भारतीय प्रतिभूति और विनिमय बोर्ड
Securities and Exchange Board of India

Consultation Paper on Price Band formulation for scrips in Equity Derivatives segment to strengthen volatility management and minimise information asymmetry

1. Objective

Price bands for a scrip or a derivative contract represent the boundaries within which the competing orders of buyers and sellers are accepted for the day by the trading system of the stock exchange. For scrips having derivative contracts on them, these price bands are dynamic and can be flexed depending on trading during the day. Objective of this paper is to seek public comments on strengthening the existing price band formulation for scrips in derivative segment in order to strengthen volatility management and consequently risk management in the market as also to minimize information asymmetry in the market.

2. Background on price band formulation for scrips in Equity Derivatives Segment

2.1. SEBI vide circular SMDRPD/Policy/Cir-37/2001 dated June 28, 2001 had specified individual scrip wise price bands/ circuit filters of 20% either way, for all scrips in the compulsory rolling settlement except for the scrips on which derivatives products are available or scrips included in indices on which derivatives products are available.

2.2. In order to prevent executing stray/ erroneous orders resulting in non-genuine prices, on account of fat-finger error or otherwise, SEBI vide circular CIR/MRD/DP/34/2012 dated December 13, 2012 read with circular CIR/MRD/DP/25/2013 dated September 03, 2013 mandated dynamic price bands at 10% of the previous day's closing price for the following securities:

2.2.1. Stocks on which derivatives products are available
2.2.2. Stocks included in indices on which derivatives products are available
2.2.3. Index futures
2.2.4. Stock futures

2.3. The dynamic price bands are to be flexed by the stock exchanges in increments of 5%, in the event of a market trend in either direction. Stock exchanges were also directed to frame suitable rules in consultation with SEBI, for such relaxation of dynamic price bands. The initial threshold set by the stock exchanges for flexing were "10 trades executed with multiple UCC on both sides of the trade at or above 7% or more of the base price and in further multiples of 5% of the price movement".

2.4. In May 2014, the stock exchanges revised the criteria for flexing of dynamic price bands as "*10 trades executed with multiple UCC on both sides of the trade at or above 9.90% or more of the base price and in further multiples of 5% of the price movement*". These measures were taken by the stock exchanges to mitigate disruption caused by erroneous orders and at the same time not interfere in the price discovery process. In exceptional situations, exchanges consult each other and flex the dynamic price band with a 15 minutes notice to the market. The criteria for flexing of dynamic price bands was subsequently modified to minimum of 25 trades to be executed with 5 different UCCs on each side of the trade at or above 9.90% and so on.

2.5. Vide press release dated March 20, 2020, an additional condition was introduced i.e. the dynamic price bands may be flexed only after a cooling-off period of 15 minutes from the time of meeting the existing criteria specified by stock exchanges for flexing.

2.6. In summary, the existing formulation around dynamic price band is provided below:

2.6.1. Underlying in cash market and futures contracts have start of the day price band as 10% of yesterday's closing price in that scrip/contract as a notional price band.

2.6.2. These price bands can be flexed by 5% of yesterday's closing price during the day as many times as required subject to the following conditions followed by the cooling off period (exchanges co-ordinate with each other for commonly listed scrips).

2.6.2.1. In the event market trends in either direction, the criteria for flexing is minimum of 25 trades to be executed with 5 different UCCs on each side of the trade at or above 9.90% and so on. That is to say if 25 trades from 5 different UCCs occurred at or above 9.90%, the dynamic price band is flexed to 15%, if 25 trades from 5 different UCCs occurred at or above 14.90%, the dynamic price band is again flexed to 20% etc.

2.6.3. Cooling Off: After the aforesaid conditions are satisfied, a cooling off period of 15 minutes is provided before the flex is activated.

2.6.4. If price band in cash market is flexed for a scrip, then the price band for the futures contracts is also flexed.

2.6.5. It may be noted that during the cooling off period, trading continues in the underlying scrip / futures contracts albeit with a price floor/ceiling as applicable. For instance, if yesterday's closing price was ₹100 and today's start of the day dynamic price bands are ₹90 (lower band) and ₹110 (higher band) and if scrip price reaches ₹110 and triggers cooling off after meeting the flexing criteria, it means that the scrip price during this period cannot move beyond ₹110 (temporary price ceiling). However, during this period, the entire price band i.e. from ₹110 to ₹90 remains active and scrip price can move anywhere in this range.

3. Principles behind construct of dynamic price band and existing formulation

In general, dynamic price band for scrips are put in place with the following illustrative guiding principles:

3.1. Volatility Control Measure (VCM):

Price bands provide price boundaries within which orders are accepted and matched for the trading day and hence serve as a Volatility Control Measure for price movement in the scrip or derivatives contract.

3.2. Continuity of Trading and Price Discovery Process:

3.2.1. In order to accommodate for developments during market hours or on account of a market wide event, it should be possible to flex the price band in the direction of market movement for the scrip to achieve new equilibrium price.

3.2.2. Continuity of trading should not be affected when price bands are hit on any side. Trading halts, if any, should be rare.

3.3. Orderly Trading:

Price bands should be rigid enough to dampen short term volatility driven by temporary demand-supply imbalances in the scrip or fat finger error and flexible enough to allow the underlying scrip to reach a new equilibrium price based on healthy and collective market dynamics.

3.4. Addressing Information Asymmetry:

Before expanding such dynamic price bands, sufficient time has to be given to market participants to assimilate any company specific development / market wide event/ information. Such time period allows information to flow to a wider set of investors.

3.5. Consistency and Price Alignment:

3.5.1. Start of the day price bands in cash market and futures contracts should have the same formulation to avoid possibility of misalignment of prices of the same underlying between different segments.

3.5.2. In case of flexing of price bands in one segment, say cash market, price bands for futures contracts also should be flexed in order to avoid possible misalignment arising out of different price bands.

3.6. Transparency and Guideline Dissemination:

3.6.1. Price band formulation should be objective and computation should be replicable. Further, rules and conditions precedent to such formulation should be available to market participants.

3.6.2. Original price bands and any revision thereof should be disseminated to market participants on continuous basis.

3.7. Risk Management/ Protection of Interest of Shareholders from Sudden and Extreme Price Movement:

While dynamic price bands provide room for the underlying scrip price to move beyond original price band, in the interest of orderly trading, risk management and to protect the interest of shareholders, there should be some maximum limit (on the upside and downside) beyond which underlying scrip price/ derivatives contract is not allowed to move in a single day.

4. Back testing of data

4.1. Back testing of data was carried out on the following dimension to understand if there was any need to improve the existing price band formulation for scrips in equity derivatives segment.

4.1.1. Single day price movement distribution for scrips in equity derivatives segment:

4.1.1.1. For this purpose, instances of flexing of price bands for derivative scrips for the period January 01, 2020 to December 31, 2022 were examined and bucketed into highest price bands till which the start of the day price bands of 10% were flexed intraday in either direction. Summary of the same is provided herewith:

Instances of flexing of upper limit of price band				Instances of flexing of lower limit of price band		
Highest limit till which price band is flexed (%)	**No. of Instances**	**No. of Companies**	**No. of Distinct Days**	**No. of Instances**	**No. of Companies**	**No. of Distinct Days**
85	0	0	0	1	1	1
80	0	0	0	0	0	0
75	1	1	1	0	0	0
70	0	0	0	0	0	0
65	0	0	0	0	0	0
60	1	1	1	0	0	0
55	1	1	1	0	0	0
50	5	5	4	1	1	1
45	4	4	3	1	1	1
40	6	4	6	3	3	3
35	5	3	5	5	5	3
30	21	13	17	18	14	10
25	59	38	41	40	31	18
20	149	81	76	164	93	45
15	759	179	315	669	174	147

4.1.1.2. From the above table, it is inferred that

4.1.1.2.1. 98.22% of instances of flexing of upper/lower limit of price band fall under the highest limit of 30% till which the price band is flexed and 99.21% of instances fall under the highest limit of 40% till which the price band is flexed.

4.1.1.2.2. Extreme observations of single day price movement of more than 30%-40% on either side, for instance, hint at abnormal situations and possible vulnerabilities in terms of volatility and risk management.

4.1.1.2.3. If we compare the number of distinct days and number of companies wherein price bands were flexed, in the table above, there are instances wherein values for number of distinct days is higher than the number of companies. This effectively means that there are scrips which are prone to showing significant price movement on multiple different days.

Further, if such extreme price movement happens consecutively for a number of days, the total impact of such price movement can be very significant. Thus, on the basis of aforesaid table, it appears that strengthening of existing formulation of price band

for scrips in equity derivatives segment is required to reduce the worst case maximum price movement in a day with the understanding that a price movement of larger magnitude over multiple days would be more orderly compared to it happening entirely on a single day.

4.1.1.2.4. Such staggered price rise or fall across multiple days would also reduce possible strain on settlement systems. It would provide adequate time to market participants to assess the situation and to listed companies to provide clarifications on any company specific development/ information flow.

5. International Practices

5.1. The World Federation of Exchanges ("WFE") has done a study on the implementation of circuit breakers and other market safeguards across the world in 2021. It is observed from the aforesaid report and on the basis of information available in public domain that for orderliness in the marketplace on account of wild swings in the prices of stocks, various jurisdictions deploy measures ranging from call auctions to temporary trading halts in the security.

5.2. On the basis of separate study carried out by BSE/NSE, carrying out Call auctions on breach of daily price band doesn't seem to be the preferred route across jurisdictions barring one or two exceptions.

5.3. The WFE report is placed as **Annexure I**.

6. Issues with existing framework of dynamic price band

6.1. With the aforesaid principles and back testing of data as backdrop, SEBI carried out evaluation of the existing formulation around price band for scrips in equity derivatives segment in order to identify cases and scenarios which may require further strengthening. It is to be noted that some of these scenarios may be seen as a low probability event, however, it is not the probability of such scenarios materializing which is a point of evaluation rather the possibility of such scenario materializing and threatening orderly trading, being the concern. These scenarios are summarised under the following 6 sections. Views required for each of the areas are mentioned as question beneath each of the sections.

6.1.1. Section 1: Conditions precedent before flexing price band

6.1.1.1. Guiding Principle: Orderly trading

6.1.1.2. Existing Practice:

6.1.1.2.1. Dynamic price bands are flexed in the event market trends in either direction. Criteria followed by stock exchanges for flexing the price band is that a minimum of 25 trades should be executed with 5 different UCCs on each side of the trade at or above 9.90% and so on.

6.1.1.2.2. After meeting the conditions and on completion of cooling off period, the price band of the scrip is flexed. However, at the end of the cooling off period, it is not checked, as to whether or not the current market price requires the price band to be flexed to achieve a new equilibrium price.

6.1.1.3. **Illustration:**

Assume yesterday's closing price of scrip was ₹100. Today's upper price band at the start of the day is ₹110 and the same is hit at 11:30 AM. Further assume that the conditions of 25 trades and 5 UCCs is satisfied at 11:31 AM and cooling off period ends at 11:46 AM. If the scrip price at 11:46 AM is ₹104, this implies that by the end of the cooling off period, short term volatility or demand-supply imbalance in the scrip got contained as the price came well within the band after touching the upper band of ₹110. Accordingly, it may not be required to flex the upper price band as the existing price band proved sufficient. At present, however, the price band is automatically flexed to ₹115 at 11:46 AM.

6.1.1.4. Issues with existing practice:

6.1.1.4.1. The existing conditions of 25 trades and 5 UCCs on both sides prevent price band flexing on account of fat finger error or stray instance of trades. However, a question arises whether these 25 trades and 5 UCCs adequately capture the market trend for exchanges to decide flexing of price band in the direction of trend. If we increase the count of trades and UCCs significantly, this may result into longer time to satisfy such condition and the price discovery process may be impacted.

6.1.1.4.2. There is no condition on minimum number of trading members from which such trades should be executed at or above 9.90% and so on. In case of issues with systems of a particular trading member such as malfunction or cyber-attack or any mala fide at the end of the trading member etc., a series of non-genuine/fraudulent orders from different UCCs from the same trading member may result into conditions of minimum number trades and UCCs getting satisfied thereby flexing the price band of the scrip, which may not be a desirable outcome.

6.1.1.4.3. Price band is flexed in the direction of trend even if short term demand supply imbalance got dampened during cooling off period and scrip price has moved away from the boundary of price band during cooling off period.

6.1.1.5. <u>Proposal for deliberation:</u>

6.1.1.5.1. Existing preconditions of minimum number of 25 trades from 5 different UCCs on both sides may be increased, but keeping in mind that too high a value may impede price discovery process, as mentioned before.

6.1.1.5.2. Additional condition of minimum number of trading members on both sides of the trades at or above 9.90% may be added, say 3 to 5 trading members on both sides.

6.1.1.5.3. Price band to be flexed at the end of cooling off period only if the current market price of the scrip at the end of cooling off period is showing utilization of significant proportion of available price band say 70% or 80%. In the aforesaid illustration, the scrip price was ₹104 compared to yesterday's closing of ₹100 and today's upper band as ₹110 and thus utilized 40% of price band. Accordingly, price band would not be flexed. If scrip price however utilised say 70% to 80%, that is, it was at ₹107 or ₹108, at the end of cooling off period, upper price band would be flexed.

6.1.1.6. **<u>Question 1:</u>** With regard to the aforesaid, views may be provided as to:

6.1.1.6.1. What should be the value of minimum number of trades entered from minimum number of distinct UCCs and minimum number of distinct trading members at or above 9.90%, before deciding to flex the price band in the direction of market trend?

6.1.1.6.2. At what level of utilization of price band, the scrip price should be, at the end of cooling off period, for exchanges to open up the next bracket of price band for the scrip?

6.1.2. Section 2: Price band expanding on one side Vs. sliding price band moving on both sides

6.1.2.1. Guiding Principle: Orderly trading and Risk Management.

6.1.2.2. Existing Practice:

6.1.2.2.1. When dynamic price bands are flexed in the event of market trends in either direction, the price band on the other side is left untouched. Therefore, as of now, price bands become wider with each flexing.

6.1.2.2.2. For instance, let us assume yesterday's closing price was ₹100 and with 10% dynamic price band on either side, today's lower band is ₹90 and upper band is ₹110. If the upper price band is flexed twice during trading hours, each time by 5% (existing practice), then the revised upper band becomes ₹120, however the lower band for the scrip is still ₹90. This results into a much wider band causing the price risk in the scrip for the remainder of the day.

6.1.2.2.3. The practice remains same for scrip in cash market and all the futures and options contracts available in equity derivatives segment for the said underlying i.e. price bands are always expanding on one side i.e. in the direction of market trend with other end of the band remaining as it is.

6.1.2.3. Issues with existing practice:

Dynamic price bands, at present, expand in the direction of the trend. Multiple instances of intraday flexing of price band results into much wider bands than the ones at the start of the day, thereby causing price risk and volatility risk for the remainder of the day.

6.1.2.4. Proposal for deliberation:

6.1.2.4.1. Whenever the price band is flexed by say 5% in one direction, the price band on the other side should be moved in the direction of price by an equivalent percentage, thereby

resulting into price band which moves as the price of the scrip/contract moves and does not just expand in one direction. The price band in this case becomes a sliding price band with both the ends moving by an equivalent quantum.

For instance, in the above illustration, when the upper band is flexed from ₹110 to ₹115, the lower band is shifted from ₹90 to ₹95 and when the upper band is flexed from ₹115 to ₹120, the lower band is shifted from ₹95 to ₹100 etc.

6.1.2.4.2. The aforesaid, if found appropriate, would be made applicable for price band in the underlying and derivatives contracts on them i.e. futures and options contracts.

6.1.2.4.3. While the upside of such an approach is reduced price risk and better risk management, the downside of this approach is, say when the scrip/contract price moves upwards and upper band is flexed by 5% and if lower price band is accordingly moved up by 5% (proposal), the orders accepted by stock exchange previously between the old lower band and new lower band will not be executed. The same has to be appropriately intimated by stock exchanges to market participants when the price band shifts in this manner, so that clients can place their order anew, if they so desire, in the new price band.

6.1.2.4.4. Further, options contracts, depending on their moneyness (in the money, at the money or out of the money), react differently and more swiftly (in % terms) to a given movement in the underlying and undergo price band revisions more often than the underlying. If price bands are kept as sliding price band, it is envisaged that market participants may have to enter their new orders in the revised band on multiple occasions (especially around key events or near expiry of the contracts). Futures contracts, on the other hand, react linearly to movement in the underlying and may not face such issue of non-linear movement like options.

6.1.2.5. **Question 2:** With regard to the aforesaid, views may be provided as to:

6.1.2.5.1. Should the dynamic price band be expanding band (i.e. only the price band in the direction of market trend is flexed) or

sliding band (i.e. if one side is flexed, the other side is contracted by equivalent quantum)?

6.1.2.5.2. If sliding bands are envisaged, should such formulation be made applicable to only cash market scrips/futures contracts or also to the options contracts on an underlying?

6.1.3. Section 3: Uniform Cooling Off Period and Flexing Percentage

6.1.3.1. Guiding Principle: VCM / Orderly trading / Protection of interest of shareholders/Information Asymmetry

6.1.3.2. Existing Practice/ Illustration:

6.1.3.2.1. After the condition of 25 trades and 5 UCCs on both sides are met, there is a cooling off period of 15 minutes before price band is flexed. In case of extreme events when the price keeps trending in one direction, the cooling off period for all such flexing instances, at present, is uniform i.e. 15 minutes.

6.1.3.2.2. Similarly, price band is flexed in the direction of scrip price movement by 5% of yesterday's closing price. In case of extreme events when the price keeps trending in one direction, this flexing percentage remains uniformly applicable.

6.1.3.3. Issues with existing practice:

6.1.3.3.1. Cooling off period allows information to flow to a wider set of investors and provides them a window to assess the developments when the price of the scrip/contract is subject to temporary floor / ceiling. If after the cooling off period, price keeps moving in one direction, requiring multiple rounds of flexing, it may be more appropriate to provide a higher cooling off period of more than 15 minutes for market participants to assess the situation before subsequent rounds of flexing of price band. This may also act as a tool to contain volatility in the case of extreme price movement in a scrip / contract.

6.1.3.3.2. Increasing cooling off period as price keeps trending in one direction has another utility of controlling single day worst case price movement (upwards or downwards) to strengthen the risk management in the market. Trading hours at present are from 9.15 AM to 3.30 PM i.e. 375 minutes. In the worst case, if price

of the scrip keeps going completely in one direction thereby instantly hitting the upper price band and meeting the flexing criteria, say within a minute of flexing the previous price band, this could effectively mean that in approximately 16 minutes, a scrip is able to move 5% in one direction (15 minutes of cooling off plus approximately 1 minute of trading). The aforesaid can result in flexing of price band nearly 23 times in one direction effectively resulting in a worst case single day price movement of nearly 120% in a single day.

6.1.3.3.3. Similarly, on the downside as each time the price band is flexed downwards by 5% of yesterday's closing price, theoretically, in a single day, scrip price after undergoing 18 downward flexes can hit lowest possible tick size of ₹0.05. (start of the day price band of -10% followed by 18 flexes of 5% each).

6.1.3.3.4. The aforesaid illustration of extreme single day price movement may be a rare or improbable event. However, from the perspective of market stability, risk management and protecting the interest of investors, it is desirable to have safeguards against such extreme price movements. Globally, most of the exchanges impose trading halt in such scrips much before price movement of aforesaid quantum materializes in a single day.

6.1.3.3.5. Similar to the aforesaid concept of increasing cooling off period, reducing the quantum by which the price band is flexed beyond say 20% price movement in the scrip (non-derivative scrips have maximum permissible daily price band of 20%), provides a tool to control extreme market volatility and aids in containing worst case single day price movement in the scrip.

6.1.3.4. <u>Proposal for deliberation:</u>

6.1.3.4.1. As price keeps trending in one direction, say beyond 20% (non-derivative scrips have maximum permissible daily price band of 20%), cooling off period would be increased in phased manner, subject to maximum cooling off period of 1 hour and flexing percentage would be reduced in a phased manner subject to minimum flexing of 2% as part of the volatility control measures of the exchange.

6.1.3.5. Question 3:

Views may be provided with regard to the aforesaid proposal of increasing cooling off in phased manner (subject to maximum cooling off of 1 hour) and reducing flex percentage in phased manner (subject to minimum flex of 2%) as price of a scrip keeps trending in one direction during the day.

6.1.4. Section 4: Trading in options segment during cooling off period

6.1.4.1. Guiding Principle: VCM / Misalignment of prices.

6.1.4.2. Existing Practice/ Illustration:

6.1.4.2.1. During the cooling off period of 15 minutes, underlying in cash market and futures contracts in derivatives segment are under a temporary price floor / ceiling, as applicable. However, trading in options on the underlying scrip continues to happen within the price band for these options contracts.

6.1.4.2.2. Price bands for options are also dynamic in nature and exchanges follow certain rules for flexing these bands. If these conditions are met during the aforesaid cooling off period, the price band of options can get flexed in the direction of price, despite the inability of the price of the underlying scrip to move beyond its price band limits.

6.1.4.3. Issues with existing practice:

6.1.4.3.1. Options as derivative contracts derive their prices from the underlying. Further, cooling off period provides a window to market participants to assess the developments when the price of a scrip/contract is subject to temporary floor / ceiling. It may not be appropriate to allow trading in options during cooling off period without any corresponding restrictions in price band of the options during this period.

6.1.4.3.2. Moreover, with the proposal of increasing cooling off period in phased manner when price of the underlying keeps trending in one direction, it becomes more important to have a framework to have controls with regard to price band of options during cooling off period.

6.1.4.4. Proposal for deliberation:

Once scrip price touches the price band till the time the price band is flexed after the cooling off, revised temporary floor or ceiling in the price band of the options be introduced depending on the Last Traded Price ("LTP") of the options contract, as illustrated below:

6.1.4.4.1. Illustration 1:

Underlying scrip price going upwards and LTP of options contract is available when the underlying hits the upper limit of the band.

Let us assume yesterday's closing price of scrip was ₹100. Today at 11.30 AM, the upper price band of ₹110 was hit by the scrip. Let us also assume that price of call options with strike price of ₹108 on the underlying traded at the price of ₹3.00 at that time and put options with strike price of ₹112 on the underlying traded at ₹3.50 at that time.

Till the time price band in underlying is flexed to ₹115, the upper band for call options would be recomputed to its LTP i.e. ₹3.00 i.e. call options would not be allowed to trade beyond this price point. Similarly, the lower band of put options would be recomputed to its LTP i.e. ₹3.50 i.e. put options would not be allowed to trade beyond this price point.

The aforesaid revision in price band would be broadcasted to trading members by the exchange, who in turn would intimate to their clients.

Further assume that at 11:46 AM, the price band of the underlying is flexed to ₹115. The exchanges would re-compute the price band of options at this stage on account of the new price band of the underlying and the same would be broadcasted to clients and the new price range would be available for placing orders.

6.1.4.4.2. Illustration 2:

Scrip price going downwards and LTP of options contract is not available when the underlying hits the lower limit of the price band.

In line with the aforesaid proposal, as the scrip price is going down, put options would go up and a ceiling is required during cooling off period (revision of upper band during cooling off) and similarly floor is

required for call options (revision of lower band during cooling off).

However, in this case, certain options contracts did not get traded and hence do not have LTP for the day. In such a case, for the options wherein LTP is not available, the theoretical price of the options contract would become the floor (revised lower band) or ceiling (revised upper band) during the cooling off period. Exchanges already have a framework to compute theoretical price of the options contract and same could be utilized for this purpose.

6.1.4.5. <u>Question 4:</u>

Views may be provided with regard to the aforesaid proposal of putting a ceiling or floor, as applicable, on the prices of the options contract, once the underlying touches the upper or lower limit of its price band on either side.

6.1.5. <u>Section 5: Price band for scrips in equity derivatives segment having surveillance concerns e.g. Additional Surveillance Measures (ASM)</u>

6.1.5.1. Guiding Principle: Orderly trading

6.1.5.2. Existing Practice/ Illustration:

Exchanges, as first level regulators, have an important mandate of market surveillance. For scrips in the cash market, there is a framework to revise the price band of the scrip downwards and upwards as part of surveillance actions. However, for derivative scrips despite surveillance concerns, the dynamic price band combined with flexing of these bands remain fully applicable at present.

6.1.5.3. <u>Issues with existing practice:</u>

Dynamic price bands for scrips in derivative segment are flexed, even if there are surveillance related concerns in the scrip.

6.1.5.4. <u>Proposal for deliberation:</u>

6.1.5.4.1. Price bands aid in controlling volatility and provide for orderly trading. Scrips wherein there are surveillance concerns on account of findings by exchange / SEBI or in view of a

framework put in place by exchange / SEBI, a price band of say 10% may be provided at the start of the day for the scrip and futures contracts. However, these price bands would remain as hard limits for the day over the period determined by exchange / SEBI. Accordingly, for such period, there would be a daily hard band of say 10% which would not be capable of flexing intraday.

6.1.5.4.2. For options contracts, exchanges have a formulation of dynamic price band and flexing of these based on the basis of a set of rules. In case the underlying scrip price hits upper or lower limit of the band, the options contract prices would also have their Last Traded Price at that time as the ceiling or floor for the day, as applicable. Further, as mentioned in para 6.1.4.4 above, if Last Traded Prices of certain options contracts on the underlying are not available for the day when the underlying scrip price hits upper or lower limit of the band, theoretical price of the options contract at that time would become floor or ceiling, as applicable, for the day.

6.1.5.5. <u>Question 5:</u>

Views may be provided with regard to the aforesaid proposal of placing daily hard limits on the scrips/ futures contracts and corresponding price limits in options contracts in view of the surveillance related findings of exchange / SEBI or framework put in place by exchange / SEBI. Further, if such hard limits are envisaged, what should be the value of such hard limit on the daily price band?

6.1.6. <u>Section 6: Price band alignment between underlying in cash market and futures contracts on the same.</u>

6.1.6.1. Guiding Principle: Orderly trading.

6.1.6.2. Existing Practice/ Illustration:

6.1.6.2.1. Dynamic price band formulation between underlying in cash market and futures contracts on the same is identical to the effect that at the start of the day, the band is 10% of yesterday's closing price of the scrip / futures contract and flexing is also identical i.e. 5% of yesterday's closing price.

6.1.6.2.2. If the dynamic price band for a scrip is flexed after the cooling off period by the exchange, the price band for futures

contract is also flexed by the same %. It may be noted that while doing such flexing, it is not examined by the exchange as to whether or not futures contracts require flexing for continuity of price discovery process. The rationale for this is to ensure alignment of prices between the segments. Similarly, if the scrip is listed on other exchange(s), the price band is flexed on that exchange also.

6.1.6.2.3. However, if only futures contracts hit the upper or lower price band on the exchange and satisfy the conditions for flexing, the price band is flexed for that contract but the same is not flexed for the underlying in the cash market in the same exchange or other exchange(s) where the underlying scrip is traded.

6.1.6.3. <u>Issues with existing practice:</u>

As long as price band flexing between underlying in cash market and all the futures contracts on the same underlying is not carried out concurrently, there remains a possibility of misalignment of prices across segments / exchanges on account of price band formulation.

6.1.6.4. <u>Illustration:</u>

6.1.6.4.1. Consider that closing price of a scrip and its futures contract yesterday were ₹100 and ₹102 respectively. The upper limit of price band for the day for the underlying scrip is ₹110 and for futures contracts is ₹112.20. Further assume that at 11:30 AM, scrip touched the upper price band of ₹110 whereas futures contract was trading at ₹108. If, subject to the conditions precedent for flexing followed by cooling off, the upper price band in scrip is flexed to ₹115 at 11:46 AM, the upper price band for the futures contract would also be flexed concurrently by 5% of its yesterday's closing price to ₹117.30 by exchange without checking for conditions precedent in that segment. As a result, price bands for instruments in different segments do not show misalignment.

6.1.6.4.2. Now consider the reverse situation i.e. at 11:30 AM current month futures contract hit the upper price band of ₹112.20 and satisfied the conditions precedent whereas the underlying traded only at ₹108. Thus, after the cooling off period, upper price band in the futures contract would be flexed to ₹117.30, say at 11:46

AM. However, there is no automatic flexing of upper price band for the underlying scrip in cash market. So it is possible that at 11:46 AM, upper price band for the scrip remained at ₹110 and that for futures contract became ₹115, thereby resulting into misalignment of price bands.

6.1.6.5. Proposal for deliberation:

When price band is hit in either direction and conditions for flexing the price band are met in a scrip/current month futures contract on the scrip, at the end of subsequent cooling off period, price band to be flexed for the scrip and the futures contracts on this scrip across all exchanges.

6.1.6.6. Question 6:

Views may be provided with regard to the aforesaid proposal of flexing price band for the scrip and futures contracts on the scrip across all exchanges when price band is hit in either direction and conditions for flexing the price band are met in the scrip/current month futures contract on the scrip on any one exchange.

7. Public comments

In order to take into consideration, the views of various stakeholders, public comments are invited on the six specific questions/ consultation points elaborated at Para No. 6.1. of this paper in the following format:

Name of entity/ person :				
Sl. No.	**Paragraph No.**	**Reference question number/ consultation points**	**Suggestions/ comments**	**Rationale**
1	6.1.1.6.	Question 1		
2	6.1.2.5.	Question 2		
3	6.1.3.5.	Question 3		
4	6.1.4.5.	Question 4		
5	6.1.5.5.	Question 5		
6	6.1.6.6.	Question 6		
7		Any other suggestions		

It is requested that comments should reach SEBI as per the aforesaid format, latest by June 05, 2023 by e-mail to Mr. Ansuman Dev Pradhan, DGM (ansumanp@sebi.gov.in) , Mr. Darshil Bhatt, AGM (darshilb@sebi.gov.in) or Mr. Mohit Gupta, AM (mohitgupta@sebi.gov.in).