

# National Stock Exchange of India Limited

## Circular

Department: FUTURES & OPTIONS	
Download Ref No: NSE/FAOP/67690	Date: April 24, 2025
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All Members,

### Base Price for Future and Option Contracts - Update

This is with reference to Chapter 1.4 and 1.6 in the Exchange circular NSE/FAOP/61814 dated April 29, 2024.

Members are requested to take note of the following update regarding the base price of contracts on normal trading days<sup>^</sup>. The base price of the contracts shall be defined as below:

- Future & Option contracts: For the first day of trading of contract, base price shall be the theoretical price. From subsequent trading days, it shall be the close price or theoretical price of the contract.

### Calculation of theoretical base price of contracts:

- Future contract:

The theoretical price of futures contract shall be computed as per the formula,  $F = S * e^{rt}$

Where,

F = theoretical price of contract

S = underlying price

r = applicable MIBOR rate

t = time to expiration

- Option contract:

The theoretical price of option contract shall be computed using Black-Scholes model as below:

$$C = S * N(d1) * X * e^{-rt} * N(d2)$$

$$P = X * e^{-rt} * N(-d2) * S * N(-d1)$$

Where,

$$d1 = [\ln(S / X) + (r + s^2 / 2) * t] / (s * \sqrt{t})$$

<sup>^</sup> In case of exigency scenarios, Exchange may refer alternate method for base price computation

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$$d2 = [\ln (S / X) + (r - s^2 / 2) * t] / (s * \sqrt{t})$$

C = price of a call option

P = price of a put option

S = price of the underlying

X = strike price of the option

r = applicable MIBOR rate

t = time to expiration

s = underlying volatility

Members are requested to note that the above-mentioned changes shall be made effective in Live from **April 29, 2025**.

**For and on behalf of  
National Stock Exchange of India Limited**

**Khushal Shah  
Associate Vice President**

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