**Consultation Paper on the proposed framework for devolvement of In-The-Money (ITM) single stock option contracts into futures, 1 day prior to expiry, to mitigate the potential risks arising from sudden movement of Out-of-The-Money (OTM) option contracts to ITM option contracts near expiry in the context of physical settlement in the derivatives segment**

1. **Objective**

1.1. To solicit comments and inputs from stakeholders and members of public on the proposed framework for devolvement of ITM single stock option contracts into futures, 1 day prior to expiry. This change is intended to mitigate potential risks associated with scenarios where significant obligations may arise in the context of physical settlement requirement in single stock derivatives, when an OTM option unexpectedly becomes ITM due to sudden price movements near market close on expiry day.

2. **Background**

2.1. In August 2017, Stock Exchanges, in consultation with SEBI, had introduced a framework for facility of “Do not Exercise (DNE)” in cash settled stock options, wherein option holders holding Close-To-Money (CTM) options (3 In The Money (ITM) strikes below the settlement price in case of call options and 3 ITM strikes above the settlement price in case of put options) may choose not to exercise such option. The said facility was introduced inter-alia, considering that certain ITM options holders were having negative pay off due to incidence of Securities Transaction Tax (STT) on the settlement price of the underlying (notional value).

2.2. SEBI, vide circular dated April 11, 2018, has, inter-alia, mandated physical settlement of single stock derivatives, upon expiry of such derivatives, in a phased manner.

2.3. Subsequently, w.e.f. September 2019, Securities Transaction Tax (STT) began to be levied on the intrinsic value of the option (i.e., difference between the settlement price and the strike price of the option) instead of the settlement price, as was done earlier. Upon such change in computation of STT, the concerns related to negative pay off, as mentioned above, were no longer relevant. Subsequently, based on the recommendations of the Risk Management Review Committee (RMRC) of SEBI, the said DNE facility was discontinued from October 2021.

2.4. In the absence of DNE facility on expiry of stock option contracts, and the mandatory requirement of physical settlement of stock derivatives, if an OTM option suddenly turns ITM on the expiry day, the ITM option holder is obligated to bring in the cash or securities to honor the physical settlement. If the position is large and such ITM option holder(s) fails to bring in the cash or securities to honor the physical settlement, the same could pose potential risk to the settlement process.

2.5. While restoring the DNE facility, as an interim measure in April 2022 to mitigate the above risk, it was decided to examine/explore policy of allowing Net settlement across cash segment and F&O segment upon expiry of single stock derivatives, to address the above concern.

2.6. In line with the above objective, SEBI, in consultation with the Secondary Market Advisory Committee (SMAC), introduced the mechanism of Net Settlement of cash and derivative segment upon expiry of stock derivatives with effect from March 2023 expiry of derivative contracts.

2.7. Accordingly, currently the obligations arising out of cash segment settlement and physical settlement of derivative segment, upon expiry of stock derivatives, are settled on net basis. The benefit of netting (merged settlements) is available to investors whose trading member (TM) clears trades in the derivative segment and cash segment through the same clearing member (CM) i.e. benefit of netting is available to investors who trade and clear through the same TM-CM combination in Cash and derivative segments. Further, netting benefit is available for non-institutional Custodial Participants (CPs) clearing through the same entity registered both as a custodian in cash market and as a CM in derivative segment, except and otherwise for those investors/ clients/ participants (for instance Portfolio Managers-PMS) who are mandated to enter into delivery backed transactions only. However, such netting benefit is not available for institutional investors (including all categories of Foreign Portfolio Investors) since the extant regulatory framework specifies that all transactions by institutional investors (including all categories of Foreign Portfolio Investors) in cash market should be backed by delivery.

3. **Need for Review**

3.1. The closing price of the cash segment, which is the Volume Weighted Average Price (VWAP) of last 30 minutes across Exchanges, is taken as the settlement price on expiry day for single stock derivatives and is used to determine whether the options are ITM. On the expiry day, the cash market price can keep fluctuating and a contract can go in/out of the money. Whether VWAP across Exchanges is greater or lesser than the strike price cannot be determined until the market has closed.

3.2. The facility of Net settlement was introduced in 2023 to address the concerns of OTM options turning into ITM on the expiry day and consequent delivery obligations on such ITM option holder. While the net settlement of cash and derivative segments upon expiry of stock derivatives addressed the issue for the options turning ITM during the day, the same is not found to be helpful when an option contract turns ITM based on closing price calculated as VWAP across Exchanges.

3.3. **Market wide risk concerns**: From a market /CC risk standpoint, currently the delivery margin is charged on ITM options. This is to account for the possible margin which may arise if the option gets converted to delivery. Presently there is no delivery margin charged on OTM strikes. This can have a very large market impact if the price of the underlying moves even slightly during the last half an hour on expiry day. For example, in August, 2023 expiry the closing price of a scrip moved from 9,980 to close at 10,003. All calls of 10,000 strike, therefore, suddenly became ITM and the buyers were forced to accept delivery. Given that the option was OTM till the previous Span file, there was no delivery margin charged on the same.

3.4. Additionally, if a market participant—whether due to ignorance, believing the worst-case loss is limited to the premium paid, or with the intent to default—purchases a large quantity of options close to expiry, the risk can become substantial. This is because the margin required for OTM options is capped at the premium value. Such a scenario could pose systemic risks to the entire market, especially if physical delivery obligations are not met. Failure to honor these obligations could lead to significant losses due to auction penalties if the option turns ITM.

3.5. **Data Analysis**: Data was sought from NSE, symbol(ISIN) wise and contract wise in respect of options which were OTM on previous day and ITM on expiry day from April 2024 expiry to September 2024 expiry. The same is re-produced below:

**Table 1: Symbol Wise data**

| Expiry Date | No of Unique Symbols in the Expiring Month | No of Unique Symbols - OTM On Previous Day and ITM on Expiry Day | No unique symbols - Turning OTM to ITM BEFORE the last 1 hour (excludes last 1 hour) | No unique symbols - Turning OTM to ITM in the last 1 hour (excludes last 30 mins) | No unique symbols - Turning OTM to ITM in the last 30 min (excludes last 15 mins) | No unique symbols - Turning OTM to ITM in the last 15 min (excludes last 5 mins) | No unique symbols - Turning OTM to ITM in the last 5 min | No of unique symbols Turning OTM to ITM after market hours |
|---|---|---|---|---|---|---|---|---|
| 25-Apr-24 | 182 | 137 | 134 | 10 | 2 | 1 | 0 | 0 |
| 30-May-24 | 182 | 155 | 153 | 16 | 3 | 0 | 0 | 0 |
| 27-Jun-24 | 182 | 126 | 120 | 11 | 14 | 1 | 0 | 0 |

| Expiry Date | No of Unique Symbols in the Expiring Month | No of Unique Symbols - OTM On Previous Day and ITM on Expiry Day | No unique symbols - Turning OTM to ITM BEFORE the last 1 hour (excludes last 1 hour) | No unique symbols - Turning OTM to ITM in the last 1 hour (excludes last 30 mins) | No unique symbols - Turning OTM to ITM in the last 30 min (excludes last 15 mins) | No unique symbols - Turning OTM to ITM in the last 15 min (excludes last 5 mins) | No unique symbols - Turning OTM to ITM in the last 5 min | No of unique symbols Turning OTM to ITM after market hours |
|---|---|---|---|---|---|---|---|---|
| 25-Jul-24 | 181 | 125 | 124 | 7 | 7 | 2 | 0 | 0 |
| 29-Aug-24 | 181 | 92 | 89 | 1 | 2 | 1 | 1 | 0 |
| 26-Sep-24 | 180 | 123 | 117 | 16 | 1 | 2 | 0 | 0 |

**Table 2: Contract Wise data**

| Expiry Date | No of Contracts in the Expiring Month | No of Contracts - OTM On Previous Day and ITM on Expiry Day | No of OTM contracts - Turning ITM Before last 1 hour (excludes last 1 hour) | No of OTM contracts - Turning ITM in the last 1 hour (excludes last 30 mins) | No of OTM contracts - Turning ITM in the last 30 min (excludes last 15 mins) | No of OTM contracts - Turning ITM in the last 15 min (excludes last 5 mins) | No of OTM contracts - Turning ITM in the last 5 min | No of OTM contracts - Turning ITM after-market hours |
|---|---|---|---|---|---|---|---|---|
| 25-Apr-24 | 14,002 | 294 | 281 | 10 | 2 | 1 | 0 | 0 |
| 30-May-24 | 14,528 | 334 | 314 | 16 | 4 | 0 | 0 | 0 |
| 27-Jun-24 | 17,294 | 253 | 224 | 12 | 16 | 1 | 0 | 0 |
| 25-Jul-24 | 13,826 | 246 | 230 | 7 | 7 | 2 | 0 | 0 |
| 29-Aug-24 | 12,534 | 128 | 120 | 1 | 5 | 1 | 1 | 0 |
| 26-Sep-24 | 11,782 | 187 | 166 | 16 | 1 | 4 | 0 | 0 |

3.6 From the above data, the following is observed:

3.6.1 In last 6 expiry months, from April 2024 to September 2024, there has been NIL instance of an option contract turning OTM to ITM, after-market hours based on VWAP.

3.6.2 However, there were 10 contracts which turned from OTM to ITM in the last 15 minutes.

3.7 Thus, while the data does not suggest significant number of contracts turning ITM in last 15 minutes prior to market close or on VWAP basis, however, theoretical possibility of contract turning ITM in last few minutes or after-market hours based on VWAP, cannot be ruled out. Such instances may also create systemic risk to the CCs, if failure to honour delivery obligation of an ITM contract triggers default of the TM and/ or CM.

3.8 Based on representations from the Industry Standard Forum (ISF), the matter was deliberated in RMRC meeting held on February 09, 2024, and it was decided to allow DNE facility for contracts which were OTM as per the LTP (last traded price) at the close of market hours and becomes ITM due to Settlement Price computation (VWAP of closing prices of the Exchanges).

3.9 However, the ISF of Intermediaries in its meeting held on May 13, 2024, deliberated on the aforesaid proposal and concluded that the said proposal was not meeting the desired objective. There could be instances where an option contract was ITM at 3:00 pm on the expiry day, based on which an entity could buy the underlying stock, in the cash segment, to honor the physical settlement requirement of the stock using the net settlement mechanism. However, on expiry the said option contract may become OTM resulting in the position of the stock in the cash segment, remaining with the client, as there was no requirement to physically deliver the stock. Hence, the Brokers forum requested SEBI to re-examine the matter.

4. **Proposal**

The matter was deliberated with the Brokers forum and also discussed internally. Based on the deliberations, a framework of devolvement of ITM option contracts into futures, 1 day prior to expiry, for single stock derivatives, has been proposed with the following features:

**ITM Options devolving into Futures**

4.1. Currently, all ITM options (based on the last 30 mins VWAP on the expiry day) are auto exercised and converted to underlying deliverable obligations.

4.2. It is proposed that ITM options instead of directly resulting into physical delivery obligation on expiry will initially devolve into stock futures on the day prior to expiry i.e., E-1 day. Thereafter, the resultant stock futures positions can be closed on the expiry day i.e., E day.

4.3. On the expiry day, therefore, only futures will be tradeable. The open futures positions on the expiry day will be settled by delivery, as at present.

**Settlement**

4.4. Upon exercise, options positions may devolve into futures as follows:

a. Long ITM call positions may devolve into long positions in the underlying future contracts
b. Long ITM put positions may devolve into short positions in the underlying future contracts
c. Short ITM call positions may devolve into short positions in the underlying future contracts
d. Short ITM put positions may devolve into long positions in the underlying future contracts

4.5. All such devolved futures positions shall be opened at the strike price of the exercised options.

4.6. For example, assume that the stock future contracts expire on the last Thursday of the month. Accordingly, one working day prior to the expiry i.e., E-1 day, i.e. on Wednesday, all the open positions in option strikes which are ITM based on last 30 minutes VWAP of the underlying stock on Wednesday, will be auto exercised and will devolve into a futures position at the exercise price, set to expire on Thursday. The resultant positions in futures can be closed on Thursday and the residual open positions will be settled via delivery.

4.7. The aforesaid mechanism is comparable to the one used in commodity derivative segment, to a large extent, and hence, the said proposal will not require significant system-level changes at the end of the Market Infrastructure Institutions (MIIs) or the TMs / CMs.

**Margins**

4.8. Presently, the CCs impose delivery margins, in a staggered manner, on potential deliverable positions i.e., long ITM option contracts, commencing 4 working days prior to expiry i.e., from E-4 day onwards.

4.9. The proposed framework may not necessitate any change in the margining system, except that the delivery margins which is staggered from 4 working days prior to expiry i.e., E-4 day to E day, may need to be staggered from 4 working days prior to expiry to 1 working day prior to expiry i.e., E-4 day to E-1 day, given that on expiry day the future positions will be already adequately margined.

## 5. Public Comments

5.1. Public comments are sought on the following along with the supporting rationale:

5.1.1. Is the proposal of devolvement of options into stock futures, 1 day prior to expiry, based on VWAP of the stock in the last 30 minutes in the cash segment, an appropriate measure to mitigate the potential risks arising out of sudden movement of OTM option contracts to ITM option contracts near expiry, which could lead to physical delivery obligations in the derivative segment?

5.2. Considering the implications of the said proposal on market participants, public comments are invited latest by December 26, 2024 via online platform.

5.3. In case of any technical issue in submitting your comment through web based public comments form, you may e-mail your comments to mrd_consultation@sebi.gov.in. While sending the e-mail kindly mention the subject as: "Comments on the proposed framework of devolvement of In-The-Money (ITM) option contracts into futures, 1 day prior to expiry, to mitigate the potential risks arising from sudden movement of Out-of-The-Money (OTM) option contracts to ITM option contracts near expiry due to physical settlement in the derivatives segment"

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