Exchange-traded Third-party Products**

There are situations where large institutions own a sizeable part of a company's non-promoter holdings. Often due to internal policy / directives these holdings are not available in the market for trading. This means real quantity or supply of a stock available for trading could be fairly lower than the total non-promoter holdings. As such a stock could face lesser liquidity and may have higher chance of manipulability. If these large institutions are permitted to issue structured products (like covered calls or structured warrants) then it is expected that effective supply of the stock(s) to the market will increase.

These third-party products are listed and traded on an organized exchange and constitute a contract between the institutional issuers and the buyers of the product. Typically, these products are cash settled, thereby having no direct impact on the inventory of stocks of a company held by an institutional investor. The obligations of the issuers are materialized by the listing documents that detail all terms and conditions of the issue.

In the international markets some of the largest issuers of exchange-traded third-party structured products are: Citibank, Unicredito-TradingLab, Societe Generale, Goldman Sachs, UBS, BNP Paribas, Commerzbank, Credit Lyonnais, Dresdner Bank, etc. These products are traded in Australia, Canada, Euronext (incl. France, Holland, Belgium, Portugal), Finland, Germany, Hong Kong, Italy, Japan, Singapore, etc.

In India, in many leading listed companies publicly available quantum of stocks is on a lower side as compared to total non-promoter holdings. It is expected that with introduction of exchange-traded third-party products the liquidity in such stocks may improve.

*The Committee is of the opinion that for a well functioning market a wide array of choices should be available to investors and institutions alike, without compromising market-wide risk management and related systems. Accordingly, the Committee recommends that exchange-traded third party products (such as, structured warrants, etc.) to be introduced, only after successful functioning of OTC market is achieved. The Committee further recommends that (i) market making and time/price preference NOT to be given to the third-party, (ii) full margining, clearance, settlement, and guarantee to be provided by the exchanges/clearing corporations.*

### **3.4 Operational Issues**

The committee, as stated under 'envisioning the future', believes that operational aspects of trading should be left to the exchanges and various parameters relating to trading and risk management should form part of exchange regulations rather than SEBI circulars. However, as an interim measure certain operational changes are recommended.

#### **3.4.1 Eligibility Criteria for Introduction of F&O on Stocks**

Several circulars have been issued by SEBI since June 2001 in relation to eligibility criteria for introduction of F&O stocks, the latest was based on the recommendations of the Advisory Committee on Derivatives and Market Risk Management the eligibility criteria were modified vide circular dated July 16, 2004 as under:

- i. The stock shall be chosen from amongst the top 500 stock in terms of average daily market capitalization and average daily traded value in the previous six month on a rolling basis.
- ii. The stock's median quarter-sigma order size over the last six months shall be not less than Rs. 1 Lakh (Rupees One Lakh). For this purpose, a stock's quarter-sigma order size shall mean the order size (in value terms) required to cause a change in the stock price equal to one-quarter of a standard deviation.
- iii. The market wide position limit in the stock shall not be less than Rs. 50 Crore (Rupees Fifty Crore).

The Committee has noted that for the stocks getting introduced in F&O segment on the day of listing [post-IPO] has been discontinued by SEBI.

*The Committee believes in move towards principle-based regulation, however as an interim measure it recommends that the eligibility criteria for introduction of F&O on a stock to be modified as:*

- *The stock shall be chosen from amongst the top 500 stock in terms of average daily market capitalization and average daily traded value in the previous six month on a rolling basis.*
- *The stock's median quarter-sigma order size over the last six months shall be not less than Rs. 5 Lakh (Rupees Five Lakh).*
- *The market wide position limit in the stock shall not be less than Rs.100 Crore (Rupees Hundred Crore).*

### **3.4.2 Eligibility Criteria for Introduction of F&O on Sectoral Stock Indexes**

The Committee has noted that some of the sectoral stock indexes that are being disseminated have a smaller number of constituent stocks (often called as narrow based indexes – while there is no universal definition of 'narrow-based' index). As a result, when the weights are assigned to the constituent stocks based on market capitalization, the sectoral index tends to get skewed in favour of a few stocks making the sectoral index more vulnerable as compared to a 'broad-based' index.

*While the Committee believes that operational aspects of trading should be left to the exchanges and various design parameters should also be decided by the exchanges rather than by the regulator, however as an interim measure the Committee recommends that for a sectoral index to become eligible as an underlying asset for introduction of F&O, the following features are necessary, in addition to the existing criteria:*

- i. *All constituent stocks to be individually eligible for introduction of F&O,*
- ii. *The sectoral index should have at least 15 constituent stocks,*
- iii. *No constituent stock should have weight more than 15%,*
- iv. *No constituent stock should have weight less than 1%,*
- v. *These requirements should be met by all stocks included in a sectoral index for immediate past preceding six months on a continuous basis, and*
- vi. *The sectoral index to have median quarter-sigma order size of at least Rs. 5 lakh.*

**There is a general agreement in the Committee on issues relating to narrow-based sectoral indexes, however, one member [Ms. Chitra Ramkrishna] is of the opinion that the conditions imposed are too onerous and restrictive. These conditions may lead to only a few sectoral indexes, if at all, possible. The existing criteria are more helpful.**

### **3.4.3 Position Limits**

The Committee has noted that new products are to be introduced in the Indian market and a greater desire is expressed by the investors to participate in the derivatives segment.

*The Committee is in favour of principle-based regulation, however as an interim measure it recommends that market-wide-position limit (MWPL) to be raised, on immediate basis, to 40% of free-float (number of shares held by non-promoters) for all single stock futures and single stock options. Further, the position limit in terms of MWPL to be completely removed, over a period of time, in a progressive manner.*

*The Committee is aware of the limits imposed on trading member, FIIs and mutual funds while trading in Index based products, therefore the Committee further recommends that with the introduction of OTC products on those indexes the corresponding position limits at trading member, FIIs, and Mutual Funds should cease to exist.*

*However, for introduction of OTC products based on single stock futures and single stock options complete removal of position limits will be a necessary prerequisite, as such, even with proposed upward revision of limit it will not be feasible to introduce OTC products based on single stock futures and single stock options.*

### **Recommendations of the Committee on Various Position Limits**

<b>Member type</b>	<b>Index Options</b>	<b>Index Futures</b>	<b>Stock Options</b>	<b>Stock Futures</b>	<b>Interest Rate Derivatives</b>
<b>Client level / NRI / Subaccounts</b>	Disclosure requirement when the position reaches 15% of the open interest.		1% of non-promoter holding or 5% of open interest whichever is higher		Rs. 500 crore or 15% of total open interest, whichever is higher
<b>Trading Member level</b>	15% of the total open interest in index options of the market or Rs. 1000 crore, whichever is higher (till OTC products are not permitted, once OTC products are permitted - no limits)	15% of the total open interest in index futures of the market or Rs. 1000 crore, whichever is higher (till OTC products are not permitted, once OTC products are permitted - no limits)	If MWPL $\geq$ Rs.1000 crore, the combined futures and options position limit is 20% of applicable MWPL or Rs. 600 crore, whichever is lower and within which stock futures position cannot exceed 10% of applicable MWPL or Rs. 300 crore, whichever is lower.  If the MWPL $\leq$ Rs. 1000 crore, the combined futures and options position limit is 20% of applicable MWPL and futures position cannot exceed 20% of applicable MWPL or Rs. 100 crore whichever is lower.		Rs. 1000 crore or 15% of total open interest, whichever is higher
<b>Market-wide</b>	No limits fixed.		40% of the number of shares held by non-promoters in the relevant underlying security.		No limits fixed
<b>FII/ Mutual Fund</b>	15% of the total Open Interest in index options of the market or Rs.1000 crore, whichever is higher. In addition hedge positions are permitted. (till OTC products are not permitted, once OTC products are permitted - no limits)	15% of the total Open Interest in index futures of the market or Rs.1000 crore, whichever is higher. In addition hedge positions are permitted. (till OTC products are not permitted, once OTC products are permitted - no limits)	If MWPL $\geq$ Rs.1000 crore, the combined futures and options position limit is 20% of applicable MWPL or Rs. 600 crore, whichever is lower and within which stock futures position cannot exceed 10% of applicable MWPL or Rs. 300 crore, whichever is lower.  If the MWPL $\leq$ Rs. 1000 crore, the combined futures and options position limit is 20% of applicable MWPL and futures position cannot exceed 20% of applicable MWPL or Rs. 100 crore whichever is lower		Gross open positions upto USD 1 billion. In addition, hedge positions are permitted.

#### **3.4.4 Securities Transaction Tax (STT)**

Earlier, the Committee in its interim recommendations had requested SEBI to approach the Ministry of Finance for suitable amendments in tax-laws for charging STT based on price/premium of option and not on the strike price or any such notional value of the underlying.

The Committee has noted the changes made by the Ministry of Finance in this regard. However, in case of compulsory exercise by the Exchanges STT could be charged on the premium only.

### **3.4.5 Contract Lot Size**

During interaction with market participants various issues arising out of mismatch between contract lot size and contract value were brought to notice of the Committee. The Committee has considered the issues arising out of realignment of contract value and lot size.

*The Committee recommends that, to begin with, under the existing framework the exchanges may realign the contract lot size on six-monthly basis with the approved contract value. Further, any changes in frequency of realignment of contract lot size can be examined after sufficient experience is obtained with six-monthly realignments.*

### **3.4.6 Physical Settlement**

The issue of physical settlement in derivatives segment is being discussed since the time of introduction of derivatives in the Indian market.

For example, L. C. Gupta Committee stated that, “In the case of individual stocks, the positions which remain outstanding on the expiration date will have to be settled by physical delivery. This is an accepted principle everywhere.” However, when single stock derivatives were introduced in India, it was decided to use cash settlement to begin with because the exchanges did not then have the software, legal framework and administrative infrastructure for physical settlement. It was proposed that cash settlement would be replaced by physical settlement within a period of six months as the exchanges developed the capabilities to achieve physical settlement efficiently.

In 2002, the Advisory Committee on Derivatives (ACD) proposed a broad framework for physical settlement. The committee recommended that derivatives on individual stocks should shift to physical settlement. The committee also recommended that physical settlement be implemented for all stock-based derivative products simultaneously by giving at least 45 days notice to the market. Accordingly, the ACD recommended the mechanism of physical settlement wherein at no point in time trades on the derivative segment are commingled with trades on cash market. However, the clearing corporation of the derivative segment could use the facility of the clearing corporation of cash market as its agent.

The SEBI Board in its meeting held on November 29, 2002, recommended that the timing of physical settlement would be determined by SEBI. The Board was

of the view that it is desirable to have margin trading and securities lending facility in the cash market before commencing physical settlement. SEBI, vide circular Ref. No. SEBI/MRD/SE/SU/Cir-15/04 dated March 19, 2004, prescribed the scheme for margin trading and registering of intermediaries desirous of providing securities lending/borrowing in the cash market. The scheme did not witness high volumes as the market did not perceive the scheme to be attractive and efficient.

The issue of physical settlement was once again placed for the consideration of the Advisory Committee on Derivatives and Market Risk Management. In the meeting of the Committee held on January 19, 2005, the Committee felt that globally exchanges are moving away from physical settlement to cash settled scenario, all the new products that are being introduced at CME were cash settled and a number of the successful old products which were originally physically settled were being switched over to cash settlement.

Further to these views, the Secondary Market Advisory Committee in its meeting held on March 21, 2006 opined that, to begin with, physical settlement may be implemented in the single stock options. It was of the view that physical settlement in single stock futures would not be advisable in the absence of vibrant securities lending and borrowing mechanism in place.

Meanwhile the securities lending and borrowing scheme for all market participants was specified vide circular dated December 20, 2007.

*Noting the aforementioned facts relating to physical settlement in derivatives segment and interaction with the market participants the Committee recommends introduction of physical settlement at the choice of buyer (long party), to be started with single stock options contracts and to be extended to cover single stock futures. Before introduction of physical settlement in single stock futures it will be worthwhile to generate experience for about six months in the single stock options. While analyzing this experience parameters like (i) extent of convergence, (ii) ability to handle short squeeze situations, etc. to be considered.*

*The Committee is well aware of the fact that a pre-requisite for successful introduction of physical settlement of derivatives is efficient and transparent lending & borrowing mechanisms in cash segment.*

**While, there is general agreement among the Committee members on physical settlement of single stock futures and options as it provides the investors with more choice, one of the members [Ms. Deena Mehta] is of opinion that the physical settlement should start with single stock futures.**

**This would give liquidity to the entire lending and borrowing system, since stock futures contracts are more popular and participation in the same is very high by all types of investors. Another member [Ms. Chitra Ramkrishna] is of the opinion that the lending and borrowing market should be liquid enough so that borrowers have the confidence that they will be able to adequately meet physical settlement obligations. As an experiment we should start with single stock options only.**

### **3.4.7 Margin requirements**

Along with other safeguards, margins play an important role in enhancing integrity of markets and protection of investors. In the derivatives markets, margins provide additional protection to the clearinghouse / corporation and market participants against possibility of default by a market participant as a result of price movements in individual instruments and / or changes in market volatility.

It goes without saying that higher margins mean higher safety. However, this higher safety comes at a 'cost'. For example, higher margin would mean reduction in leverage, and in many financial instruments it may lead to lower investor interest and impairment of liquidity of certain products.

The Committee took note of recent episodes of changes in volatility, indicating that large movements in markets are becoming more frequent. The Committee is of the opinion that a risk management framework needs to be explored / developed that is able to manage both the situations of exceptional volatility as well as the normal movement in the market. The exceptional events are those ones when change in volatility is such that a 99% VaR event takes place. When such events take place liquidity (that is access to 'cash') plays a major role in smoothening the volatility. At these moments exchanges/clearing mechanisms have an important role in terms of managing market risk. However, provision of liquidity is best managed by banking/financial system.

The Committee has noted the changes introduced by SEBI in Calendar Spread margins.

***The Committee is convinced that there is a case for simplification of margining system. Accordingly, the Committee recommends that the existing margining framework be simplified in the near future, as follows:***

- i. Portfolio Based Margins: An investor may hold a portfolio of an underlying and F&O on that or F&O on an index and a basket of constituent stocks to hedge the position. At present both sides are fully margined. It is proposed to margin the two sides together as a portfolio.***

- ii. *Cross margining: At present no benefit is extended to an investor for the positions taken on cash and derivatives markets. There is a need to extend this benefit across these market segments.*

*While the foregoing is of relevance irrespective of broader risk management framework, however given the recent instances of spurt in volatility there is a clear need to revisit market micro-structure and come up with a framework so as to mitigate system wide risk/uncertainty. This effort could include:*

- i. *Developing process map of ‘financial’ market (just mapping the process of ‘securities’ market will not be adequate) and identification of sources of delays along with impact assessment that have a direct bearing on system stability. Then, streamlining various sub-systems to have a higher degree of coherent and integrated working.*
- ii. *Based on the process map mentioned above, developing and implementing a market micro-structure simulator, which will help in assessing likely impact of changes in rules/regulations and other parameters of market design.*

*This effort will help in having a transparent and accessible framework for working out various margins. This could be further improved by introducing better IT in banking infrastructure.*

### **3.4.8 Legal Definitions in the Derivatives Segment**

Transactions in the securities market are regulated and enforceable under the various laws governing them. It may so happen that the terminologies used in the various legal documents may not have the same definitions in all instances. Therefore, it is felt that to simplify the legal documentation consistent definitions are used across various market segments while dealing with various categories of market participants.

#### **3.4.8.1 Net Worth of a Broker / Member**

‘Net worth’ is a basic measure of the value of a business. Net worth is one of many terms used to describe the value of the equity held by owners of a business. Very often, owner’s equity is the term that is usually applied to the net worth of a sole proprietorship, partners’ equity to that of a partnership, and shareholders’ equity to that of a company. It is often defined as the difference between a company’s assets and liabilities, as they are recorded on the balance sheet. In contrast to these more specific definitions, net worth could also be used to describe the value of any business, as well as the financial position of an individual.

It is important to note that net worth measures only the book or the accounting value of a business. This amount is not usually the same as the market value of a business, which is the amount an informed buyer would pay to acquire the business in an arms-length transaction. Improving net worth is a matter of increasing assets or decreasing liabilities. If a business has liabilities in excess of its assets, it is said to have a negative net worth.

The 'net worth' in derivatives market as defined in SEBI Circular No. FITTC/DC/CIR-1/98 dated June 16, 1998 is: Capital + Free Reserves *less* non-allowable assets *viz.* fixed assets, pledged Securities, Member's card, non-allowable securities (unlisted securities), bad deliveries, doubtful debts and advances, prepaid expenses, losses, intangible assets, 30% of marketable securities, etc.

The definition of net worth in cash market was given in Circular No. SMD/SED/9012/93 dated May 14, 1993 as: "A corporate member shall at all times maintain a net worth, i.e. the aggregate of paid up capital plus free reserves, which shall conform to the capital adequacy norms as specified by the Securities and Exchange Board of India." Further, "Explanation: For purposes of computation of the net-worth, the following assets shall not be taken into account: (a) fixed assets including land and building, (b) receivables which are due and outstanding for more than three months, (c) value of the stock exchange card, (d) doubtful debts and advances, (e) pledged securities."

It may be mentioned here that the liquid assets deposited by a clearing member with the exchange / clearing corporation / house *less* initial margin are termed as 'liquid net worth' in the derivatives market.

***The Committee is of the opinion that there should be uniformity in the definitions being used in the market to minimize confusion and to attain better compliance. Accordingly, the Committee recommends that definition / method of computation of 'net worth' of various entities to be aligned across market segments.***

#### **3.4.8.2 Role of 'Sub-brokers'**

In September 2002, the Advisory Committee on Derivatives (ACD) had stated, "The LCGC Report made no mention of sub-brokers though it recommended a two tier market structure consisting of clearing members and trading members.

The ACD has discussed the issue of sub brokers on several occasions. Its view has consistently been that there can be no compromise on:

- client level gross margins
- regulation of sales practices at client level.

Sub-brokers as they operate in cash market are inconsistent with this. However, the ACD has consistently taken the view that other forms of multi-tier broking relationships are possible consistent with the above two requirements.”

Several committees have examined the issue of sub-brokers in derivatives market. The major concern of all committees was of adding an extra layer between the investor and broker. However, these concerns were set to rest subsequent to amendment of Broker Sub-broker Regulation in September 2003, wherein it was mandated that the broker shall directly deal with the clients. Contracts and settlement of money as well as securities would be directly done between the broker and client.

After due deliberations, the Committee is of the opinion that the legal documentation needs to be streamlined. Not having sub-brokers in derivatives segment leads to signing of a bi-partite agreement between the client and broker, whereas he signs a tri-partite agreement for cash segment. Hence, one extra set of document is required and additional cost of stamping, etc. is incurred.

*As mentioned earlier, to ensure uniformity in the definitions being used in the market to minimize confusion and to attain better compliance, the Committee recommends that legal documentation and recognitions of various tiers of intermediaries to be synchronized across the segments. This includes adoption of consistent definition of ‘sub-brokers’ by SEBI across market segments.*

#### **3.4.9 Direct Market Access (DMA) / Off-shoring of Terminals / Program Trading**

Over the time, the kind of access to market and speed of placing orders as demanded by customers has changed. Increasingly, the sophisticated customers want more control over trade execution, rapid access to the markets, and less intervention by their brokers. Each market has a different jargon for this trend, but the most widely used terms are DMA, off-shoring of terminals, program trading, algorithmic trading etc.

These features create new challenges for risk management for brokers and exchanges. These risks are certainly manageable, but it is important for the market participants and exchanges to consider the potential implications.

The Committee has noted the changes introduced by SEBI in this regard.

### **3.4.10 Other Issues**

#### ***3.4.10.1 Overseas Derivative Instruments (ODIs) and definitions***

Committee took note of various regulations and circulars relating to Overseas Derivative Instruments. The Committee is of the opinion that need for transparency and consistency in terms of know-your-client (KYC) and reporting of exposure can not be diluted. The Committee has also noted that the body of knowledge in terms of IFRS 7, IAS 32, IAS 39, FAS 133, AS 30, AS 31 and AS 32 exists, which could be used for addressing issues relating to ODIs. The ODI issuers may be asked by SEBI to follow these standards consistently.

***The Committee recommends that the valuation of ODIs could be carried out on marked-to-market or marked-to-model basis in accordance with the standards mentioned above. Further, the approach adopted by mutual funds in reporting exposure to derivatives and calculation of NAV could be also be followed by ODI issuers.***

#### ***3.4.10.2 Training, Skill Enhancement, etc.***

The Committee took note of recommendations made by L C Gupta Committee with regard to training and skill enhancement of SEBI officers, and the developments thereafter. Given the evolution of derivatives market in India and abroad, the Committee is opinion that SEBI needs to redouble its efforts to have a set of 'quants' who will help in building risk-models and carry out in-house mathematical research.

***The Committee recommends that SEBI/Exchange officials dealing with market should, at least, attain proficiency and get certified from NISM/exchanges in test modules relating to 'Markets: Cash and Derivatives', and 'Depositories'. Further, SEBI needs to have a fulltime dedicated group working on derivatives and build a large market microstructure simulator to estimate the impact of proposed policy changes on the market dynamics.***

#### ***3.4.10.3 Information Dissemination to Market***

As the saying goes, 'an informed investor is a protected investor', the Committee also feels that more and timely information should be made available to investors so that they can take appropriate investment decisions.

***As a forward looking measure, with advent of technology and communication infrastructure, the Committee recommends that more and more information to be disseminated to the market participants and individual investors relating to cash and F&O market, for example, value of open-interest across securities for various maturities and strike price, etc. Further, exchange may workout***

*suitable mechanism (including appropriate pricing) to disseminate information pertaining to price-order distribution.*

#### ***3.4.10.4 Investor Education and Profiling***

Going by the maxim ‘an educated investor is a protected investor’; the Committee is of the opinion that SEBI should make more and persistent efforts towards investor education with special emphasis on F&O segment and explain importance of hedging using options.

The Committee is also of opinion that small and individual investors will be better-off by using options market to hedge their positions with buying calls or puts, where downside risk is limited to the extend of the premium paid for the Contract rather than entering futures market or selling (writing) calls or puts where downside risk could be unlimited.

*The Committee recommends that over a period of time, a formal process (on lines of credit card eligibility assessment) for ‘profiling’ investor(s) and suggesting suitable product(s) could be put in place, especially for F&O segment. This process could be started by making available ‘rating’ software on SEBI/exchange websites. By filling up requisite information in this ‘rating’ software an investor would be able to get a list of suitable products.*

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