![NSE logo]

FAQs on Limit Price Protection

Version 3.0

November 2024

Disclaimer:

Background:

With reference to circular NSE/FAOP/54242 dated October 28, 2022, members are requested to note that Exchange have introduced the mechanism of Limit Price Protection (LPP) w.e.f. October 31, 2022 in the Futures and Options segment to strengthen the pre-trade risk control measures for preventing aberrant orders and to ensure orderly trading. LPP range is dynamic and may change throughout the day based on market activity. Any incoming limit order placed beyond LPP range shall automatically be rejected. There is no change in the existing validation of 'Operating price range' on order entry requests. LPP validation is an additional check, over, and above, OPR validation.

FAQs:

1. **What is Limit Price Protection mechanism?**
   LPP range is an additional validation apart from prevailing operating price range (OPR). LPP range shall be the range on both sides of the 'reference price' to validate price of limit orders.
   Any incoming limit order placed beyond LPP range shall automatically be rejected by the Exchange as below:
   • Buy order price > High LPP limit
   • Sell order price < Low LPP limit

2. **How are the reference price for each contract computed?**
   a. At market open - It shall be computed theoretically using underlying price as discovered in the cash market pre-open session, benchmark interest rate as MIBOR rate (for option contracts, Black Scholes model shall be used along with appropriate volatility). In case underlying price is not available at the time of computation, reference price shall be base price of the contract.

   b. During trading hours - It shall be the simple average of trade prices of that contract in the last 30 seconds. For contracts that have traded in last 30 seconds, the reference price shall be revised throughout the day at 30 seconds interval.

   c. For contracts that have not traded in the last 30 seconds, the reference price shall not be revised. However, in case contract remains untraded for continuous 15 mins from last reference price update event, the reference price shall be the theoretical price based on the latest available underlying price (or base price of the contract if underlying price is not available).

3. **What are the applicable parameters for contract level LPP range calculation?**
   Currently, the LPP range in both the side of reference price is computed as follows:

Instruments	Reference Price (in Rs.)	Minimum Absolute Range (Rs.)	% of Reference Price
FUTIDX	<=10000	+ / - 200	-
	>10000	-	+ / - 2%
FUTSTK	<=50	+ / - 1.5	-
	>50	-	+ / - 3%
OPTIDX & OPTSTK	<=50	+ / - 20	-
	>50	-	+ / - 40%

Note: The Exchange may review and modify the parameter values in future, if required and the same shall be informed through circular issued from time to time.

4. For which type of instrument LPP mechanism is applicable?

Currently, LPP mechanism is applicable for all Futures & Options contracts in Equity Derivatives Segment.

5. For which order types the limit price protection range mechanism are applicable?

LPP validation/ mechanism is applicable for all the permitted order types having limit price.

6. How LPP validation works for Stop Loss (SL)- Limit orders?

For the SL-Limit orders, LPP validation are applied post trigger of the order while releasing in the RL book, considering prevailing LPP limits.

Limit order placed beyond LPP range shall automatically be rejected by the Exchange as below:

- Buy order price > High LPP limit
- Sell order price < Low LPP limit

Additionally, the triggered SL order shall be rejected with transcode 2231 in LPP validation.

7. How can trading member minimize instances of stop loss order rejections?

Instances of stop loss order rejections can be minimized by not placing stop loss orders at extreme prices near operating ranges and keeping minimum difference between the limit price and trigger price.

8. Are the LPP mechanism applicable for PRO as well as CLI orders?

Yes, LPP validation mechanism are applicable for PRO (Proprietary) as well as CLI (Clients) - Custodial Participant (CP), Non-Custodial Participant (Non-CP) orders.

9. Is LPP validation applicable for Order modification request?

Yes, LPP validation is also applicable at the time of order modification request. Order modification request having price beyond LPP limits shall be rejected. Hence, original order, in state prior to order modification request, shall continue to remain in the order book.

10. **How will the member know if an order is rejected due to order placed beyond the prevailing LPP range?**

An appropriate rejection message is displayed on trading terminal for orders rejected due to LPP validation.

11. **What is the error code generated for Non-Neat Frond End (NNF) users when orders placed beyond the prevailing LPP range get rejected?**

Following is the error code for the rejected orders due to LPP validation.
   - Error Code Value: 17070
   - Description of Error Code: "The Price is out of the current execution LPP range"

Members are requested to refer the latest API specification document of FO Segment available on NSE website for handling of LPP mechanism.

12. **What are the criteria for relaxation of LPP range?**

Currently, LPP limit is flexed automatically when minimum 10 orders are rejected on account of LPP validation, between two LPP revision events; AND when such orders involve minimum 5 unique UCCs and minimum of 3 unique trading members. LPP range shall be flexed in the corresponding direction in which the criteria are met.

13. **How will trading member know whether the latest/flexed limit price range?**

Exchange broadcast the applicable LPP range for the active as well as reserved strikes through a separate LPP specific broadcast channel for Non-NEAT frontend (NNF) users. The range for each token is computed periodically throughout the day and same is broadcast by the Exchange whenever there is change in LPP ranges.

Members are requested to note the following broadcast parameters provided for the LPP range:

Limit Price protection Range (LPP) Parameters					
	Source 1		Source 2		Approx. bandwidth utilization
Segment	Multicast IP Address	Broadcast Port	Multicast IP Address	Broadcast Port	
FO Segment	239.55.55.21	55021	239.55.55.121	55121	2 Mbps

14. **Are LPP validation applicable for reserved strikes/contracts apart from active strikes?**

Currently there is no validation for reserve strikes/ contracts in LPP mechanism, but LPP range is calculated and broadcasted for the same. Kindly note that Exchange creates strikes which are reserved and not available for trading. The same may be enabled during the day in case of market movement in the respective direction and once the reserve strikes are enabled for trading, LPP validation will be implemented.

15. **What will be the status of outstanding orders if the LPP range gets flexed?**

Any passive orders i.e., existing outstanding orders shall continue to remain in the order book even if the LPP range has moved/flexed and shall be matched as per existing price time priority matching mechanism.

❖ **Illustrations**

For e.g.

- Operating Price Range (OPR) : 50 to 150
- LPP Range : 80 to 120

Buy limit order having price greater than 120 shall be rejected due to LPP validation. Effectively, Buy limit order is permitted between price range of 50 to 120.

Sell limit order is permitted between price range of 80 to 150. Sell limit order having price lesser than 80 shall be rejected due to LPP validation.

Any limit order (Buy/Sell) with price lesser than 50 & greater than 150 shall be rejected on account of OPR validation.

Illustration - I

Transaction	Operating Range	Current LPP Range	Order Acceptance Limit
Buy Order	50 to 150	80 to 120	50 to 120

Illustration – II

Transaction	Operating Range	Current LPP Range	Order Acceptance Limit
Sell Order	50 to 150	80 to 120	80 to 150

Questions pertaining to Trading in options segment during cooling off in underlying / futures contracts as mentioned in Para (E) SEBI/HO/MRD/TPD-1/P/CIR/2024/58 dated May 24, 2024:

16. **When and how will temporary price floor or ceiling be applied in the options segment?**

    As per NSE circular NSE/FAOP/64995 issued on November 08, 2024, once the underlying triggers cooling off, a temporary price floor or ceiling based on the LTP/Theoretical Price will be placed on LPP limits of stock options in the sentimental direction of price trend in the underlying.

17. **What is the purpose of the temporary price floor or ceiling on LPP limits of stock options?**

    The temporary price floor or ceiling aims to control price movements in the sentimental direction of the underlying price trend during the cooling off period, facilitating market participants to hedge or close their positions.

18. **How is the temporary floor or ceiling determined if the Last Traded Price (LTP) is available and not stale?**

    If the LTP is available and not considered stale, the temporary floor or ceiling is linked to the LTP of the stock options contract.

19. **What happens if the LTP is unavailable or considered stale?**

    If the LTP is unavailable or stale, the temporary floor or ceiling is linked to the theoretical price of the options contract.

20. **How is a stale LTP defined?**

If the reference price used for the prevailing LPP is not as per the Simple Average Price (SAP) then it is considered as stale LTP. For reference price please refer point (E)(2) in chapter 1.15 Pre-Trade Risk Controls in Exchange circular NSE/FAOP/61814

21. **What are the parameters for the temporary floor or ceiling?**
The parameters for the temporary floor or ceiling is as under:

Theoretical Price / LTP	% / Absolute
> 50	15%
<= 50	Rs.7.5

22. **What happens at the end of the cooling off period?**
The temporary floor or ceiling on option contracts is revoked once the price band for the underlying scrip is flexed.

23. **What happens to orders placed beyond the LPP range during cooling off?**
- Buy orders with a limit price greater than the temporary ceiling are rejected.
- Sell orders with a limit price lower than the temporary floor are rejected.

24. **Is Floor/Ceiling capping during the cool-off applicable only on the sentimental side?**
Yes, Floor/Ceiling capping during the cool-off is applicable only on the sentimental side.

25. **How does the LPP computation and flexing work during the cooling off period?**
LPP computation and flexing for all option contracts continue as per the current logic, subject to the applicability of the temporary ceiling or floor.

26. **Are there any specific provisions for Stop Loss (SL)-Limit orders?**
For SL (Stop loss)-Limit orders, aforesaid validations shall be applicable post trigger of the order while releasing in the RL (Regular Lot / Main order book) book, considering prevailing LPP limits. Hence, members are requested to note the same while placing SL-Limit orders

27. **Is Floor/Ceiling capping applicable to all options contracts?**
This mechanism is only applicable to stock options contracts.

28. **Is cancellation of order applicable in options segment?**
Orders cancellation is not applicable for options. Passive orders i.e. existing outstanding orders which are within the OPR, shall continue to remain in the order book even if the LPP range has moved and shall be matched as per price time priority

29. **Will orders cancelled on account of sliding considered for OTR as well as PNC computation?**
No, orders cancelled on account of sliding will not be considered for OTR as well as PNC computation.

30. **How will trading member know the latest/flexed limit price range within cool-off?**

Exchange broadcast the applicable LPP range for the active as well as reserved strikes through a separate LPP specific broadcast channel for Non-NEAT frontend (NNF) users. The range for each token is computed periodically throughout the day and same is broadcast by the Exchange whenever there is change in LPP ranges.

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31. **Which is the latest circular issued?**

Please refer circular NSE/FAOP/64995 issued on November 08, 2024.