

LIMIT UP LIMIT DOWN

Highlights:

On May 31, 2012, the Securities and Exchange Commission (SEC) approved, on a pilot basis, a National Market System Plan, known as the Limit Up/Limit Down (“LULD”) Plan (“Plan”), to address extraordinary market volatility. The purpose of this Trader Update is to inform our member firm community how NYSE, NYSE MKT and NYSE Arca handle order flow sent or routed directly to our systems under the Plan.¹ Please refer to each market’s rules for complete details.² The Plan is currently operating as a pilot set to expire on April 21, 2017.

Summary:

OVERVIEW

The Plan is designed to prevent trades in NMS Stocks from occurring outside specified price bands, which are set at a percentage level above and below the average reference price of a security over the preceding five-minute period. The percentage level is determined by a security’s designation as a Tier 1 or Tier 2 security. Tier 1 comprises all securities in the S&P 500, the Russell 1000 and select Exchange Traded Products (ETPs). Tier 2 comprises all other NMS securities, except for rights and warrants, which are specifically excluded from coverage. The Plan applies during regular trading hours of 9:30 am ET - 4:00 pm ET.

CALCULATION OF PRICE BANDS

The price bands, consisting of a Lower and Upper Price Band for each NMS Stock, are calculated by the two SIPs – CTA and Nasdaq UTP. The SIPs calculate upper and lower price bands by applying a formula to a **Reference Price**, which is the arithmetic mean price of Eligible Reported Transactions over the prior five minute period. (The first Reference Price of the day is either the primary market’s opening price or the primary market’s previous day’s closing price/last sale when opening on a quote. If there is no last sale on any market for a security (i.e., a new issue) and that security opens on a quote, the NYSE, NYSE MKT and NYSE Arca will use a derived last sale provided by the Corporate Actions group in consultation with the issuer.) If no eligible trades have occurred in the prior five minutes, the previous Reference Price remains in effect. The Reference Price is updated after 30 seconds only if a new Reference price would be least 1% away from the current Reference Price.

The **Price Bands** are calculated by multiplying the current Reference Price by the applicable Percentage Parameter and then adding or subtracting that value from the Reference Price and rounded to the nearest penny.

$$\text{Price Band} = (\text{Reference Price}) \pm ((\text{Reference Price}) \times (\text{Percentage Parameter}))$$

¹ References to NYSE include NYSE MKT.

² For more detail on the Plan, go to <https://www.nyse.com/regulation/nms-plans>.

Table 1:

Tier 1 Securities (9:45 am – 3:35 pm)	
Previous Closing Price	Percentage Parameter
Greater than \$3.00	5%
\$0.75 up to and including \$3.00	20%
Less than \$0.75	Lesser of \$0.15 or 75%

Table 2:

Tier 2 Securities (9:45 am - 3:35 pm)	
Previous Closing Price	Percentage Parameter
Greater than \$3.00	10%
\$0.75 up to and including \$3.00	20%
Less than \$0.75	Lesser of \$0.15 or 75%

Price Bands are doubled during the first 15 and last 25 minutes of the regular trading day for both Tier 1 and Tier 2 Securities.

Illustration: Assume that “XYZ” is a Tier 1 security and has a previous closing price of \$25. As such, its percentage parameter would fall within the first bucket (Greater than \$3.00) of Table 1 above. Security XYZ would therefore have upper and lower price bands that are 5% greater (\$26.25) and lower (\$23.75) than that of the previous closing price, respectively. The bands would be as follow:

Upper Band	\$26.25
Closing Price	\$25.00
Lower Band	\$23.75

OPERATION OF PRICE BANDS

When the National Best Bid (Offer) is below (above) the Lower (Upper) Price Band, the SIPs disseminate the National Best Bid (Offer) with an indicator identifying it as unexecutable. Trading immediately enters a **Limit State** if the National Best Offer (Bid) *equals but does not cross* the Lower (Upper) Price Band. When a Limit State occurs, the SIPs indicate the National Best Bid (Offer) as a **Limit State Quotation**. Trading exits a Limit State if, within 15 seconds of entering the Limit State, all Limit State Quotations are executed or canceled in their entirety. If the market does not exit a Limit State within 15 seconds, the primary listing exchange declares a five-minute Trading Pause. The Trading Pause may be extended for another five minutes. Thereafter, all markets may resume trading. If a security enters a Trading Pause during the last 10 minutes of regular trading hours, the primary listing exchange will not reopen trading and will attempt to execute a closing transaction using its established closing procedures.

A **Straddle State** occurs when the National Best Bid (Offer) is below (above) the Lower (Upper) Price Band and the NMS Stock is not in a Limit State. For example, assume the Lower Price Band for an NMS Stock is \$9.50 and the Upper Price Band is \$10.50, such NMS stock would be in a Straddle State if the National Best Bid were below \$9.50, and therefore non-executable, and the National Best Offer were above \$9.50 (including a National Best Offer that could be above \$10.50). If an NMS Stock is in a Straddle State and trading in that stock deviates from normal trading characteristics, the primary listing exchange may declare a Trading Pause for that NMS Stock.

NYSE Rule 80C and NYSE Arca Rule 7.11P, discussed below, describe system operations consistent with the Plan.

NYSE RULE 80C

NYSE systems re-price or cancel buy (sell) interest that is priced or could be executed above (below) the Upper (Lower) Price Band. Any interest that is re-priced pursuant to this Rule retains its original time stamp. The NYSE will not “ack” back to the customer the re-filed price.

The NYSE re-prices or cancels certain trading interest as follows:

- **Market Orders.** A market order is executed to the extent possible at or within the Price Bands. Any unexecuted portions of a buy (sell) market order is displayed at the Upper (Lower) Price Band.
- **Limit-priced Interest.** Limit-priced interest to buy (sell) that is priced above (below) the Upper (Lower) Price Band (both displayable and non-displayable) is re-priced to the Upper (Lower) Price Band. NYSE systems also re-price resting limit-priced interest to buy (sell) to the Upper (Lower) Price Band if Price Bands move and the price of resting limit-priced interest to buy (sell) moves above (below) the Upper (Lower) Price Band.
- **IOC Orders.** An IOC order is executed to the extent possible at or within the Price Bands, with any unexecuted portion being cancelled.
- **Market Pegging Interest.** Market Pegging Interest to buy (sell) pegs to the specified pegging price or the Upper (Lower) Price Band, whichever is lower (higher).
- **Sell Short Orders.** During a Short Sale Price Test, as defined in NYSE Rule 440B(b), Short Sale Orders priced below the Lower Price Band are re-priced to the higher of the Lower Price Band or the Permitted Price, as defined in Rule 440B(e).
- **Original Order Instructions.** Any interest re-priced pursuant to these rules returns to its original order instructions for purposes of the re-opening transaction following a Trading Pause.
- **Routing away.** NYSE systems do not route buy (sell) interest to an away market displaying a sell (buy) quote that is above (below) the Upper (Lower) Price Band.

NYSE ARCA RULE 7.11

NYSE Arca systems cancel buy (sell) interest that is priced or could be executed above (below) the Upper (Lower) Price Band, unless the order contains instructions to reprice to the LULD Band (available for certain orders only as detailed below). Any interest that is re-priced pursuant to this rule will receive a new working time. NYSE Arca does not “ack” back to the customer the re-filed price.

- **Market Orders, Limit Orders and Limit IOCs.** Market orders and marketable limit orders are executed to the extent possible at or within the Price Bands. Any unexecuted portions are cancelled.
- The ETP Holder will be notified in the cancel message of the reason for the cancellation.
- **Cross Orders** with a cross price above the Upper Price Band or below the Lower Price Band will be rejected.
- **Repricing Instructions** may be entered for Limit Orders that do not include an IOC modifier.
 - Not available for Market Orders, Auction-Only Orders (MOO, LOO, MOC, LOC), Primary Only Orders, Day ISO, or any Limit Order that includes an IOC modifier, including Cross Orders.
 - Instructions to reprice included with a Primary Until 9:45 Order or Primary After 3:55 Order will only be enforced when such orders are entered on or resting on the NYSE Arca Book
 - An MPL Order that has an instruction to reprice will not cancel, but will not be repriced or be eligible to trade if the midpoint of the PBBO is below the Lower Price Band or above the Upper Price Band
 - LULD Order repricing option Fix Tag 9733/Proactive If Locked=1
- **Sell Short Orders.** During a short sale price test, a sell short order with instructions to reprice and priced below the Lower Price Band will be repriced to the higher of the Lower Price Band or the Sell Short Permitted Price. Sell short orders that are not eligible for repricing instructions will be treated as any other order pursuant to above Cancellations.
- **Routing away.** NYSE Arca systems do not route buy (sell) interest to an away market displaying a sell (buy) quote that is above (below) the Upper (Lower) Price Band, provided that the Exchange will route Primary Only Orders, Primary Until 9:45, and Primary After 3:55 Orders to the primary listing market regardless of price.

Contact Info:

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