

**CODA BLOCK** is CODA's on-demand block auction type. CODA BLOCK utilizes a multilateral, call auction price discovery model providing trading opportunities for large orders and latent liquidity which may reside outside the NBBO and therefore may execute outside the NBBO. As described below, CODA BLOCK and CODA are compliant with Rule 611 of Regulation NMS. A 30-second Pause serves as the approximate time length of the auction and order entry period during which orders are entered by subscribers into a non-displayed auction order book.

The **CODA BLOCK** auction process contains four stages:

1. Auction Initiation
2. Auction Alert & Participation
3. Auction Pricing, Share Allocation and Trade Reporting
4. Post Auction

**Auction Initiation** – A CODA BLOCK eligible order is sent to CODA and triggers the start of a CODA BLOCK auction. Only one CODA BLOCK auction can be in progress at a time for each symbol. A snapshot of the NBBO is taken at this time.

Liquidity Seeker orders can initiate CODA BLOCK during the Core Trading Session with firm orders up until 3:59:00 p.m. Eastern Time. No CODA BLOCK auctions will be initiated after that time. As with other auction types only Buy orders priced greater than the NBB and Sell/Sell Short orders priced less than the NBO upon receipt are eligible to initiate a CODA BLOCK auction.

A minimum order quantity is required to initiate CODA BLOCK based on the following criteria:

- ❖ Middle Market Capitalization or Larger (greater than \$2 billion market capitalization). Initiating order size must be at least 15,000 shares.
- ❖ Small Market Capitalization or Smaller (\$2 billion or smaller market capitalization). Initiating order size must be at least 5,000 shares.
- ❖ Odd lot orders are not accepted in CODA BLOCK auctions and will be rejected.
- ❖ Mixed lot orders are accepted in CODA BLOCK auctions, but only the round lot portion will be eligible for participation in CODA BLOCK auctions.
- ❖ Stocks priced less than \$1.00 are not eligible for CODA BLOCK and orders in these securities will be rejected.
- ❖ If the NBB is less than \$1.00 upon receipt of an initiating order, the order will be rejected.
- ❖ No CODA BLOCK auction will execute with a trade price less than \$1.00 (CODA BLOCK auction pricing is discussed below).

Following successful eligibility and CODA standard risk checks on the initiating order the “30-second” order entry period begins (discussed further under “Auction Alert & Participation” below) and no further CODA BLOCK auctions can be initiated in that symbol until the end of the current CODA BLOCK auction. All CODA BLOCK auction orders received in that symbol while a “30-second” order entry period is open are included in the existing CODA BLOCK auction for that symbol as “participating orders” (discussed further below). If the initiator cancels the order before completion of a CODA BLOCK auction, the auction and all related orders are cancelled. CODA will monitor for repeated cancelling by initiators and will address and take action as it deems necessary.

**Auction Alert & Participation** – A successful initiation of a CODA BLOCK auction is followed by the distribution of CODA BLOCK Auction Alerts and the opening of a “30-second” order entry period. CODA distributes Auction Alerts to its subscribers using its “symbol only” RFT similar to other CODA auction types. The alerts notify participants that a CODA BLOCK auction has been initiated in that symbol and is in progress.

Subscribers (both Liquidity Seekers and Liquidity Providers) can receive Auction Alerts at three distinct times, in order to accommodate the varied trading workflow needs and latency sensitivities of CODA and CODA BLOCK’s diverse subscriber community. The first of the three Auction Alerts, Phase 1 Auction Alert, is sent at the start of this stage.

Auction Alerts are distributed to participants via IOI, Instant Message (“IM”), OMS/EMS, direct FIX connections and other third party messaging platforms and networks. If any alert distribution platforms or networks require “Side” in their specification, then CODA will send both a Buy Auction Alert and a Sell Auction Alert to the platform or network to avoid disclosing the direction of the initiating order. The Auction Alerts can also include the start and stop time for the order entry period.

Orders received during the order entry period are placed in the CODA BLOCK auction order book for that symbol as participating orders. There is no time priority in the auction pricing process (allocation rules are described later in this document); therefore, a subscriber can respond to any of the three Auction Alerts at any time. CODA BLOCK enforces the following requirements on participating orders:

- ❖ Participating orders may be priced below, at, inside or above the NBBO.
- ❖ A minimum order quantity of 1,000 shares is required for a participating (responding) order.
- ❖ Managed Orders and Conditional orders are eligible for participating in CODA BLOCK auctions if they meet the aforementioned criteria.
  - If the CODA BLOCK auction is priced outside the NBBO (as described below), Managed Orders will only participate in the allocation if the order is receiving price improvement on the passive side of the NBBO.

The Phase 2 and Phase 3 Auction Alerts are designed to accommodate quantitative, algorithmic and Conditional Order subscribers. The Phase 2 Auction Alert is sent approximately 29.7 seconds after the Phase 1 Auction Alert. This time is also 300 milliseconds prior to the end of the “30-second” order entry period. Conditional order invites are sent to all eligible Conditional Orders as part of the Phase 2 Auction Alert.

The Phase 3 Auction Alert is the final Auction Alert and is sent 10 milliseconds prior to the end of the “30-second” order entry period. Managed Orders in the CODA system that are CODA BLOCK auction eligible are reserved for the auction book at this time.

The Auction Alerts are sent to participants according to the following schedule:

- ❖ Phase 1 Auction Alert: Time ~0 seconds
  - This is the start of the auction.
- ❖ Phase 2 Auction Alert: Time ~29.7 seconds (29 seconds and 700 milliseconds).
  - This is 300 milliseconds before the end of the order entry window.
- ❖ Phase 3 Auction Alert: Time ~ 29.990 seconds (29 seconds and 990 milliseconds).
  - This is 10 milliseconds before the end of the order entry window.

Participating orders in the auction order book may be entered, replaced or cancelled at any time during the order entry period. All participating orders in the CODA BLOCK auction order book are non-displayed and not executable until the end of the “30-second” order entry period. The stage is complete at the end of the “30-second” order entry period. At that time all participating orders in the auction order book are deemed firm and cannot be cancelled.

**Auction Pricing, Share Allocation and Trade Reporting** – During this stage the CODA BLOCK auction matching logic determines the price for the auction, the allocation of shares to each participant, and the sending of trade reports as required to a TRF. CODA rechecks the NBBO to establish the current NBBO for pricing and allocation as well as identifying the protected markets “top of book” should the CODA BLOCK auction be priced outside the NBBO requiring CODA to fulfill any Rule 611 of Regulation NMS obligations.

All CODA BLOCK auction eligible orders are aggregated in the CODA BLOCK auction order book at their most aggressive (i.e., highest priced Buy orders/lowest priced Sell/Sell Short orders) price levels. Since a CODA BLOCK auction is a multilateral trading environment that allows multiple buy orders and multiple sell/sell short orders to compete in a single auction, there may be multiple orders to buy and sell up to or down to any given price level.

**Pricing:** CODA BLOCK's auction pricing logic determines the single price where the most aggregated buy shares can trade with the most aggregated sell/sell short shares while taking into consideration all of the following:

1. All Limit prices.
2. All Pegged Orders, the limit price on the pegged orders and any peg offset value specified on the order (Pegged orders are pegged to the NBBO snapshot taken at the end of the order entry period).
3. Minimum Fill Quantity instructions (CODA BLOCK satisfies Minimum Fill Quantity instructions)
  - a. Unless subscriber specifies another value on the order, CODA BLOCK enforces a default 100 share minimum fill quantity instruction on all initiating and participating orders less than 50,000 shares.
  - b. CODA BLOCK enforces a default 10% Block Order Minimum Fill Quantity on initiating and participating orders of 50,000 shares or greater unless the subscriber specifies its own minimum fill quantity value on the order.
4. Maximum contra is not supported in CODA BLOCK.
5. Self-trade prevention is not supported in CODA BLOCK, but is actively monitored by CODA. CODA addresses self-trade concerns with subscribers directly as needed.
6. CODA BLOCK's Passive Order Rule ("POR")
7. Only applied when the auction price will be outside the NBBO.
8. Designed to prevent an order that is small in size and passive in price from having an undue influence on the auction trade price (when compared to the aggregate share volume of orders on the passive side of the auction trade).
9. The POR establishes a threshold to determine which, if any, passive orders should be excluded based on the distance from the NBBO midpoint of the volume weighted average price of all orders that would be included on the passive side of the auction trade.
10. CODA BLOCK's Liquidity Protection Rule ("LPR")
  - a. Only applied when the auction price will be outside the NBBO.
  - b. Designed to prevent an auction trade from executing at an unreasonable distance outside the spread given the size of the execution and the liquidity profile of the symbol.

- c. The LPR uses an equation that is calibrated for each symbol against its historical trade data to determine a typical relationship between notional turnover and price variance. This equation takes the auction trade size as an input and returns the maximum distance the LPR will allow a trade of that size to be executed outside the spread as an output. If the auction trade price would be outside of that threshold, the orders passively priced outside of that threshold are deemed ineligible and the auction is repriced and reallocated.
11. If CODA BLOCK determines that the maximum number of shares that can trade is equal at multiple price levels, CODA BLOCK prices the auction at the price where the most shares can trade that is closest to the NBBO midpoint from the snapshot taken at the end of the order entry period.
12. **Trade Size Requirements:** The CODA BLOCK auction trade size must satisfy CODA BLOCK Trade Size Requirements as follows:
13. CODA BLOCK auctions with an execution price at or within the NBBO
  - a. Middle Market Capitalization or Larger (greater than \$2 billion market capitalization): The Auction trade size minimum is 5,000 shares. If the CODA BLOCK auction price and share allocation results in an auction trade that is less than 5,000 shares, the CODA BLOCK auction and all related orders are canceled.
  - b. Small Market Capitalization or Smaller (\$2 billion or smaller market capitalization): The Auction trade size minimum is 2,500 shares. If the CODA BLOCK auction price and share allocation results in an auction trade that is less than 2,500 shares, the CODA BLOCK auction and all related orders are canceled.
14. CODA BLOCK auctions with an execution price outside the NBBO
  - a. Middle Market Capitalization or Larger (greater than \$2 billion market capitalization): The Auction trade size minimum is 15,000 shares. If the CODA BLOCK auction price and share allocation results in an auction trade which is less than 15,000 shares, the CODA BLOCK reprices the auction without the passively priced orders in the auction book to determine if a trade can occur at or within the NBBO. If not, the CODA BLOCK auction and all related orders are canceled.
  - b. Small Market Capitalization or Smaller (\$2 billion or smaller market capitalization): The Auction trade size minimum is 5,000 shares. If the CODA BLOCK auction price and share allocation results in an auction trade which is less than 5,000 shares, the CODA BLOCK reprices the auction without the passively priced orders in the auction book to determine if a trade can occur at or within the NBBO. If not, the CODA BLOCK auction and all related orders are canceled.

15. If CODA's protected markets "top of book" snapshot shows more shares available in aggregate at the protected markets "top of book" than the pending CODA BLOCK auction trade size, then CODA, if possible, will reprice and reallocate the CODA BLOCK auction, not including the passively priced orders outside the NBBO, and price the auction at or inside the NBBO. If not possible, the CODA BLOCK auction and all related orders in the auction are cancelled.
16. If CODA BLOCK Trade Size Requirements are satisfied the allocation process is effected as described below.
17. **Primary Allocation:** If an initiating or participating order is priced at or through the auction trade price, the order will be allocated shares from the auction order book as follows:
18. The initiating order receives 100% allocation priority.
  - a. If the initiating order's limit price, minimum fill quantity or other order instruction prevents it from trading at the auction's trade price, then the initiating order will not be included in the allocation process. (If an initiating order is not included in the CODA BLOCK auction allocation process due to its limit price or other order instructions, it will not result in the cancelation of the auction.)
19. Participating orders receive a quantity weighted pro-rata allocation.
  - a. If a participating order's limit price, minimum fill quantity or other order instruction prevents it from trading at the auction's trade price, then the participating order will not be included in the allocation process.
  - b. Multiple orders from the same subscriber on the same side are not aggregated for pro-rata allocation and calculation purposes.
20. If the auction price is outside the NBBO, then Rule 611 of Regulation NMS Trade Through requirements are triggered. In these cases, CODA BLOCK will reduce the number of shares allocated to CODA BLOCK participants by the number of shares shown as protected "top of book" according to Rule 611 of Regulation and NMS and CODA BLOCK's NBBO snapshot. CODA will route orders outside CODA to satisfy the requirements of Rule 611 of Regulation NMS in an agency capacity. Any shares filled at the protected prices will be allocated according to the "Secondary Allocation" described below.
21. The primary allocation process will not allocate shares in mixed or odd lots. If the final 100 shares need to be allocated to one participating order while there are several participating orders in the CODA BLOCK auction order book, the final 100 shares are allocated to the participating order based on price/time priority (price and time stamp on new order receipt).

**TRF Trade Reporting:** Once the auction trade price and the primary allocation is determined, a trade report is generated as a single price and a single trade execution. This is the media print to the TRF. CODA sends the trade report to a TRF at this time along with any required Intermarket Sweep Orders ("ISO") (described below).

**Regulation NMS Rule 611 ISO Sweep (if necessary):** To comply with Rule 611 of Regulation NMS, if the auction trade price is outside the NBBO, CODA will route ISOs to access the liquidity deemed as protected markets “top of book” according to CODA’s “protected market” snapshot. CODA will send ISO orders to the protected markets in an agency capacity; therefore, the CODA BLOCK auction trade size may be adjusted as necessary and to comply with Rule 611 of Regulation NMS. The initiator’s 100% allocation priority from the primary allocation is maintained during any auction trade size adjustment. Fills for participating orders are adjusted on a volume weighted pro-rata basis in necessary. If an auction trade size adjustment would result in a violation of CODA BLOCK’s auction Trade Size Requirement then CODA, if possible, will reprice and reallocate the CODA BLOCK auction, not including the passively priced orders outside the NBBO, and price the auction at or inside the NBBO. Should that not be possible, the CODA BLOCK auction and all related orders in the auction are cancelled. The ISO order(s) to the protected markets and the auction trade print to the TRF are sent contemporaneously.

**Secondary Allocation (if necessary):** To comply with Rule 611 of Regulation NMS, if CODA receives full or partial fills on any of the ISO orders, the filled shares will be allocated on a quantity weighted pro-rata basis to the aggressively priced orders (i.e., Buy orders in a CODA BLOCK auction with an auction trade price greater than NBO/Sell orders in a CODA BLOCK auction with an auction trader price less than NBB) that received allocations in the auction (which may include the initiator).

**Post Auction** – Immediately after the auction price, share allocation, and TRF reporting has been completed:

- ❖ Subscriber execution reports:
  - a. Subscribers receiving fills from CODA BLOCK will receive one fill at a single price. That fill price reflects the auction price unless the participant receives secondary allocation shares as described above. Participants receiving secondary allocation shares in addition to primary allocation shares will receive a single fill at the average price.
  
- ❖ Post auction residual processing:
  - b. All unfilled or partially filled IOC orders are cancelled back to the participant.
  - c. Day orders may remain active as Managed Orders as follows:
    - i. If an initiating or participating order received in response to an Auction Alert has residual quantity, it is eligible to interact with future CODA BLOCK auctions, but not eligible to interact with other CODA auction types.
    - ii. If the remaining quantity on a CODA BLOCK auction Day order is less than 1,000 shares, then CODA BLOCK will cancel the order.
    - iii. All CODA BLOCK auction orders that do remain active as Managed Orders will maintain the 100 share minimum fill quantity or 10% block minimum fill quantity (previously described) unless another value is specified by the subscriber.

- d. Conditional Orders that send Day orders as a firm up to a CODA BLOCK auction alert/invite are cancelled after the auction.
  - e. Managed Orders (not designated as CODA BLOCK-only) that were included in a CODA BLOCK auction will remain live and active as Managed Orders in CODA.
- ❖ Clearance and settlement – CODA BLOCK’s clearing and settlement procedures are consistent with other CODA auction types.

At the completion or cancellation of a CODA BLOCK auction, the symbol is again available for initiation of a new CODA BLOCK auction.

**CODA BLOCK accepts and handles the following Order Types from Liquidity Seekers:**

- ❖ **Market Orders:** Market orders are not accepted in CODA BLOCK auctions and will be rejected.
- ❖ **Limit Orders:** Limit orders are handled similarly to limit orders in CODA’s other auction types.
- ❖ **Pegged Orders:** Market, primary and midpoint pegged orders are all accepted and are handled similarly to pegged orders in CODA’s other auction types. Peg Offset may also be used as described herein and in the CODA FIX specifications for Market and Primary Pegged Orders.
- ❖ **Managed Orders:** Managed Orders greater than 1,000 shares and residing in the CODA system are eligible to interact with CODA BLOCK auctions. Managed Orders are reserved as participating orders in a CODA BLOCK auction during the Phase 3 Auction Alert. If the CODA BLOCK auction is priced outside the NBBO, Managed Orders will only participate if they are receiving price improvement and on the passive side of the NBBO.
- ❖ **Conditional Orders:** A Conditional Order resting in CODA can only participate (not initiate) in CODA BLOCK auctions. Conditional Order invites will include an indication that the invite is for a CODA BLOCK auction. CODA BLOCK auction Conditional Order invites will be sent to all eligible Conditional Orders in that symbol regardless of side, size and price of the initiating order. As with all participating orders, Conditional Order “firm up” orders submitted to a CODA BLOCK auction must be at least 1,000 shares to be eligible. Conditional Order “firm up” orders must be Limit or Pegged Orders (Market orders will be rejected). Conditional Orders whose “firm up” orders are submitted to a CODA BLOCK auction are treated with the same priorities and on the same basis as other participating orders. Due to the multilateral matching rules of CODA BLOCK, Conditional Orders and their subsequent “firm up” orders may not participate in the allocation process due to their limit price, minimum fill quantity or other order instructions even following receipt of an invite. As a result of the symbol-only nature of the CODA BLOCK Conditional Order invite, subscribers may choose to not submit a

Conditional Order "firm up" order. Any unfilled shares on a firm up order will be cancelled back to the subscriber at the completion of the auction.

**CODA BLOCK accepts and handles the following TIF instructions from Liquidity Seekers:**

- ❖ **IOC Orders:** An IOC order can initiate or participate in a CODA BLOCK auction. If unfilled upon completion of the auction, it will be returned immediately to the subscriber. IOC responses to CODA BLOCK auctions are live until completion of the auction or cancelled.
- ❖ **Day Orders:** A Day Order can initiate or participate in a CODA BLOCK auction and upon completion of the auction, any order with residual shares will rest in CODA as a Managed Order, eligible to participate in future CODA BLOCK auctions or until canceled by subscriber.
- ❖ **Managed Orders:** As described previously herein.

**CODA BLOCK accepts and handles Liquidity Provider orders as follows:**

- ❖ CODA BLOCK allows Liquidity Providers to generate firm IOC orders in response to liquidity-seeking order flow. When responding to Auction Alerts, the Liquidity Provider responses remain tagged as IOC; however, they are Paused for the full length of the auction in order for CODA BLOCK to identify and complete the price discovery process.
- ❖ Liquidity Providers may send Pegged Orders, with or without peg offset, as previously described for Liquidity Seekers.
- ❖ Liquidity Providers may send orders with discretion offset to provide additional price improvement to their orders. Discretion offset values may be no smaller than \$0.01.
- ❖ At the completion of any CODA BLOCK auction, unfilled Liquidity Provider responses are cancelled. Liquidity Providers may only enter orders when responding to a RFT/Auction Alert. All Liquidity Provider orders are IOC and are not eligible for routing via CODA's service bureau / agency routing broker functionality. If Liquidity Providers send Day orders they will be treated as IOC as described above.

Note: In an effort to focus this document entirely on CODA Block the language has been slightly modified from CODA Markets' full Form ATS on file with the U.S. Securities and Exchange Commission.