US Equities
Auction Process

Version 1.2.4

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Contents

1   Introduction

1.1   Overview

The BATS US Equities Auction Process provides electronic price discovery mechanisms that efficiently match orders in BATS listed securities at a single price using a Dutch auction. These auctions enable BZX Exchange Members to execute against on-open and on-close interest at BATS. They also allow for Member participation in BATS Corporate IPOs, Exchange Traded Product (ETP) new issues and auctions resulting from security halts. During the auction process, BATS will calculate and disseminate current price and size information, as described below.

1.2   Securities Eligible

Only BATS listed securities are eligible for BATS Auctions. Listings on BATS will be added to the Opening and Closing Auctions either after the IPO/New Issue Auction or after the listing has transferred to BATS from another listing exchange. On-Open and On-Close orders submitted for non-BATS listed securities will be rejected.

1.3   Time Zone

Note that all times referenced within this document are Eastern Time (ET).

1.4   Acronyms

ETP: Exchange Traded Product

IPO: Initial Public Offering

LLOC: Late-Limit-On-Close

LLOO: Late-Limit-On-Open

LOC: Limit-On-Close

LOO: Limit-On-Open

MOC: Market-On-Close

MOO: Market-On-Open

RHO: Regular Hours Only

1.5   Definitions

References to terms defined in this section will be italicized and underlined within the document.

ZBBO: The best displayed bid and offer on the BATS BZX Exchange. 'Z' corresponds to the letter identifying BZX on the consolidated tapes.

Eligible Auction Orders: On-Open and On-Close orders that are entered prior to the cut-off or Late-Limit orders entered after the cut-off for an Opening/Closing Auction. All orders entered prior to the auction match for an IPO/New Issue/Halt Auction.

Final Last Sale Eligible Trade: This will be the last trade during regular market hours (9:30AM – 4PM) on the BATS BZX Exchange if the trade was executed within the last one second prior to either the closing auction or trading in the security being halted/paused. Otherwise, the last trade reported to the Consolidated Tape and received by BATS during regular trading hours and, where applicable, prior to trading in the security being halted/paused will be used. If there is no qualifying *Final Last Sale Eligible Trade* for the current day, the official previous closing price will be used.

Volume Based Tie Breaker: The midpoint of the ZBBO. In the event there is no ZBBO, the NBBO will be used if there is at least one limit order on the BZX Exchange book. In the event that there is no ZBBO and also either no NBBO or no limit orders on the BZX Exchange book, this will be the price of the *Final Last Sale Eligible Trade*.

Collar Price Range: 10% of the *Volume Based Tie Breaker* below the ZBB or above the ZBO. In the event there is no ZBBO, the NBBO will be used if there is at least one limit order on the BZX Exchange book. In the event that there is no ZBBO and also either no NBBO or no limit orders on the BZX Exchange book, this will be the price of the *Final Last Sale Eligible Trade*.

2 BATS Auction Information

BATS disseminates BATS Auction information **every five seconds** between 9:28 and 9:30 a.m. for the Opening Auction, between 3:55 and 4:00 p.m. for the Closing Auction, and during a defined Quote-Only period for Halt/IPO/New Issue Auctions. BATS Auction data is available to subscribers of BATS TCP PITCH data feed and BATS Auction Feed and is also made available to other market participants by various market data vendors, maximizing transparency for all investors.

BATS Auction information will also be made available on the BATS public web-site.

2.1 Quote-Only Period

The default Quote-Only period will begin 5 minutes before Halt Re-Open Auctions, 15 minutes before IPO Auctions, and 90 minutes before New Issue Auctions for ETPs plus a short random period to prevent gaming. Situations that can result in the Quote-Only period being extended include, but are not limited to:

> ➢ Unmatched Market Order Shares (automatic)
> ➢ Legitimate Underwriter Request (manual, IPO/New Issue only)
> ➢ Volatility (automatic 5 minute (IPO/New Issue) or 1 minute (Halt) extension for an *Indicative Price* movement that is the greater of 10% or 50 cents in the 15 second window prior to the auction match)

During the Quote-Only period, BATS will begin accepting orders and disseminating indicative prices and BATS Auction information in the subject security. Entered orders can be cancelled and no executions in the subject security will occur until the auction has completed.

2.2 Messages

BATS Auction information to be disseminated during a BATS Auction is as follows.

Time: Message event time.

Security: Symbol of the subject security.

Auction Type: O-Opening Auction; C-Closing Auction; H-Auction for Halt; I-Auction for IPO/New Issue

Reference Price: The *Reference Price* is *based upon Eligible Auction Orders only.* The price is calculated at or within the *Reference Price Range* for the security. The *Reference Price* is set to the price that maximizes the shares associated with the lesser of the *Reference Buy Shares* and the *Reference Sell Shares* (as determined at each price level within the *Reference Price Range*), that minimizes the absolute difference between *Reference Buy Shares* and the *Reference Sell Shares*, and minimizes the distance from the *Volume Based Tie Breaker*. Shares of *Eligible Auction Orders* may be unmatched at the Reference Price.

Reference Price Range: The ZBBO, including visible orders only. In the event there is no ZBBO, the NBBO will be used if there is at least one limit order on the BZX Exchange book. In the event that there is no ZBBO and also either no NBBO or no limit orders on the BZX Exchange book, this will be the price of the *Final Last Sale Eligible Trade*. The *Reference Price Range* is used only for the purpose of calculating the *Reference Price* and will not be disseminated as part of the BATS Auction information.

Reference Buy Shares: The total number of shares associated with buy-side *Eligible Auction Orders* that are priced equal to or greater than the *Reference Price*.

Reference Sell Shares: The total number of shares associated with sell-side *Eligible Auction Orders* that are priced equal to or less than the *Reference Price*.

Indicative Price: The price at which the auction book and the continuous book would match. Shares in the auction book and continuous book may be unmatched at the Indicative Price.

Auction Only Price: The price at which the auction book would match using **only** *Eligible Auction Orders*. In the event there is no price at which the auction book would match, the value will be zero. Shares in the auction book may be unmatched at the Auction Only Price.

3   Opening/Closing Auction

The BATS Opening/Closing Auction has been designed to efficiently maximize the number of shares executed at a single price for securities during the regular market open/close. In the event of a volume based tie at multiple price levels, the auction price will be determined by the *Volume Based Tie Breaker*. Additionally, Opening/Closing Auction prices will be collared such that they are within the *Collar Price Range* as measured immediately prior to the conclusion of the auction.

During the Opening and Closing Auction BATS disseminates BATS Auction information to market participants via PITCH and the BATS Auction Feed. BATS Auction information contains valuable details about opening and closing orders as well as relevant pricing information for a security.

When the Opening/Closing Auction takes place, the BATS continuous book will be brought together with the opening/closing book to create a single opening/closing price for each security. Once the auction is complete, any On-Open/On-Close orders that are unable to participate in the auction will be cancelled as will unexecuted Day and GTC orders at the Closing Auction. All other unexecuted orders will be released to the continuous book for normal processing.

If a halt is disseminated in a BATS listed security prior to the Opening or Closing Auction all orders on the Opening and Closing auction book will remain open. Members may cancel open auction orders, but may not submit new On-Open/On-Close orders for the halted security. If the halt persists through the Opening or Closing cutoff time all live On-Open/On-Close orders will be cancelled for at the cutoff time.

3.1   BATS Official Opening Price

Upon completion of the BATS Opening Auction for BATS listed securities, the BATS Official Opening Price for the security will be disseminated to the consolidated tape along with a bulk execution. The BATS Official Opening Price will be represented by a sale condition code of 'O' (Market Center Opening Trade).

If an Opening Auction results in an odd lot execution the BATS Official Opening Price will be the price of the auction. However, the execution will be represented by a sale condition code of 'Q' (Market Center Official Open).

If an issue does not have an Opening Auction Price (e.g. there is insufficient interest to open the security), the BATS Official Opening Price will be the price of the *Final Last Sale Eligible Trade*, which will be the official previous closing price and will be represented by a sale condition code of 'Q' (Market Center Official Open).

3.2   BATS Official Closing Price

Upon completion of the BATS Closing Auction, the BATS Official Closing Price for BATS listed securities will be disseminated to the consolidated tape along with a bulk execution. The BATS

Official Closing Price will be represented by a sale condition code of '6' (Market Center Closing Trade).

If a Closing Auction results in an odd lot execution the BATS Official Closing Price will be the price of the auction. However, the execution will be represented by a sale condition code of 'M' (Market Center Official Close).

If an issue does not have a Closing Auction Price (e.g. there is insufficient interest to conduct a closing auction), the BATS Official Closing Price will be the price of the *Final Last Sale Eligible Trade* and will be represented by a sale condition code of 'M' (Market Center Official Close).

3.3   BATS Opening and Closing Auction Times

Opening Auction	Closing Auction
8:00 a.m. – The BATS Pre-market Trading session begins	3:55 p.m. – Dissemination of Closing Auction information begins. MOC/LOC orders are cut-off and LLOC are accepted at this time.
9:28 a.m. – Dissemination of Opening Auction information begins. MOO/LOO orders are cut-off and LLOO orders are accepted at this time.	4:00 p.m. – The Closing Auction Match occurs.
9:30 a.m. – The Opening Auction Match occurs.	5:00 p.m. – The BATS Post-market Trading session ends.

3.4   Order Types

3.4.1   Regular Market and Limit Orders

Executable from 8:00 a.m. to 5:00 p.m., including during the Opening/Closing Auction. Includes Day, GTC, GTX, RHO (Regular Hours Only) and Immediate Or Cancel (IOC) orders. At the time of an auction match BATS will not honor the MinQty, Discretion, Post Only or Match Trade Prevention (MTP) attributes on a regular market or limit order; however, these attributes will be re-applied to the order immediately following the auction. An imbalance only order is not an available order type, and imbalance only orders are never accepted or executed by BATS.

3.4.2   Routable Orders

Regular Hours Only orders may be marked as routable. At the conclusion of an Opening Auction, a routable RHO order will be added to the BATS continuous book. If the routable order has Re-Route enabled, the order will be routed out when an away market locks the order.

3.4.3   On-Open Orders

Specifically request an execution at the opening price. Executable only in the Opening Auction. Can be Limit-On-Open (LOO) or Market-On-Open (MOO).

LOO and MOO orders must be received prior to 9:28 a.m. to guarantee eligibility for participation in the Opening Auction. LOO and MOO orders received after 9:28 a.m. will be rejected. On-Open orders cannot be cancelled between 9:28 and 9:30 a.m.

3.4.4   On-Close Orders

Specifically request an execution at the closing price. Executable only in the Closing Auction. Can be Limit-On-Close (LOC) or Market-On-Close (MOC). LOC and MOC orders must be received prior to 3:55 p.m. to guarantee eligibility for participation in the Closing Auction. LOC and MOC orders received after 3:55 p.m. will be rejected. On-Close orders cannot be cancelled between 3:55 p.m. and 4:00 p.m.

3.4.5   Late Orders

Specifically request an execution at the open/closing price. Late-Limit-On-Open/On-Close orders differ from a standard On-Open/On-Close order in that at the time of entry, the effective price is set to be no more aggressive than the ZBB for bids and the ZBO for offers. As the ZBBO changes, the effective price will be adjusted to be more aggressive (to a defined limit price), but will never be adjusted to a less aggressive effective price. In the event there is no ZBBO (i.e. there is only interest on one side or there is only market order interest), the NBBO will be used to constrain effective price. If there is no NBBO, the Late order will assume its full limit price.

The effective price is the limit price that will be considered for the order at the time calculations occur for the _Reference Price_, _Indicative Price_ and the _Auction Only Price_.

3.4.5.1   Late-Limit-On-Open Orders
Executable only in the Opening Auction.

In an Opening Auction, Late-Limit-On-Open (LLOO) orders must be received between 9:28 and 9:30 a.m. to guarantee eligibility for participation in the Opening Auction. LLOO orders received before 9:28 a.m. or after 9:30 a.m. will be rejected. LLOO orders cannot be cancelled between 9:28 and 9:30 a.m.

3.4.5.2   Late-Limit-On-Close Orders
Executable only in the Closing Auction, Late-Limit-On-Close (LLOC) orders must be received between 3:55 and 4:00 p.m. to guarantee eligibility for participation in the Closing Auction. LLOC orders received before 3:55 p.m. or after 4:00 p.m. will be rejected. LLOC orders cannot be cancelled between 3:55 and 4:00 p.m.

3.4.6   Regular Hours Only Orders

The Regular Hours Only (RHO) order will only be accepted for BATS listed securities between 8:00 a.m. and 4:00 p.m.

Market RHO orders will be rejected between 9:28 a.m. and 9:30 a.m. Limit RHO orders will be accepted between 9:28 a.m. and 9:30 a.m. and will behave as Late-Limit-On-Open Orders for the Opening Auction. Additionally, limit and market RHO orders cannot be cancelled between 9:28 a.m. and 9:30 a.m.

Not executable during pre/post-market hours, RHO orders will be executable in the Opening, Closing and in IPO/New Issue/Halt Auctions. Unfilled shares remaining after participation in the

Opening Auction will be transferred to the continuous book. Unfilled shares remaining on the continuous book at the Closing Auction will participate in the Closing Auction. Unfilled shares remaining at the conclusion of the Closing Auction will be cancelled.

3.4.7 Order Entry Reference

Order Type	BOE Field (FIX Tag)	
Market-On-Open (MOO)	OrdType (40) = 1 (*Market*) RoutingInst (9303) = B (*BZX Only*)	Time in Force (59) = 2 (*At the open*)
Market-On-Close (MOC)		Time in Force (59) = 7 (*At the close*)
Limit-On-Open (LOO)	OrdType (40) = 2 (*Limit*) RoutingInst (9303) = B (*BZX Only*) Price (44) = [price]	Time in Force (59) = 2 (*At the open*)
Limit-On-Close (LOC)		Time in Force (59) = 7 (*At the close*)
Late-Limit-On-Open (LLOO)		Time in Force (59) = 2 (*At the open*) ExecInst (18) = r (*Late*)
Late-Limit-On-Close (LLOC)		Time in Force (59) = 7 (*At the close*) ExecInst (18) = r (*Late*)
Regular-Hours-Only (RHO)	Time in Force (59) = R (*Regular Hours Only*)	

Any auction order with a non-zero MinQty, Discretion, or MaxFloor will be rejected. In addition, auction orders with OrdType (40) = P or RoutingInst (9303) = P (BATS Only Post Only) will also be rejected.

3.4.8 Cancel On Disconnect

BATS will offer Members 3 options for cancelling orders as a result of a session disconnect:

1. Cancel Continuous Book Orders Only (default)
2. Cancel All Open Orders (continuous books and On-Open, On-Close and Late orders)*
3. Do Not Cancel Any Open Orders

* If disconnect occurs during the cut-off period for an auction, On-Open, On-Close and Late orders that are to participate in the auction will not be cancelled.

To change the Cancel on Disconnect setting for any order entry sessions, contact the BATS Trade Desk.

3.5 Order Priority

3.5.1 Opening Auction Execution Priority

1. MOO and market RHO orders received in time priority.
2. **Limit/LOO/LLOO** orders <u>priced at or more aggressively than the official auction price</u>. Regular limit orders may include display, hidden and reserve orders. Price/time priority of the specified limit (effective price for LLOO, not ultimate target price) will be considered and hidden followed by reserve size for each price level will be executed after displayed liquidity prior to moving to the next price level.

3.5.2 Closing Auction Execution Priority

1. MOC orders received in time priority.
2. Limit/LOC/LLOC orders <u>priced at or more aggressively than the official auction price</u>. Regular limit orders may include display, hidden and reserve orders. Price/time priority of the specified limit (effective price for LLOC, not ultimate target price) will be considered and hidden followed by reserve size for each price level will be executed after displayed liquidity prior to moving to the next price level.

3.6 Delayed Auction

In the event of systemic issues at BATS at the time of an Opening/Closing auction, BATS reserves the right to delay the cut-off and auction match time OR to specify that no auction will occur. Should no auction occur, the price of the *Final Last Sale Eligible Trade* will be used for the BATS Official Opening or Closing Price.

4   IPO/New Issue/Halt Auction

The BATS IPO/New Issue/Halt Auction provides a mechanism that has been designed to allow Members to match a maximum number of shares at a single price for new issues and securities coming out of a trading halt/pause based on supply and demand.

BATS will disseminate a halt for new issues at 7:30 a.m. ET on the morning of the IPO/New Issue Auction. In addition, an administrative message will be published to the consolidated tape on the morning of the IPO/New Issue Auction for a new issue. This administrative message will contain information about the issue price and the expected time of the IPO/New Issue Auction.

During an IPO/New Issue/Halt Auction BATS disseminates BATS Auction information to market participants via PITCH and BATS Auction Feed. BATS Auction information contains valuable details about IPO/New Issue/Halt orders as well as relevant pricing information of new issues and securities coming out of a trading halt/pause. Note that the _Reference Price_ for an IPO/New Issue/Halt Auction will never take the ZBBO or NBBO into account. Additionally, the Buy Shares and Sell Shares will show the same value during an IPO/New Issue/Halt Auction. This allows market participants to determine the number of matched shares without providing information about potential differences between Buy and Sell Shares at the _Reference Price_.

In the event of a volume based tie at multiple price levels, the price level closest to the issuing price (this will be the issuing price itself when the issuing price is in between the price levels creating the volume based tie) will be used in an IPO Auction. The price closest to the price of the _Final Last Sale Eligible Trade_ will be used for tie breakers during a Halt Auction. In the event that there are no limit orders on the BZX Exchange book, an IPO/New Issue Auction and a Halt Auction will occur at the issuing price or the _Final Last Sale Eligible Trade_, respectively.

Note that IOC orders received during an IPO/New Issue/Halt auction will not be cancelled back until they have been processed in the auction or they have been explicitly cancelled by a Member. Such IOC orders that are not filled in the auction will be cancelled at the conclusion of the auction.

4.1   Order Types

4.1.1   Regular Market and Limit Orders

Executable from IPO/New Issue/Halt Auction time to 4:00 p.m. (Day and GTC orders) and 5:00 p.m. (GTX and IOC orders). Available for entering during the auction. Day and GTC/GTX orders will be displayed during the Quote-Only period and will be included in the auction. Market and IOC orders will be queued until the auction match and will be reflected in BATS Auction information. An imbalance only order is not an available order type, and imbalance only orders are never accepted or executed by BATS.

4.1.2   Routable Orders

Limit and Regular Hours Only orders may be marked as routable. At the conclusion of an auction, a routable order will be added to the BATS continuous book. If the routable order has Re-Route enabled, the order will be routed out when an away market locks the order.

4.1.3 On-Open Orders

Executable only in the IPO/New Issue Auction. LOO and MOO orders will be treated as standard limit and standard market orders, respectively.

LOO and MOO orders may be entered at any time prior to an IPO/New Issue Auction. Unfilled shares remaining from LOO and MOO orders at the conclusion of the auction will be cancelled.

4.1.4 On-Close Orders

Executable only in the Closing Auction. Can be Limit-On-Close (LOC) or Market-On-Close (MOC). LOC and MOC orders received prior to the start of the IPO/New Issue Auction quoting period will be rejected.

LOC and MOC orders must be received prior to 3:55 p.m. to guarantee eligibility for participation in the Closing Auction. LOC and MOC orders received after 3:55 p.m. will be rejected. On-Close orders cannot be cancelled between 3:55 p.m. and 4:00 p.m.

4.1.5 Late-Limit-On-Open Orders

Executable only in the IPO/New Issue Auction, LLOO orders will be treated as standard limit orders.

LLOO orders may be entered at any time prior to an IPO/New Issue Auction. Unfilled shares remaining from LLOO orders at the conclusion of the auction will be cancelled.

4.1.6 Regular Hours Only Orders

Executable in both IPO/New Issue and Halt Auctions that occur during regular market hours, limit RHO and market RHO orders will be treated as standard limit and standard market orders, respectively.

RHO orders will only be accepted for BATS listed securities between 8:00 a.m. and 4:00 p.m.

Unfilled shares remaining from limit RHO orders after participation in an IPO/New Issue/Halt Auction will be transferred to the continuous book.

4.2 Execution Priority

1. Regular market and MOO orders received prior to the auction will be executed in time priority.

2. Limit, LOO and LLOO orders <u>priced at or more aggressively than the auction price</u> received prior to the auction match. Regular limit orders may include display, hidden and reserve orders. Price/time priority of the specified limit will be considered and hidden followed by reserve size for each price level will be executed after displayed liquidity prior to moving to the next price level.

4.3 BATS Official IPO/New Issue Opening Price

Upon completion of an IPO/New Issue Auction the BATS Official Opening Price for the newly issued security will be disseminated to the consolidated tape along with a bulk execution. The BATS Official IPO/New Issue Opening Price will be represented by a sale condition code of 'O' (Market Center Opening Trade). This is the same code used for the standard BATS Official Opening Price disseminated at market open.

IPO/New Issue auctions that result in an odd lot execution will be allowed. In these cases the BATS Official IPO/New Issue Opening Price will be the price that resulted from the IPO/New Issue auction. The BATS Official Opening Price will be represented by a sale condition code of 'Q' (Market Center Official Open).

5 Short Sale Order Handling

Opening Auction: Short sale orders for covered securities subject to Rule 201 of Regulation SHO that are in an active short sale circuit breaker will only be eligible for execution at a price above the National Best Bid (NBB) at the time of the auction match.

Halt Auction: Short sale orders for covered securities subject to Rule 201 of Regulation SHO that are in an active short sale circuit breaker will only be eligible for execution at a price above the last National Best Bid (NBB) prior to the halt.

Closing Auction: Short sale orders for covered securities subject to Rule 201 of Regulation SHO that are in an active short sale circuit breaker will only be eligible for execution at a price above the last National Best Bid (NBB) at the time of the auction match.

6   Examples

To demonstrate the value of the different price indicators used in the BATS auction process for various situations, consider the following examples. Note that BATS Auction information updates are time based and are not disseminated until the cut-off. These examples are not indicative of what would be expected in a BATS Auction update.

No Match occurs in the Auction

The last trade during the normal session occurred at 3:15 p.m. at $17.25.

Entry Time	Buy Shares	Sell Shares	Order Type/Price	Reference Price	Reference Buy Shares	Reference Sell Shares	Indicative Price	Auction Only Price
3:54:00		4,000	LOC/$17.00	$17.25	0	4,000	0	0
3:55:00	5,000		Limit/$15.00	$17.25	0	4,000	0	0
3:56:00		3,000	Limit/$18.00	$16.50	0	0	0	0
3:58:00		4,000	LOC/$17.50	$16.50	0	0	0	0

As there is no match on the book at the auction match, the official closing price will be set to $17.25. Also note that the $17.50 LOC sell order at 3:58:00 would be rejected as it has been entered after the cut-off.

Market Order Only Auction

Previous closing price is $10.05.

Entry Time	Buy Shares	Sell Shares	Order Type/Price	Reference Price	Reference Buy Shares	Reference Sell Shares	Indicative Price	Auction Only Price
9:27:00	1,000		MOO	$10.05	1,000	0	0	0
9:27:01		1,000	MOO	$10.05	1,000	1,000	$10.05	$10.05
9:27:02	1,000		MOO	$10.05	2,000	1,000	$10.05	$10.05
9:27:05		1,000	MOO	$10.05	2,000	2,000	$10.05	$10.05

In this auction, 2,000 shares will match at $10.05 at 9:30:00.

Late On-Open/Close Order Behavior

Consider a ZBBO of $10.00 x $10.05 is present at the cut-off. Shortly thereafter an LLOO/LLOC is received to buy 10,000 shares at $10.25. The order will initially work at $10.00 as it is confined to the ZBBO. The ZBBO slides to $9.80 x $9.85. The order will continue to work at $10.00. Next, the ZBBO jumps to $10.05 x $10.10. The effective price for the order now jumps to $10.05 as it is a more aggressive price and is still within the original limit. The ZBBO jumps again to $10.30 x $10.40. The effective price will be reset to $10.25 (the original limit price), where it will remain through the conclusion of the auction.

Limit Order Only Auction

The ZBBO is $13.75 x $14.00 until 9:28:59 at which point it becomes $13.80 x $14.00 due to the introduction of a limit order to buy at $13.80 on the continuous book at that time.

Entry Time	Buy Shares	Sell Shares	Order Type/Price	Reference Price	Reference Buy Shares	Reference Sell Shares	Indicative Price	Auction Only Price
9:27:00	5,000		Limit/$13.75	-	0	0	0	0
9:27:01		5,000	Limit/$14.00	-	0	0	0	0
9:27:02	2,000		LOO/$14.00	$13.875	2,000	0	$14.00	0
9:27:03		1,000	LOO/$13.75	$13.875	2,000	1,000	$14.00	$13.875
9:27:04		2,000	LOO/$13.90	$13.90	2,000	3,000	$13.90	$13.90
9:27:05		4,000	LOO/$13.00	$13.875	2,000	5,000	$13.75	$13.875
9:27:06		6,000	LOO/$12.00	$13.875	2,000	11,000	$13.75	$13.875
9:27:29	7,000		LOO/$13.50	$13.875	2,000	11,000	$13.50	$13.50
9:27:30	9,000		LOO/$13.75	$13.75	11,000	11,000	$13.75	$13.75
9:28:59	1,000		Limit/$13.80	$13.89	2,000	11,000	$13.75	$13.75

At 9:30:00, this auction would execute 11,000 shares at $13.75.

Market/Limit Order Auction

The ZBBO is $10.00 x $10.01 until 9:27:59 at which point it becomes $10.01 x $10.02.

Entry Time	Buy Shares	Sell Shares	Order Type/Price	Reference Price	Reference Buy Shares	Reference Sell Shares	Indicative Price	Auction Only Price
9:27:00	10,000		Limit/$10.00	-	0	0	0	0
9:27:01		10,000	Limit/$10.01	-	0	0	0	0
9:27:02		10,000	Limit/$10.02	-	0	0	0	0
9:27:02	100,000		MOO	$10.005	100,000	0	$10.02	0
9:27:03		50,000	MOO	$10.005	100,000	50,000	$10.02	$10.005
9:27:04		20,000	LOO/$9.90	$10.005	100,000	70,000	$10.02	$10.005
9:27:05		30,000	LOO/$10.05	$10.005	100,000	70,000	$10.05	$10.05
9:27:06	20,000		LOO/$10.10	$10.005	120,000	70,000	$10.05	$10.05
9:27:07		30,000	Limit/$10.10	$10.005	120,000	70,000	$10.05	$10.05
9:27:31		50,000	MOO	$10.005	120,000	120,000	$10.005	$10.005
9:27:59	50,000 (40,000 remainder after fill against 9:27:01 order)		Limit/$10.01	$10.015	120,000	120,000	$10.015	$10.015

At 9:30:00, this auction would execute 120,000 at $10.015.

7 References

7.1 Order Entry

For more information regarding auction specific order types such as LOO, LOC, LLOO, LLOC, MOO, and MOC refer to the appropriate order entry specification:

- ➢ BATS BZX Exchange US Equities FIX Specification
- ➢ BATS BZX Exchange US Equities BOE Specification

7.2 Market Data

For more information regarding BATS Auction information messaging, refer to the appropriate market data specification:

- ➢ BATS Auction Feed Specification
- ➢ TCP PITCH Specification
- ➢ Multicast PITCH Specification

8 Support

Please e-mail questions or comments regarding this document to tradedesk@batstrading.com.

Revision History

Document Version	Date	Description
1.0.0	05/09/11	Initial draft version.
1.0.1	05/27/11	Final draft based on feedback.
1.0.2	06/24/11	Added clarification of RHO order handling behavior during the opening cut-off period. On-Open/On-Close Orders must send 9303=B.
1.0.3	07/19/11	Added further clarification regarding limit RHO order handling behavior during the opening cut-off period.
1.0.4	07/21/11	Clarification added regarding prioritization of hidden versus reserve orders during an auction.
1.0.5	08/17/11	For Volume Based Tie Breakers as well as Collars, only use NBBO as a reference if there is no ZBBO and there is at least one limit order on the BZX Exchange book.
1.0.6	11/02/11	Removed reference that indicated LOO and LOC orders would be automatically converted to LLOO and LLOC orders after the cutoff.
1.0.7	12/15/11	Added BOE references. For IPO Auctions BATS will halt issue in morning and send administrative message to consolidated tape. Opening/Closing Auction orders will not be cancelled automatically due to halt dissemination. Updated automatic extensions. Updated RHO orders.
1.1.0	01/05/12	Clarification added to IPO/Halt Auction language to include other types of new issues such as Exchange Traded Products.
1.2.0	02/01/12	Added description for routable order behavior during auctions. Added clarification regarding use of 'Q' versus 'O' and 'M' versus '6' for BATS Official Opening/Closing pricing. Added support for RHO, LOO, MOO and LLOO during IPO/New Issue auctions. *Effective 02/10/12.*
1.2.1	02/17/12	Clarification added noting market RHO orders cannot be cancelled between 9:28 a.m. and 9:30 a.m.
1.2.2	03/07/12	Clarification added noting that Buy Shares and Sell Shares will be equal during IPO/New Issue/Halt Auction.
1.2.3	04/04/12	Omitted support for RHO orders in non-BATS Listed Securities.
1.2.4	07/20/12	Added clarification regarding acceptable attributes for auction order types. Added clarification regarding odd lot handling in auctions.