

Net Order Imbalance Indicator Support Document

The Net Order Imbalance Indicator (NOII) can have a positive impact on a trader's ability to perform effectively in a highly competitive environment. This product increases market transparency by providing users with invaluable details about the opening and closing orders and the likely opening and closing prices of a security. NOII offers traders valuable insight into the true supply and demand in the marketplace - insight that can help reveal new trading opportunities.

One of the primary benefits of the Nasdaq Opening and Closing CrossesSM is the detailed information disseminated about opening and closing orders and likely clearing prices. This information is intended to inform all market participants equally, and to minimize surprises at the market open and the market close.

Nasdaq disseminates imbalance information every second between:

Opening Cross: 9:28 to 9:30 a.m., Eastern Time* (ET)

Closing Cross: 3:55 to 4:00 p.m.





IPO and Halt Crosses: beginning with the quote-only period of the IPO or halt resumption


I. NOII Components




Time	Symbol	Paired Shares	Imbalance Shares	Imbalance Side	Current Reference Price	Near Indicative Clearing Price	Far Indicative Price	Price Variance Indicator	Cross Volume	NOCP
15:59:55	AAPL	665,706	0	N	\$89.62	\$89.62	\$89.62	0-.99%		\$0.00
15:59:56	GE	17,840	0	N	\$16.09	\$16.09	\$16.09	0-.99%		\$0.00
15:59:56	MSFT	5,230,265	0	N	\$19.51	\$19.51	\$19.51	0-.99%	5,230,265	\$19.62
15:59:56	NDAQ	126,679	0	N	\$19.65	\$19.65	\$19.65	0-.99%		\$0.00
15:59:57	SCHW	571,194	0	N	\$15.73	\$15.73	\$15.73	0-.99%		\$0.00

1. **My Portfolio** - Use this tab to view Open/Close information for user-created portfolios or specific symbols. This tab also gives access to the portfolio creation applet.

2. **Market Open/Close** – These sections will open automatically at the start of dissemination times (Open: 9:28 a.m., Close: 3:55 p.m.). These sections can be opened at other times, but data will only be disseminated during the set dissemination period.
3. **Data Display** – Displays the open/close information for the selected stock(s) or portfolios. Please see Nasdaq Net Order Imbalance Indicator (NOII) Display Description section of this document for a list of field definitions.
4. **Export** – Export portfolio data into Excel.
5. **History** – View historical open/close information for the current day, as well as previous five business days. Simply select the drop down and choose a date.
6. **Portfolio/Symbol** – Use this field to select a portfolio or to enter an individual symbol. The Portfolio Management icon allows you to create multiple portfolios. To create a new portfolio:
 - a. Select the Portfolio Management icon. 
 - b. Enter a name for your Portfolio.
 - c. Select the Plus icon to create the portfolio. 
 - d. Select the newly created Portfolio from the list.
 - e. Enter Symbol(s) into the Symbol field of your portfolio and press the Plus icon. 
 - f. To import a list of symbols, select the  file. Note: you can only import .csv files.
 - i. Select Browse and choose the file you would like to upload.
 - ii. Select any options to your preference.
 - iii. Select the Upload button.

To edit a portfolio, select the Edit icon. 

To delete a portfolio, select the Delete icon. 
7. **Top Lists** – Select the Launch Top List button to view real-time Top List information.
8. **Top 50 Highest by Imbalance** - Reflects the Top 50 securities with the highest imbalance.
9. **Top 50 Highest by Variance** - Reflects the Top 50 securities with the highest variance between the near indicative clearing price and the current inside price. For more information on these fields, see the field description section below.
10. **IPO/Halt Imbalances** – Displays new midday opening process for initial public offerings (IPOs) and securities being released from a trading halt.

II. Nasdaq Net Order Imbalance Indicator (NOII) Display Description

Nasdaq Opening and Closing Crosses

The Nasdaq Opening and Closing Crosses are price discovery facilities that Cross orders at a single price. The Crosses enable market participants to execute on-open and on-close interest and provide unparalleled transparency. Since the launch of the Opening and Closing Crosses, market makers and other industry professionals have repeatedly demonstrated their willingness and ability to offset imbalances that are entered into the cross. For more information, please refer to the Nasdaq Opening Cross and [Nasdaq Closing Cross fact sheets](#).

Nasdaq IPO/ Halt Process

Nasdaq also offers a midday opening process for initial public offerings (IPOs) and securities being released from a trading halt. The IPO and trading halt opening process is designed to promote greater transparency during the positioning window and to provide more uniform prices on which traders and investors can rely. For more information on the midday opening process, please refer to the [IPO/Halt fact sheet](#).

To ensure an orderly market open process, Nasdaq marketplace rules provide for a positioning window for IPO and halted securities. During the positioning window, market participants are only allowed to enter orders and quote updates for the associated Nasdaq-listed issue. To promote price discovery, Nasdaq disseminates NOII data during this positioning window at one second intervals. In its NOII calculation for IPO and halted securities, Nasdaq includes non-displayable order types (such as market and reserve orders) as well as displayable market participant quotation data from the Nasdaq Market Center (NMC) system.

Fields Descriptions

FIELD NAME	FIELD DESCRIPTION										
Time	The time the Net Order Imbalance Indicator is disseminated to this web site. The time represents Eastern Time and is displayed in Military Format: HH:MM:SS										
Symbol	The identifier of the security.										
Paired Shares	<p>The total number of shares that are eligible to be matched at the Current Reference Price.</p> <p>For the Opening Cross, this calculation will include early "Regular Hours", Market On Open, Limit On Open, and Imbalance Only orders that are eligible to be matched at the Current Reference Price.</p> <p>For the IPO and trading halt opening process, this calculation would include regular hour orders and quotes that are eligible to be matched at the Current Reference Price.</p> <p>For the Closing Cross, this calculation will include Market On Close, Limit On Close, and Imbalance Only Orders that are eligible to be matched at the Current Reference Price.</p>										
Paired Shares cont.	<p>The Number of Shares Paired may be zero-filled under the following two scenarios:</p> <ul style="list-style-type: none"> • There are no on-open/on-close orders in the Nasdaq book. In this case, the Imbalance Side field would be set to "O". • There are no shares in the eligible order types that match at the Current Reference Price. 										
Imbalance Shares	<p>For the Opening Cross, this field indicates the absolute difference between the number of shares for early "Regular Hours", Market On Open, Limit On Open and Imbalance Only orders on the buy side and the number of shares for early "Regular hours", Market On Open, Limit On Open and offsetting Imbalance Only orders on the sell side eligible to be matched at the Current Reference price.</p> <p>For the IPO and trading halt opening process, imbalance information will only be disseminated when there is a Market Buy or Market Sell condition.</p> <p>For the Closing Cross, this field indicates the absolute difference between the number of shares for Market On Close, Limit On Close and offsetting Imbalance Only orders on the buy side and the number of shares for Market On Close, Limit On Close, and offsetting Imbalance Only orders on the sell side eligible to be matched at the Current Reference Price.</p> <p>For the opening and closing crosses, the Number of Shares of Imbalance may be zero-filled under the following scenarios:</p> <ul style="list-style-type: none"> • There are no on-open/on-close orders in the Nasdaq book. In this case, the Imbalance Side field would be set to "O". • There is no imbalance; all shares in eligible orders can be paired at current reference price. In this case, the Imbalance Side would be set to "N". 										
Imbalance Side	<p>The Imbalance Side field indicates the market side for of the imbalance. This field will display the following values for a specific security:</p> <table border="1"> <thead> <tr> <th>CODE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>Buy-side imbalance</td> </tr> <tr> <td>S</td> <td>Sell-side imbalance</td> </tr> <tr> <td>N</td> <td>No imbalance (buy side equals sell side)</td> </tr> <tr> <td>O</td> <td>No marketable on-open (or on-close) orders in Nasdaq, thus no imbalance.</td> </tr> </tbody> </table>	CODE	DESCRIPTION	B	Buy-side imbalance	S	Sell-side imbalance	N	No imbalance (buy side equals sell side)	O	No marketable on-open (or on-close) orders in Nasdaq, thus no imbalance.
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Current Reference Price	<p>The Current Reference Price reflects the price for which the number of Paired Shares and the number of Imbalance Shares are calculated. Please note that the Current Reference Price is determined by the price within the Nasdaq Inside where the maximum number of shares are paired, the imbalance is minimized and the distance from the bid-ask midpoint is minimized, in that order. If this field is null or blank, it is because there is no Current Reference Price for the specific security.</p>
Near Indicative Clearing Price	<p>The crossing price at which orders in the Nasdaq opening/closing book and continuous book clear against each other. If this field is null or blank, this indicates one of two circumstances:</p> <ul style="list-style-type: none"> • There are no on-open (or on-close) orders entered for the security; or • There is no substantial on-open (or on-close) or continuous book interest on the opposite side of the market to execute all of the MOO (or MOC) orders on the other side. When this occurs, the No Indicative Price field displays either a Market Buy or Market Sell indicating that offsetting imbalance-only or continuous market orders should be entered on the other side of the market. <p>For the midday opening process, the Current Reference Price, the Near Indicative Clearing Price and the Far Indicative Clearing Price will be equal.</p>
Far Indicative Clearing Price	<p>This field indicates the price level at which buy orders and sell orders match in the opening/ closing book. If this field is null or blank, this indicates one of two circumstances:</p> <ul style="list-style-type: none"> • There are no on-open (or on-close) orders entered for the security; or • There is no substantial on-open (or on-close) interest on the opposite side of the market to execute all of the MOO (or MOC) orders on the other side. When this occurs, the No Indicative Price field displays either a Market Buy or Market Sell indicating that offsetting imbalance only orders should be entered on the other side of the market. <p>For the midday opening process, the Current Reference Price, the Near Indicative Clearing Price and the Far Indicative Clearing Price will be equal.</p>
Price Variance Indicator	<p>This field indicates the absolute value of the percentage of deviation of the Near Indicative Clearing Price to the Current Reference Price.</p> <p>Price Variance Indicator = (Near Indicative Clearing Price - Current Reference Price) ÷ Current Reference Price (or Near Indicative Clearing Price if value is larger)</p> <p>This field indicates the % difference between the indicative Opening/ Closing Cross price (Near Indicative Clearing Price) and the price where the market is currently trading. A high value indicates there will be a large price difference between the indicative Opening/ Closing Cross price and the continuous market if sufficient offsetting interest is not entered. This field will display a percent difference or percent range as listed below:</p> <ul style="list-style-type: none"> • 0-0.99% • 1-1.99% • 2-2.99% • 3-3.99% • 4-4.99% • 5-5.99% • 6-6.99% • 7-7.99% • 8-8.99% • 9-9.99% • 10-19.99% • 20-29.99% • +30%
Price Variance Indicator (cont.)	<p>Following the Cross process, Nasdaq will populate this field will contain the number of shares executed at the Cross price. This field will be zero filled for issues without a Cross and for halted securities.</p>

Nasdaq Official Opening/Closing Price (NOOP/NOCP)	Following the Cross process, this field will contain the price at which the Cross was executed. Please note that this field will not be populated for halted securities.
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III. Dissemination Times

For the Opening/ Closing Crosses, the NOII messages are disseminated at one second intervals from 9:28:00 a.m. to 9:29:55 a.m., and 3:55:00 p.m. to 3:59:59 p.m.

For the IPO and halt opening process, the NOII messages are disseminated at one second intervals during the quote positioning window. For IPO securities, the standard quote positioning window is 15 minutes in length. For halted securities, the standard quote positioning window is five minutes in length. If the positioning window is extended, Nasdaq will continue to calculate and disseminate one second intervals until the issue is released.

IV. NOII Frequently Asked Questions (FAQs)

WHAT IS NET ORDER IMBALANCE INDICATOR (NOII)?

NOII allows you to view Nasdaq crossing data to participate in the Opening, Closing, IPO and Halt Crosses. Use this information to find liquidity and predict cross prices before they occur. NOII can positively impact a traders' ability to perform effectively in a highly competitive environment.

HOW MANY SYMBOLS CAN A PORTFOLIO HOLD?

Portfolios hold up to 50 symbols each.

CAN I VIEW PRIOR DAYS NOII DATA?

Yes. NOII allows you to view the last six days of open/close imbalance information.

HOW CAN I VIEW THE OPEN/CLOSE IMBALANCE DATA?

At the time the data is disseminated, the application automatically opens the Open or Close section and displays the imbalance information. To view the unopened section, simply click on that header.

WHICH ORDER TYPES ARE ELIGIBLE FOR THE OPENING CROSS?

Please refer to the Opening and Closing Cross FAQ document posted on nasdaqtrader.com/openclose.

WHY AM I AM EXPERIENCING PROBLEMS WITH THE NOII?

There are some common reasons why individuals might have problems running NOII. Please refer to the NOII Troubleshooting section.

WHERE CAN I FIND ADDITIONAL NASDAQ CROSS INFORMATION?

For additional information regarding Crosses, please go to our [Nasdaq crossing page](#).

V. NOII Troubleshooting

Below are common reasons why you might be experiencing problems running NOII:

I. You are not connected to the Internet.

Please use a broadband connection, otherwise the NOII applet will not be able to connect back to its server.

System requirements for NOII:

1. Operating System: Microsoft XP (note that VISTA is not supported)
2. Internet Explorer 6+ or Safari. (Note that Mozilla Fire Fox is not supported).
3. Latest version of flash player.
4. A Broadband connection (NOII does not work with dial-up).
5. Firewalls are off.
6. Launch NOII by:
 - a. Logging in with username and password at data.Nasdaq.com,
 - b. Click on My Account
 - c. Select the Launch button under NOII.
 - d. Note: Always launch from My Account; Always close the browser and run each application individually, after launching.

Note: It can take up to 20-30 seconds to load the Top 50 buttons as the application must calculate the data.

II. If requirements 1-6 above are met, and NOII still doesn't work.

Make sure cookies are accepted from a third party:

1. Open Internet Explorer.
2. Click Tools menu and select Options
3. Select Privacy tab
4. Click Advanced button

Clear your web cache (instructions at <http://www.java.com/en/download/help/webcache.xml>) and restart computer.

Please send your questions with a complete description of the problem, including your operating system, browser name and version to datastore@Nasdaq.com.