

**SECURITIES AND EXCHANGE BOARD OF INDIA
INVESTIGATIONS ENFORCEMENT
& SURVEILLANCE DEPARTMENT
Mittal Court, A Wing, Gr. Floor,
224, Nariman Point, Mumbai 400 021**

IES/DC/CIR- 5/00
December 11, 2000

To,
The Chief Executive Officer/President/
Managing Director of Derivative Segment of NSE & BSE
and their Clearing House / Corporation.

Dear Sir,

Sub: Risk containment measures for Option on Indices.

This is in continuation of SEBI Circular No. IES/DC/CIR-4/99 dated July 28, 1999 wherein SEBI had laid down the risk containment measures for Exchange traded Index Futures Contracts.

SEBI has setup a ' Technical Group' headed by Prof. J.R Varma to prescribe risk containment measures for new derivative products. The group has recommended the introduction of Exchange traded Options on Indices which is also in conformity with the sequence of introduction of derivative products recommended by Dr. L.C Gupta Committee.

The 'Technical Group' has recommended the risk containment measure for Exchange traded Options on Indices. While SEBI would not mandate any particular risk management product, the framework shall be consistent with the risk management guidelines mandated by the L. C. Gupta Committee. The Exchanges are free to decide whether they want to adopt any of the risk management models available globally or else may like to develop their own models for risk management.

The following are the risk containment measures to be adopted by the derivative exchange/segment and the Clearing House/Corporation for the trading and settlement of both Index Futures and Index Option Contracts:

1. The Index option contracts to be traded on the derivative exchange/segments shall have prior approval of SEBI. The Contract should comply with the disclosure requirements, if any, laid down by SEBI.
2. Initially, the Exchanges shall introduce premium style index options.
3. Initially the Exchanges shall introduce European style Index Options which shall be settled in cash. The risk containment measures described hereunder are only for premium style European option contracts.
4. The Index Option Contract shall have a minimum contract size of Rs. 2 lakhs at the time of its introduction in the market.
5. The Index Option contract shall have maximum maturity of 12 months and shall have a minimum of 3 strikes (in the money, near the money and out of the money)
6. The Initial Margin requirements shall be based on worst case loss of a portfolio of an individual client to cover a 99% VaR over a one day horizon. The Initial Margin requirement shall be netted at level of individual client and it shall be on gross basis at the level of Trading / Clearing Member. The Initial margin requirement for the proprietary position of Trading/Clearing member shall also be on net basis.
7. A portfolio based margining approach shall be adopted which will takes an integrated view of the risk involved in the portfolio of each individual client comprising of his positions in index futures and index options contracts. The parameters for such a model should include-

A) ***Worst Scenario Loss***

The worst case loss of a portfolio would be calculated by valuing the portfolio under several scenarios of

changes in the index and changes in the volatility of the index. The scenarios to be used for this purpose would be:

Risk Scenario Number:	Price Move in Multiples of Price Range	Volatility Move in Multiples of Volatility Range	Fraction of Loss to be Considered
1.	0	+1	100%
2.	0	-1	100%
3.	+1/3	+1	100%
4.	+1/3	-1	100%
5.	-1/3	+1	100%
6.	-1/3	-1	100%
7.	+2/3	+1	100%
8.	+2/3	-1	100%
9.	-2/3	+1	100%
10.	-2/3	-1	100%
11.	+1	+1	100%
12.	+1	-1	100%
13.	-1	+1	100%
14.	-1	-1	100%
15.	+2	0	35%
16.	-2	0	35%

The price range is defined to be three standard deviations as calculated for VaR purposes in the index futures market for the near month contract. The volatility range would be taken at 4% for an initial period of six months, after which it shall be reviewed.

While computing the worst scenario loss, it shall be assumed that the prices of futures of all maturities on the same underlying index move up or down by the same amount.

For the purpose of the calculation of option values the exchanges may use any of the following standard Option Pricing Models – Black-Scholes, Binomial, Merton, Adesi-Whaley.

The maximum loss under any of the scenario (considering only 35% of the loss in case of scenarios 15 and 16) is referred to in this circular as the Worst Scenario Loss. Subject to the additions and adjustments mentioned below, the Worst Scenario Loss is the margin requirement for the portfolio.

B) *Calendar Spread*

- i. The margin for calendar spread would be the same as specified for the index futures contracts. However, the margin shall be calculated on the basis of delta of the portfolio in each month. Thus, a portfolio consisting of a near month option with a delta of 100 and a far month option with a delta of –

100 would bear a spread charge equal to the spread charge for a portfolio which is long 100 near month futures and short 100 far month futures. The Calendar Spread Margin would be charged in addition to the Worst Scenario Loss of the portfolio.

- ii. As in the index futures market, a calendar spread would be treated as a naked position in the far month contract as the near month contract approaches expiry. Currently, in the index futures market, this is done in gradual steps over five trading days. For the sake of computational ease, it is now decided that when options are introduced, the gradual steps would be eliminated. Therefore, a calendar spread would be treated as a naked position in the far month contract three trading days before the near month contract expires.

C) *Short Option Minimum Margin*

The Short Option Minimum Margin equal to 3% of the Notional Value of all short index options shall be charged if sum of the Worst Scenario Loss and the Calendar Spread Margin is lower than the Short Option Minimum Margin. In this circular, Notional Value of option positions is calculated by applying the last closing price of the index futures contract.

D) *Net Option Value*

The Net Option Value shall be calculated as the current market value of the option times the number of options (positive for long options and negative for short options) in the portfolio. This Net Option Value shall be added to the Liquid Net Worth of the clearing member. This means that the current market value of short options will be deducted from the Liquid Net Worth and the market value of long options will be added thereto. Thus market to market gains and losses on option positions will get adjusted against the available Liquid Net Worth. Since the options are premium style, mark to market gains and losses will not be settled in cash for option positions.

E) *Cash Settlement of Premium*

For option positions, the premium shall be paid in by the buyers in cash and paid out to the sellers in cash on T+1 day.

F) *Unpaid Premium*

Until the buyer pays in the premium, the premium due shall be deducted from the available Liquid Net Worth on a real time basis.

G) *Cash Settlement of Futures Mark to Market*

The mark to market gains/losses for index futures position shall continue to be settled in Cash.

H) *Position Limits*

The existing position limits in the index futures market shall be applicable to index options also on the basis of notional value.

I) *Real Time Computation*

The computation of Worst Scenario Loss has two components. The first is the valuation of each option contract under sixteen scenarios using an appropriate option pricing model. The second is the application of these Scenario Contract Values to the actual positions in a portfolio to compute the portfolio values and the Worst Scenario Loss. For computational ease, exchanges are permitted to update the Scenario Contract Values only at discrete time points each day. However, the latest available Scenario Contract Values would be applied to member/client portfolios on a real time basis.

1. The Derivative Exchange/Segment shall submit their proposal for approval of the index option contract to SEBI which shall include:

- a. the details of proposed derivative contract to be traded on the exchange which would include:
 - i. Symbol
 - ii. Underlying
 - iii. Multiplier
 - iv. Strike Price Intervals
 - v. Premium Quotation
 - vi. Last Trading Day
 - vii. Expiration day/month
 - viii. Exercise Style
 - ix. Settlement of Option Exercise
 - x. Position and Exercise Limits
 - xi. Margin
 - xii. Trading Hours

- a. the economic purpose it is intended to serve,
- b. likely contribution to market development,
- c. the safeguards and the risk protection mechanism adopted by the exchange to ensure market integrity, protection of investors and smooth and orderly trading,
- d. the infrastructure of the exchange and the surveillance system to effectively monitor trading in such contracts, and
- e. details of settlement procedures & systems with regard to Index Options.

Yours sincerely,

(L.K SINGHVI)
SR. EXECUTIVE DIRECTOR