



# IEX

## Industry Call: IEX Listings

OPERATIONAL GUIDE FOR IEX TRANSITION TO PRIMARY LISTING EXCHANGE

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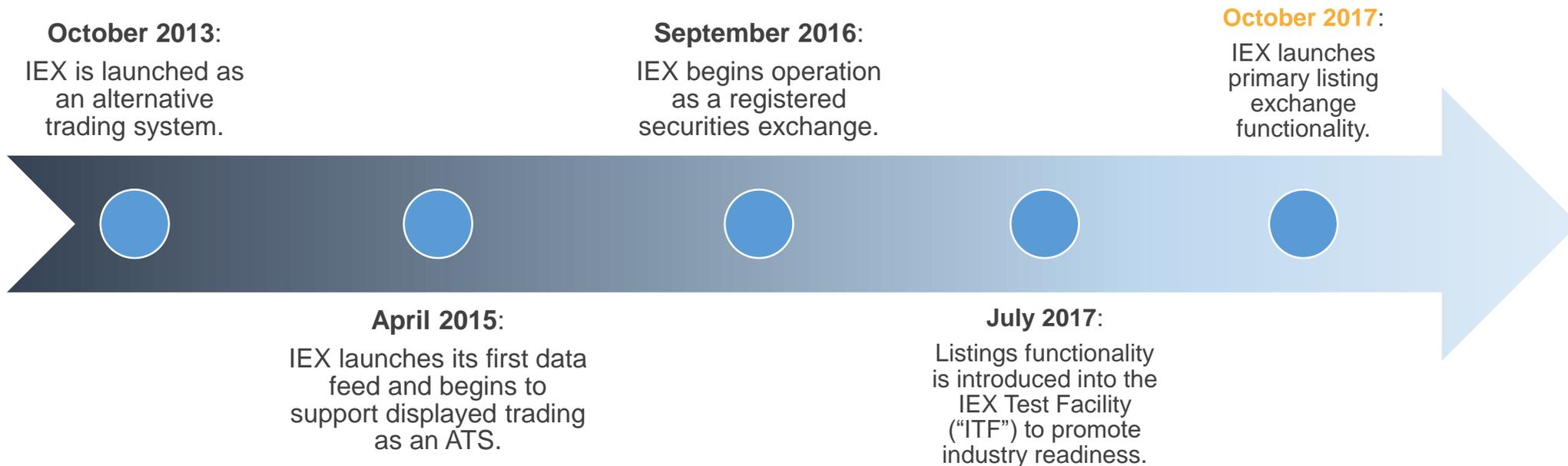
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# How did we get here?

- The original vision of IEX has always been to register as a national exchange and align the market with the interests of the trading community.
- Throughout IEX's gradual evolution, each new development has been another step closer to servicing the industry as a primary listing exchange for corporate issuers.





# Introduction

- Pending SEC approval, IEX plans to launch as a primary listing exchange and support IEX-listed companies in **October 2017**.\*
- Introduce new functionality to support IEX Auctions exclusively for IEX-listed securities:
  - Auctions (opening, closing, and reopening after LULD Pause, Trading Halts, or MWCB)
  - Support for On-Open and On-Close order types
  - Support for Security Directory and Auction Information Messages on IEX market data feeds
  - Launch of dedicated IEX-listed test symbols (ZIEXT, ZEXIT, ZXIET)
  - Quoting and printing for IEX-listed securities on Network B (i.e., Tape B) data feeds
  - Generation and distribution of daily list files
  - Distribution of Security Alerts for Corporate Actions, Trading Halts, LULD Trading Pauses, and Short Sale Price Test Activations

IEX's foremost objective is to promote ease of adoption, broad participation, and reliable price formation.

*\*Pending SEC filing and effectiveness.*



# Testing Opportunities and Timeline

- IEX has 3 dedicated test symbols available in Production starting Friday, September 15 via the CTA SIP:

Test Symbol	Listing Market	CTA Network	
		CTS	CQS
ZIEXT	IEX	B	F
ZEXIT	IEX	B	F
ZXIET	IEX	B	F

- **Weekday** testing in the IEX Testing Facility (“ITF”) Testing of Auctions and Listings functionality:
  - Auction Processing
  - TOPS v1.6 and DEEP v1.0 with Security Directory and Auction Information messages
  - Short Sale Restrictions
  - Halt and Pause dissemination
- **Weekday** testing in Production using test IEX-listed symbols beginning Friday, September 15.
- **Weekend** testing in Production or DR
  - Saturday, August 26 ✓
  - Saturday, September 9 (from our Chicago DR data center) ✓
  - Saturday, September 23
  - Saturday, October 7

October 2017: Pending SEC Approval, IEX Launches as a Primary Listing Exchange



# Corporate Actions and Daily Lists

- For IEX-listed securities the following daily lists (with and without CUSIP data) will be posted to the IEX public website each day for view or download **free of charge**:
  - **IEX-Listed Symbol Directory**: List of all IEX-listed securities and their corresponding data fields
  - **Corporate Actions**: Lists new issues, symbol and name changes, and deleted issues
  - **Dividends**: Details upcoming dividend information and other corporate actions, such as stock splits
  - **Next Day Ex-Dates**: Provides advance notification of dividend declarations impacting IEX-listed securities
- Data files with CUSIP information are only available to those participants with a proper CUSIP license
  - Participants will need to set up an account online with IEX and request a CUSIP license verification
- Subscription based e-mail notifications for events affecting an IEX-listed security status:
  - Corporate Actions
  - Trading Halts
  - Limit Up-Limit Down Trading Pauses
  - Short Sale Restriction Activations

IEX Real-Time Data Feeds, TOPS v1.6 and DEEP, will disseminate Security Directory Messages during the morning spin for each IEX-listed security



# IEX Auction Design Features and Attributes

- No specialty order types or privileged exchange-Members: *simple tools and equal access available to all Members.*
- Auction contributions are rewarded for *price* before *arrival time* or *participant type* to best serve natural trading interest and strategies designed to assign a value to an asset.
- Predictable and consistent auction schedule ensures transparency.
- Opportunity to “flip” the auction imbalance before the auction match maximizes flexibility to accommodate all eligible interest.
- Commonsense controls are enforced to prevent late entry of “hyper-aggressive” order flow.
- Auction reference prices are derived from the consolidated marketplace to support stability.

IEX is improving upon an industry standard while preserving a familiar foundation



# How is Priority Assigned in an IEX Auction?

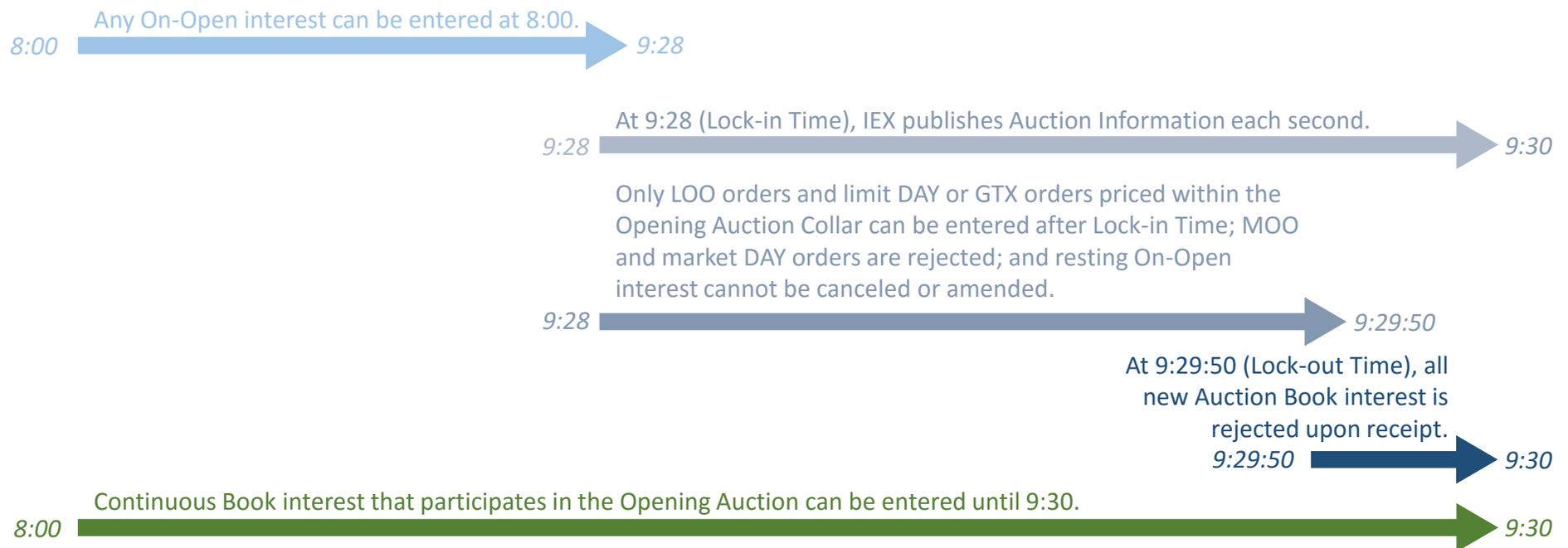
- IEX ranks orders using Price – Display – Time priority:
  - **Price: Orders are ranked by price**
    - Higher priced buy Auction Eligible Orders have priority over lower priced buy interest. Lower priced sell Auction Eligible Orders have priority over higher priced sell interest.
      - Orders resting on the Auction Book are ranked by their limit price.
        - Market orders have priority over limit orders.
      - Orders resting on the Continuous Book are ranked by their resting price.
  - **Display: Same priced orders are then ranked by their display priority**
    - Auction Eligible Orders with display priority have priority over Auction Eligible Orders with non-displayed priority (On-Open and On-Close interest are ranked with display priority).
  - **Time: Orders with the same price and display priority are then ranked by time**
    - Older Auction Eligible Orders have priority over newer orders.

Prioritizing Price over Time de-emphasizes speed and incentivizes participants to maximize their contribution to price discovery in the auction process



# The IEX Opening Auction: How does it work?

- Auction Eligible Orders rest on the Order Book ahead of the Opening Auction and participate in the auction process:
  1. Continuous Book: orders resting on the Pre-Market Continuous Book can execute at any time.
  2. Auction Book: orders resting on the Auction Book can only execute in the auction match.
    - Limit-On-Open (“*LOO*”), Market-On-Open (“*MOO*”), and non-routable market DAY
    - Limit DAY or GTX orders (orders queued for the Regular Market Session)
- All limit orders resting on the Pre-Market Continuous Book are eligible for the Opening Auction.
  - Routable market DAY orders and pegged orders are ineligible for the Opening Auction.
- Conditional Opening Auction interest, such as Imbalance-Only (“*IO*”) orders, will not be supported.





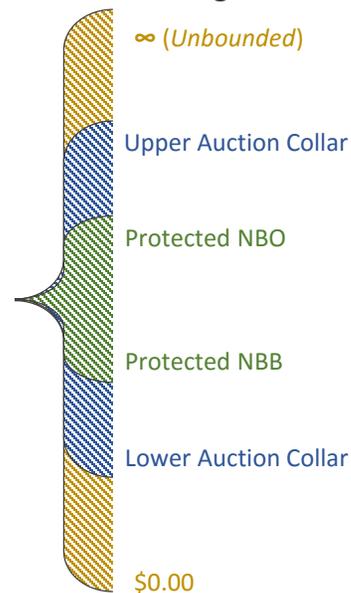
# IEX Auction Information

- IEX Auctions will be fully transparent to all participants; IEX Auction Information will be publicly available via our website, web-based IEX API, IEX Historical Data files and published free of charge via our proprietary feeds TOPS v1.6 and DEEP.
- IEX only publishes Auction Information during the Lock-in Time because Auction Information is most useful to participants and observers when Auction Eligible Orders are committed to the Auction Book and cannot be canceled or modified.
  - Data for the Opening Auction will be disseminated once a second between 9:28 – 9:30
  - Data for the Closing Auction will be disseminated once a second between 15:50 – 16:00
- Subscribers to either TOPS v1.6 or DEEP will have complete visibility and receive identical information.



# IEX Auction Information

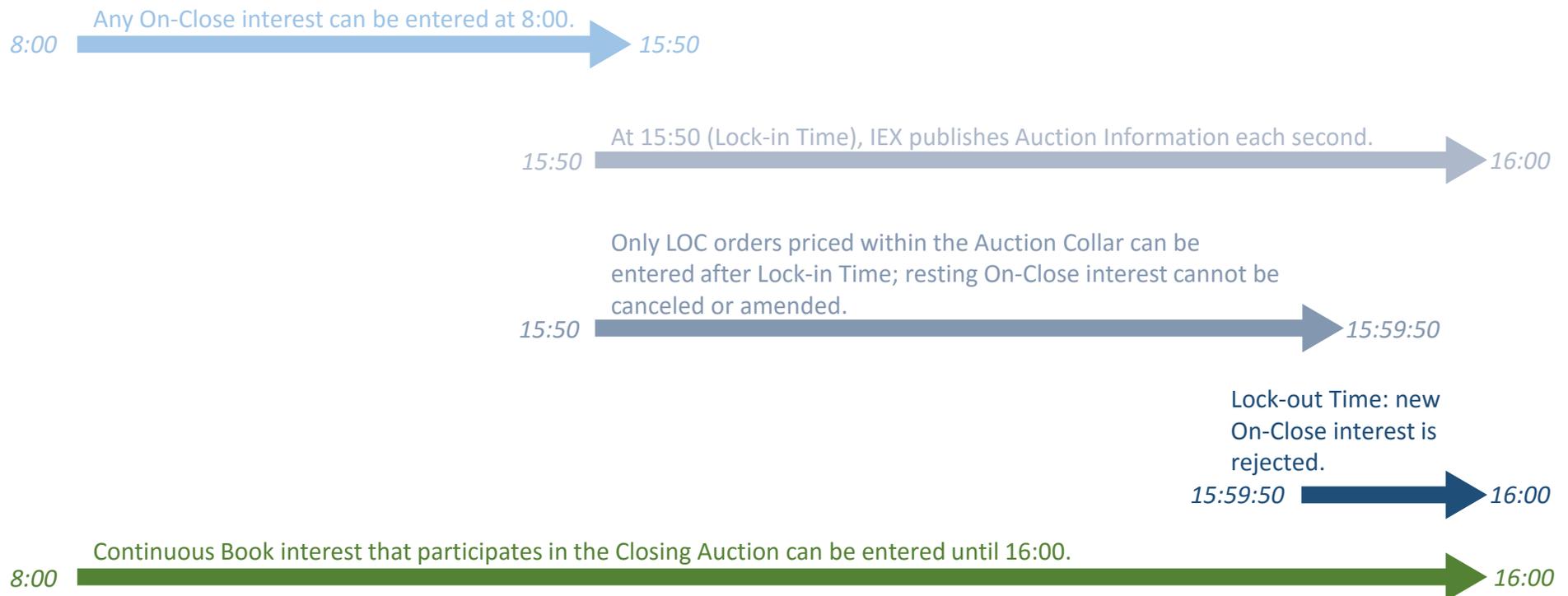
- The *Auction Book Clearing Price*, *Indicative Clearing Price*, and *Reference Price* are used to indicate potential clearing prices for the auction and information regarding imbalance size, side, and paired shares at a reference price aligned with where the broader market is.
- **Reference Price:** “Where within the protected NBBO would the auction clear right now using Auction Book interest?”
  - At the Reference Price, the following information is provided:
    - Paired Shares: Number of Auction Book shares that can be matched right now.
    - Imbalance Shares: Number of Auction Book shares that cannot be matched right now.
    - Imbalance Side: The side of the imbalance.
- **Indicative Clearing Price:** “Where within the Auction Collar would the auction clear using all Auction Eligible Orders?”
- **Auction Book Clearing Price:** “Where would the auction clear right now using Auction Book interest?”





# The IEX Closing Auction: How does it work?

- Auction Eligible Orders rest on the Order Book ahead of the Closing Auction and participate in the auction process:
  1. Continuous Book: orders resting on the Continuous Book can execute at any time.
  2. Auction Book: orders resting on the Auction Book can only execute in the auction match.
    - Limit-On-Close (“LOC”) and Market-On-Close (“MOC”) orders.
- All limit orders and pegged orders resting on the Continuous Book are Auction Eligible Orders.
- No conditional Closing Auction interest, such as Imbalance-Only (“IO”) or Closing Offset (“CO”) orders, will be supported.





# Cancellation of Legitimate Errors

- Participants can request to cancel On-Close interest after Lock-in Time at 15:50 if an order is entered as a result of a legitimate error (e.g., side, size, symbol, price, or duplication of an order).
- Requests to cancel legitimate errors may be submitted to IEX no later than 15:55; On-Close interest cannot be canceled or modified after 15:55 for any reason.
- Requests must be sent by an authorized representative of a Member firm directly to IEX Market Operations via e-mail with order details and a reason for the error cancellation.
- Cancellation requests are performed on a best efforts basis.
- Cancellation requests received from individuals who have not been formally recognized as a Member's authorized representatives will not be fulfilled by IEX Market Operations.
- All clients are encouraged to contact IEX Market Operations at [MarketOps@iextrading.com](mailto:MarketOps@iextrading.com) to identify their firm's authorized representative(s).



# Trading Halt Auctions

- Used to reopen trading after a regulatory trading halt or MWCB.
- IEX will disseminate the following messages to the CTA:
  1. **News Pending** – Material news is forthcoming.
    - Open orders are not canceled.
    - IEX rejects any incoming orders or modifications, but order cancellations are allowed.
  2. **News Dissemination** – Dissemination of material news is complete.
    - Triggers the beginning of the Order Acceptance Period (new orders and modifications to existing orders).
    - Starts the dissemination of Auction Information.
    - Schedules the Halt Auction to execute in 5 minutes (i.e., t + 5 minutes, subject to change by IEX).
- Halt Auctions do not have a Lock-in or Lock-out Time – orders may be entered, modified, or canceled during the Order Acceptance Period until the auction match.
- 1- minute automatic extensions if either of the following exist at the scheduled auction match:
  - The Indicative Clearing Price differs by the greater of 5% or \$0.50 from any of the last 15 Indicative Clearing Price disseminations, or
  - A market order imbalance exists.



# Volatility Auctions

- The Volatility Auction is used to resume trading after a Limit Up-Limit Down (LULD) trading pause.
- Designed inclusive of changes required for Amendment 12 of the LULD Plan.
- Immediately after the LULD trading pause:
  - The Order Acceptance Period begins.
  - IEX begins to disseminate Auction Information.
- Volatility Auctions do not have a Lock-in or Lock-out Time.
- Volatility Auctions may only occur within the Volatility Auction Collar:
  - Apply 5% of the LULD Band Price on the side that triggered the LULD trading pause to such price (\$0.15 for stocks \$3.00 or less) and utilize the other LULD Band Price as the thresholds of the Volatility Auction Collar.
  - The auction automatically extends if the auction price falls outside the Volatility Auction Collar.
- If an LULD Trading Pause exists at or after the Closing Auction Lock-in Time (15:50) IEX will NOT conduct a Closing Auction in the security:
  - Orders eligible for the Closing Auction are transferred into the Volatility Auction Book, and
  - IEX will utilize the Volatility Auction to close the security and determine its Official Closing Price at the conclusion of the Regular Market Session.



# Key Take-aways

1. IEX Auctions may be accommodated without overhauling existing trading workflows.
2. Auction functionality is available in the IEX Testing Facility (“ITF”), which can be accessed free of charge.
  - Additional Saturday Testing opportunities in the Production environment:
    - September 23<sup>rd</sup>
    - October 7<sup>th</sup>
3. IEX Auctions will be available in Production beginning September 15<sup>th</sup> for IEX-listed test symbols.
4. IEX plans to launch as a primary listing exchange in **October 2017**.
5. IEX will announce transfers via Security Alerts at least 10 days before the first date of listing on IEX.
6. Next steps to consider:
  - Review information and specifications available at <https://www.iextrading.com/trading/listed/>
  - Sign up for our subscription based e-mail notifications for events affecting IEX-listed securities
  - Exercise trading systems and static reference data sourcing in advance of launch