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1. How would positions on options be calculated?

Position on options will be calculated on notional value. For example, if 20 MT of call option is purchased and 10 MT of call option sold, then the position is taken as 20MT and will be monitored against position limit.

2. What are the position limits on options?

This limit is separate from the position limit on Futures and remains unchanged. The position limit varies according to the commodity. Members are requested to go through the product note on options.

3. When does the buyer of option pay premium?

The option buyer pays premium in the next pay-in settlement after option purchase. Until the pay in of premium, the option buyer is charged with premium margin which is blocked from the members collateral

4. In which circular of the Clearing corporation can I find details of margining for options?

The circular NCCL/RISK-028/2020 dated July 24, 2020 provides details of Margins on Option contract.

5. Do all options get charged with margin in the way futures are margined?

The purchased options will be charged with premium margin and when close to expiry, will be charged with option pre-expiry margin. The option pre-expiry margin will be charged @ 3% per day incrementally on the last 7 days of the contract. The short options will be charged with margins such as initial margin, ELM, NOV, pre-expiry margin.

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6. Will Delivery margin be charged to Options buyers and sellers?

Delivery Margin will be charged on the long and short positions resulting into physical delivery. The Delivery Margin shall be higher of 3% + 5 day 99% VaR of spot price volatility or 20% on the long and short positions marked for delivery till the pay-in is completed by the member.

7. Will there be a minimum margin on short options written by the option seller?

Yes, short options will be subject to a short option minimum margin of 8% , 10% , 12% of notional depending upon the categorization of the commodity. Members can refer to the product note on respective Option on Goods Contract.

8. What margins will be charged on option and futures contracts?

Margins will be charged on portfolio basis on options and futures positions based on Value at Risk (VaR) and scenarios based risk management system of the Clearing Corporation. VaR is estimated at 99% confidence level and a margin level is arrived at for each future or option contract, expressed as percentage of the notional. The scenario based margins will be charged on portfolio positions consisting of futures and options (SRC). Positions forming intermonth spreads will be charged with spread margins. Calendar spread margins will be charged with one-fourth of the applicable margin rates on each leg of the spread. Short options will be subject to short option minimum margin (SOMM) of 8% ,10% or 12% of the contract value depending upon the commodity categorization. Futures contracts are already subject to minimum initial margin and are subject to daily mark to market (MTM) process, with MTMs required to be settled through funds pay-in/pay-out the following trading day, before the start of trading. The option contracts will be subject to net option value (NOV) which represents their current value and will be adjusted to the margin requirement. As a result, positive NOVs from long options will have the effect towards lowering margin requirement, while short option's value (NOV) will be added to margin requirement. For illustration, consider the following portfolios in Guarseed10:

50MT short FUT FEB20, price Rs 4200/quintal, Margin = 7.00% 10MT long FUT MAR20, price Rs 4250/quintal, Margin = 7.50%
Spread margin = 15,319; Initial Margin = 1, 30,444

30MT Short Call OPT FEB20 Strike 4300, option price Rs 185/quintal, Underlying future's price

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= Rs 4250/quintal, Margin = 5.85%

Scenario based margin = 74,588, Short option minimum margin = 51,000, NOV = 55,500, Total Initial Margin = 74,588+55,500 = 1, 30,088

9. Will ELM (extreme loss margin) be charged on option positions as well?

Yes apart from futures, short option contracts will also be charged ELM. Long options will not be charged ELM. For illustration take the following position: 30MT Short Call OPT FEB20, Underlying future's price = Rs 4250/quintal and ELM = 1%. The ELM charged will be Rs 12,750.

10. Will there be market-to-market on options and how it would be settled?

The option contracts will be subject to net option value (NOV) which represents their current value and will be adjusted to the margin requirement. As a result, positive NOVs from long options will have the effect towards lowering margin requirement, while short option's value (NOV) will be added to margin requirement.

11. Can spreads be formed using options? Will it be eligible for margin benefit?

Yes, spreads can be formed between two options and also between an option and a future. The quantity of option eligible for spread will be based on its delta equivalent as calculated by the Clearing corporation. Yes, margin benefit will be available to spread positions. Margins charged will be one fourth on each leg. There will be no margin benefit on ELM. For example consider 10MT long call on Guar Seed having delta equivalent of 4 MT; and short Future position of 10 MT. In this case a spread of 4MT will be formed between the option and the future.

12. How shall Initial Margin be charged on Options?

The Initial Margin shall be charged on the basis of a scenario based risk management system which has parameters that are risk based and generate margin requirements sufficient to cover potential future exposure to participants/clients. The Initial Margin shall be imposed at the level of portfolio of individual client comprising of his positions in Futures and Options contracts on each commodity. Margins shall be adequate to cover 99% VaR (Value at Risk) and Margin Period of Risk (MPOR) shall be at least three days.

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13. What are the components of Initial Margin?

Initial Margin = Margin requirement + Net Buy Premium

14. What is Delta?

Delta is a measure of the variation of the price of a derivative contract with that of the underlying price. This gives the relationship between the price movements of the derivative contract with the price movement of the underlying. The delta calculation can be explained as below for Option on Goods

- Delta for Call Options on Goods**:** $e^{-rT}N(d1)$
- Delta for Put Options on Goods**:** $e^{-rT}[N(d1) - 1]$

N = the standard normal cumulative distribution function

$d1 = [\ln(F/K) + (v^2/2)*T] / (v*\sqrt{T})$

T = Time till expiry of option r =

Interest rate

15. How will the spread charge/margin be levied?

The spread charge shall be calculated on the delta of the portfolio of Futures and Options. A spread charge of 25% of Initial Margin on each leg of the positions shall be charged. The spread charge shall be for different expiry date contracts of the same underlying and two contracts variants having the same underlying commodity.

16. How shall the mark to market for options be handled?

The Clearing corporation shall mark to market the Options positions by deducting/adding the current market value of Options (positive for long Options and negative for short Options) times the number of long/short Options in the portfolio from/to the margin requirement. Thus, mark to market gains and losses would not be settled in cash for options positions. This is also called Net Option Value (NOV) of the Options.

17. Whether margining shall be charged at client level?

Yes, the Clearing corporation shall impose Initial Margins at the level of portfolio of individual client comprising of his positions in Futures and Options contracts on each commodity.

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18. Whether other margins will be charged?

Other margins like Adhoc Margins, Additional Margins and Special Margins etc. shall be applicable as and when they are levied by the Exchange/Clearing corporation/Regulator.

19. What percentage of Volatility Scan Range (VSR) shall be used in the scenario based margining model?

Volatility Scan Range (VSR) may be different for different commodities depending on the volatility of the underlying. The VSR shall be used in the scenario based margining model.

20. Provide details of the use of volatility for scenario based margin computation?

Implied Volatility shall be used in the scenario based margining model for portfolio margin computation. Initially, from a risk management perspective the maximum of Implied Volatility or volatility of underlying shall be considered for portfolio margin computation. On the Expiry Day of the Options contract, volatility of the underlying shall be used for portfolio margin computation.

21. Will Options Greeks be published by the Exchange?

The Options Greeks shall be published by the Exchange through various modes including the trading front ends, NCharts etc. on all trading days except on the Options Expiry Day.

22. At what frequency shall the Scanning Risk charge (SRC) and Net Option value (NOV) be computed by the Clearing corporation for the purpose of margin computations?

Scanning Risk Charge (SRC) shall be computed at each volatility refresh at discrete time intervals through the trading session. The NOV shall be computed at each LTP (Last trade price) change of the relevant Options contract.

23. How will the Pre expiry margin be charged on the Options Buyers and Options Sellers?

Pre expiry margin is charged for handling increase in margins on expiry when Options result into physical delivery .The pre expiry margin is charged @3% per day incrementally for 7 days prior to the expiry of the contract including expiry day on both Long and Short Options positions. In addition, for Short Options positions, the Pre Expiry Margin requirement shall be reduced by the actual short option charge.The Pre Expiry Margin levied on Options shall be apart from the other margins like

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initial margin, additional margin, spread margin etc. The number of days for levy of Pre Expiry Margin and other details herein are subject to change from time to time. Please refer latest Circulars for the applicable details.

24. Whether all Long and Short Option positons will be levied Pre Expiry Margin?

All Long as well as Short Options positions with strikes that are In the Money (ITM), Close to the Money (CTM), and CTM - Extended shall be levied pre expiry margin. CTM - Extended strikes are those Out of the Money (OTM) strikes which fall further in the 8% range from At the Money (ATM) on E-2. The details herein are subject to change from time to time. Please refer latest Circulars for the applicable details.

25. Will Pre Expiry Margin be included in the standard client margin reporting?

Pre Expiry Margins shall not be included in standard client margin reporting and hence no penalty shall be levied on short-collection/non-collection of the same by the Clearing Members from their clients.

26. What is the Black 76 Options pricing model?

Black 76 Model:

Call Option Price (C) = $e^{-rT} * [F*N (d1) - K*N (d2)]$

Put Option Price (P) = $e^{-rT} * [K*N (-d2) - F*N (-d1)]$

Or $P = C - [e^{-rT} * (F - K)]$

Where,

$d1 = [\ln (F/K) + (v^2/2)*T] / (v*\sqrt{T})$ d2

$= d1 - (v*\sqrt{T})$

N = the standard normal cumulative distribution function

F = the current underlying Futures contract price

K = the strike price

T = time till expiry of Options

r = the Interest rate v =

Volatility

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27. What is implied volatility?

Implied Volatility is the expected volatility in an underlying instrument. The implied volatility can be derived from the Black 76 Option pricing model with traded option price and other parameters as inputs.

28. What is the volatility of the underlying?

The volatility of the underlying is the Exponential Moving Average Volatility (EWMA) volatility.

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