NASDAQ BASIC

Product Overview

Nasdaq Basic is the leading exchange-provided alternative for real-time Best Bid and Offer and Last Sale information for all U.S. exchange- listed securities. With Nasdaq Basic, investors access a proprietary data product that provides accuracy, liquidity, instrument coverage and accessibility with significant cost-savings.

Nasdaq Basic is the combination of the Nasdaq Best Bid and Offer delivered via QBBO in combination with the Nasdaq Last Sale (NLS) Plus. The coupling of QBBO to NLS Plus to create Nasdaq Basic must be undertaken on the customer side.

Please note that the below specification only includes the QBBO portion. Please refer to the NLS spec.

In order to match the Nasdaq Basic entitlement structure, QBBO will support three outbound channels. The QBBO data set will be channelized based on the listing market of a security.

| Channel | Securities Coverage |
|---------|-----------------------|
| 1 | NYSE Issues |
| 2 | Other Regional Issues |
| 3 | Nasdaq Issues |

Publisher

Nasdaq Investment Intelligence equips investors with the tools to make informed decisions by providing innovative real-time and historical analytic products and intelligent solutions designed to tap new data sets and meet new industry challenges. Nasdaq Data Link eliminates infrastructure and resource obstacles from collecting and storing large data sets, providing tools with industry adopted open standards to ingest and analyze market data and other financial information. To learn more about the company, technology solutions and career opportunities, visit us on LinkedIn, on Twitter @Nasdaq, or at www.nasdaq.com.

Data Types

All integer fields are unsigned big-endian (network byte order) binary encoded numbers.

All alphanumeric fields are ASCII fields which are left justified and padded on the right with spaces.

Prices are integer fields, supplied with an associated precision. When converted to a decimal format, prices are in a fixed point format, where the precision defines the number of decimal places. For example, a field flagged as Price (4) has an implied 4 decimal digits.

Timestamps reflects the Nasdaq system time at which the outbound message was generated. Nasdaq states time as the number of nanoseconds past midnight. The time zone is U.S. Eastern Time.

Delivery

Nasdaq Data Link provides a modern and efficient method of delivery for Realtime exchange data and other financial information. Data is made available through a suite of APIs, allowing for effortless integration of data from disparate sources, and a dramatic reduction in time to market for customer-designed applications. The API is highly scalable, and robust enough to support the delivery of real-time exchange data.

This repository provides an SDK for developing applications to access the Nasdaq Data Link API. While the SDK is open source, connecting to the API does require credentials, which are provided by Nasdaq during an on-boarding process.

For more information, please use the link- https://github.com/Nasdaq/CloudDataService

Table of Contents

Contents

| System Event Message | 3 |
|---------------------------------------|----|
| Details | 3 |
| Schema | 4 |
| Sample | 5 |
| Quotation Message | 5 |
| Details | 5 |
| Schema | 6 |
| Sample | 7 |
| NextShares Quotation Message | 7 |
| Details | 7 |
| Schema | 8 |
| Sample | 9 |
| Retail Price Interest Indicator (PII) | 10 |
| Details | 10 |
| Schema | 10 |
| Sample | 11 |
| IPO Quoting Period Update | 11 |
| Details | 11 |
| Schema | 12 |
| Sample | 13 |
| Administrative Messages | 13 |
| Stock Trading Action | 13 |

| Details | 14 |
|--|-----|
| Schema | 15 |
| Sample | 15 |
| Stock Directory | 16 |
| Details | 16 |
| Schema | 19 |
| Sample | 21 |
| Regulation SHO Short Sale Price Test Restricted Indicator | 21 |
| Details | 22 |
| Schema | 22 |
| Sample | 23 |
| Market-Wide Circuit Breaker (MWCB) Message – Decline Level | 23 |
| Details | 23 |
| Schema | 24 |
| Sample | 24 |
| Market-Wide Circuit Breaker (MWCB) Message – Status | 25 |
| Details | 25 |
| Schema | 25 |
| Sample | 26 |
| Operational Halt | 26 |
| Details | 26 |
| Schema | 27 |
| Sample | 27 |
| Appendix A – Stock Symbol Convention | 28 |
| Appendix B – Trading Action Reason Codes | |
| Appendix C - Issue Classification Values | |
| Annendix D - Issue Sub-Tyne Values | 3.0 |

System Event Message

Details

The System Event message is used to signal key market or data feed control events. QBBO will support the System Event messages.

| Field | Name | Type | Descripti | on |
|-----------------|---------------|--------|--|---|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. | |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. | |
| Message Type | msgType | string | S = System | n Event |
| Tracking Number | trackingID | long | Message 7 | Fracking number, compound key containing: |
| | | | bytes 0-1 | = Nasdaq internal tracking number |
| | | | bytes 2-7 | = Timestamp in nanoseconds from midnight |
| | | | | |
| | | | | rackingID class in the |
| | | | | daq.ncdsclient.internal.utils |
| | | | | vithin the SDK. |
| Event Code | event | String | | he type of event for which the message is being |
| | | | generated | I. See list below for allowable values. |
| | | | | 1 |
| | | | Code | Value |
| | | | 0 | Start of Transmissions: Denotes that |
| | | | | QBBO has started its daily |
| | | | | transmission schedule |
| | | | S | Start of System Hours: This message |
| | | | | indicates that Nasdaq is open and ready to start accepting orders. |
| | | | Q | Start of Market Hours: This message |
| | | | | is intended to indicate that Market |
| | | | | Hours orders are available for |
| | | | | execution. |
| | | | M | End of Market Hours: This message |
| | | | | is intended to indicate that Market |
| | | | | Hours orders are no longer available |
| | | | | for execution. |
| | | | E | End of System Hours: It indicates |
| | | | | that Nasdaq is now closed and will not accept any new orders today. |
| | | | С | End of Transmissions: Denotes that |
| | | | | QBBO has completed its daily |
| | | | | transmission schedule. |
| | | | | |
| | | | | |

```
{
  "type": "record",
  "name": "SeqSystemEventMessage",
  "fields": [ {
    "name": "SoupPartition",
    "type": "int"
  }, {
    "name": "SoupSequence",
    "type": "long"
  }, {
    "name": "msgType",
    "type": "string"
```

```
}, {
    "name" : "trackingID",
    "type" : "long"
}, {
    "name" : "event",
    "type" : "string"
}
}
Sample
{
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "S",
"trackingID": 7238625218217,
"event": O
}
```

Quotation Message

QBBO will broadcast a real-time update every time that the exchange's best bid and offer quote is updated during the trading day. Please note that this message is for non-NextShares messages. NextShares messages will be supported in 5.4 (NextShares Quotation Message).

| Field | Name | Туре | Description |
|------------------------|---------------|--------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | Q = Quotation Message |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: |
| | | | bytes 0-1 = Nasdaq internal tracking number |
| | | | bytes 2-7 = Timestamp in nanoseconds from midnight |
| | | | See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. |
| Symbol | symbol | string | Denotes the security symbol for the issue in the |
| | | | Nasdaq execution system. |

| Security Class | market string | string | Indicates the primary listing market for the stock. The allowable values are as follows: | | |
|-----------------|---------------|--------|--|---------------------------------|--|
| | | | Code | Value | |
| | | | Q | The Nasdaq Stock | |
| | | | | Market | |
| | | | N | NYSE | |
| | | | A | NYSE American | |
| | | | Р | NYSE Arca | |
| | | | Z | BATS | |
| | | | V | Investors' Exchange | |
| | | | | LLC | |
| | | | | | |
| Nasdaq Best Bid | bidPrice | int | Denotes the Nasdaq bes | t bid price – the highest price | |
| Price | | | for market buy order(s) i | n the Nasdaq system. | |
| Nasdaq Best Bid | bidQuantity | int | Denotes the aggregated | number of shares available for | |
| Size | | | | q market center system at the | |
| | | | Nasdaq best bid price. | | |
| Nasdaq Best | askPrice | int | Denotes the Nasdaq exc | hange's best offer price - the | |
| Offer Price | | | lowest price for market s system. | sell order(s) in the Nasdaq | |
| Nasdaq Best | askQuantity | int | Denotes the aggregated | number of shares available for | |
| Offer Size | | | display within the Nasda Nasdaq best offer price. | q market center system at the | |

```
{
"type": "record",
"name": "SeqQuoteMessage",
"fields": [
"name": "SoupPartition",
"type": "int"
"name": "SoupSequence",
"type": "long"
},
{
"name": "msgType",
"type": "string"
},
"name": "trackingID",
"type": "long"
},
"name": "symbol",
"type": "string"
},
```

```
"name": "market",
"type": "string"
},
{
"name": "bidPrice",
"type": "int"
},
"name": "bidQuantity",
"type": "int"
},
"name": "askPrice",
"type": "int"
},
"name": "askQuantity",
"type": "int"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "Q",
"trackingID": 7238625218217,
"symbol": "ZVZZT",
"market": "Q",
"bidPrice": 100.11,
"bidQuantity": 500,
"askPrice": 100.13,
"askQuantity": 200
```

NextShares Quotation Message

This version of the Quotation message format will be used for Exchange Traded Managed Funds (NextShares). For this asset class, Nasdaq will support both Proxy Price and Net Asset Value (NAV) premium/discount amount for the best bid and offer.

| Field | Name | Туре | Description |
|------------------------|---------------|--------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | A = NextShares Quotation Message |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: |
| | | | bytes 0-1 = Nasdaq internal tracking number |
| | | | bytes 2-7 = Timestamp in nanoseconds from midnight |
| | | | |

| ls c. The |
|--------------|
| |
| c. The |
| c. The |
| t. The |
| . The |
| _ |
| |
| |
| |
| |
| |
| es in |
| |
| ble for |
| at the |
| |
| ١V |
| |
| |
| |
| roxy |
| - |
| ble for |
| at the |
| |
| NAV |
| |
| |
| |
| a l |

```
{
"type": "record",
"name": "SeqETMFQuoteMessage",
"fields": [
{
   "name": "SoupPartition",
   "type": "int"
},
{
   "name": "SoupSequence",
   "type": "long"
},
{
   "name": "msgType",
   "type": "string"
},
{
   "name": "trackingID",
   "type": "long"
```

```
},
"name": "symbol",
"type": "string"
},
{
"name": "market",
"type": "string"
},
"name": "bidPrice",
"type": "int"
},
"name": "bidQuantity",
"type": "int"
},
"name": "bidNavPremium",
"type": "int"
},
"name": "askPrice",
"type": "int"
"name": "askQuantity",
"type": "int"
},
"name": "askNavPremium",
"type": "int"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "A",
"trackingID": 7238625218217,
"symbol": "ZVZZT",
"market": "Q",
"bidPrice": 100.11,
"bidQuantity": 500,
"bidNavPremium": 1,
"askPrice": 100.13,
"askQuantity": 200,
"askNavPremium": 2
```

Retail Price Interest Indicator (PII)

Details

| Field | Name | Туре | Description | |
|-----------------|---------------|--------|--|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. | |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. | |
| Message Type | msgType | string | N = Retail Interest message | |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: bytes 0-1 = Nasdaq internal tracking number bytes 2-7 = Timestamp in nanoseconds from midnight See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. | |
| Stock | symbol | string | Denotes the security symbol for the issue in the Nasdaq execution system. | |
| Interest Flag | interest | string | B Pl orders available on the buy side S Pl orders available on the sell side A Pl orders available on both sides (buy and sell) N No Pl orders available | |

```
{
"type": "record",
"name": "SeqRetailInterestMessage",
"fields": [
{
   "name": "SoupPartition",
   "type": "int"
},
{
   "name": "SoupSequence",
   "type": "long"
},
{
   "name": "msgType",
   "type": "string"
},
{
```

```
"name": "trackingID",
"type": "long"
},
{
"name": "symbol",
"type": "string"
},
{
"name": "interest",
"type": "string"
}
]
}

Sample
{
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "N",
"trackingID": 7238625218217,
"symbol": "ZVZZT",
"market": "Q",
"interest": "A"
}
```

IPO Quoting Period Update

Indicates the anticipated IPO quotation release time of a security.

| Field | Name | Туре | Description |
|-----------------------|---------------|--------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | K = IPO Quoting Period Update Message |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: • bytes 0-1 = Nasdaq internal tracking number • bytes 2-7 = Timestamp in nanoseconds from midnight |
| | | | See the TrackingID class in the |
| | | | <pre>com.nasdaq.ncdsclient.internal.utils</pre> |
| | | | package within the SDK. |

| Stock | symbol | string | Denotes the security symbol for the issue in the Nasdaq execution system. | |
|------------------------------------|------------------|--------|---|--|
| IPO Quotation Release Time | releaseTime | int | Denotes the IPO release time, in seconds since midnight, for quotation to the nearest second. NOTE: If the quotation period is being canceled/postponed, we should state that 1. IPO Quotation Time will be set to 0 IPO Price will be set to 0 | |
| IPO Quotation Release Qualifier | releaseQualifier | string | Code Description A Anticipated quotation release time This value would be used when Nasdaq Market Operations initially enters the IPO instrument for release. C IPO release canceled/postponed This value would be used when Nasdaq Market Operations cancels or postpones the release of the IPO instrument. | |
| IPO Price | ipoPrice | int | Denotes the IPO price to be used for intraday net change calculations. | |

```
"type": "record",
"name": "SeqIPOQuotePeriodMessage",
"fields": [
"name": "SoupPartition",
"type": "int"
},
"name": "SoupSequence",
"type": "long"
},
"name": "msgType",
"type": "string"
},
"name": "trackingID",
"type": "long"
},
"name": "symbol",
"type": "string"
},
```

```
"name": "releaseTime",
"type": "int"
},
"name": "releaseQualifier",
"type": "string"
},
"name": "ipoPrice",
"type": "int"
}
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "K",
"trackingID": 7238625218217,
"symbol": "ZVZZT",
"releaseTime": 34509843560,
"releaseQualifier": "A",
"ipoPrice": 15.00
```

Administrative Messages Stock Trading Action

Nasdaq uses this administrative message to indicate the current trading status of a security to the trading community.

Prior to the start of system hours, Nasdaq will send out a Trading Action spin. In the spin, Nasdaq will send out a Stock Trading Action message with the "T" (Trading Resumption) for all Nasdaq- and other exchange-listed securities that are eligible for trading at the start of the system hours. If a security is absent from the pre-opening Trading Action spin, firms should assume that the security is being treated as halted in the Nasdaq platform at the start of the system hours. Please note that securities may be halted in the Nasdaq system for regulatory or operational reasons.

After the start of system hours, Nasdaq will use the Trading Action message to relay changes in trading status for an individual security. Messages will be sent when a stock is:

- Halted
- Paused*
- Released for quotation
- Released for trading

* The paused status will be disseminated for Nasdaq-listed securities only. Trading pauses on non-Nasdaq listed securities will be treated simply as a halt.

| Field | Name | Туре | Description |
|-----------------------|---------------|--------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | H = Trading Action |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: • bytes 0-1 = Nasdaq internal tracking number bytes 2-7 = Timestamp in nanoseconds from midnight See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. |
| Issue Symbol | symbol | string | Nasdaq-assigned indicator for issue for which the trading action message is being generated. For details on Nasdaq symbology, please refer to Appendix B. |
| Security Class | market | string | Indicates the primary listing market for the issue. Allowable values are: Code Value Q Nasdaq N NYSE A NYSE American P NYSE Arca Z BATS Z Investors' Exchange, LLC |
| Current Trading State | tradingState | string | Reflects the current trading state for the issue. The allowable values are: Code |
| Reason | reason | string | Reflects the Market Ops or Market Watch code for the trading state change. Refer to Appendix C for current code list. |

```
Schema
```

```
"type": "record",
"name": "SeqTradingStateMessage",
"fields": [
"name": "SoupPartition",
"type": "int"
"name": "SoupSequence",
"type": "long"
},
"name": "msgType",
"type": "string"
},
"name": "trackingID",
"type": "long"
},
"name": "symbol",
"type": "string"
},
{
"name": "market",
"type": "string"
},
"name": "tradingState",
"type": "string"
"name": "reason",
"type": "string"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "H",
"trackingID": 7238625218217,
"symbol": "ZVZZT",
"market": "Q",
"tradingState": "T",
"reason": "M1"
```

Stock Directory

At the start of each trading day, Nasdaq disseminates stock directory messages for all active symbols in its market center system.

Market data vendors should process this message to populate the Financial Status Indicator (required display field) and the Market Category (recommended display field) for Nasdaq-listed issues.

| Field | Name | Туре | Description |
|-------------------------------|----------------|---------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | R = Stock Directory Message |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: • bytes 0-1 = Nasdaq internal tracking number • bytes 2-7 = Timestamp in nanoseconds from midnight See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. |
| Stock | symbol | string | Denotes the security symbol for the issue in the |
| Stock | Symbol | 30,1118 | Nasdag execution system. |
| Market Category | marketCategory | string | Indicates Listing market or listing market tier for the issue: Code Definition |
| | | | Nasdag-Listed Instruments |
| | | | Q Nasdaq Global Select Market SM |
| | | | G Nasdaq Global Market SM |
| | | | S Nasdaq Capital Market [®] |
| | | | Non-Nasdaq-Listed Instruments |
| | | | N New York Stock Exchange (NYSE) |
| | | | A NYSE American |
| | | | P NYSE Arca |
| | | | Z BATS Z Exchange |
| | | | V Investors' Exchange, LLC |
| | | | <pre><space> Not available</space></pre> |
| Financial Status Indicator | fsi | string | For Nasdaq-listed issues, this field indicates when a firm is not in compliance with Nasdaq continued listing requirements. |
| | | | Code Definition |
| | | | Nasdaq-Listed Instruments |
| | | | D Deficient |
| | | | E Delinquent |
| | 1 | l . | = = = = = = = = = = = = = = = = = = = |

| S | | | | | Pankrunt |
|--|----------------------|-----------------------|----------|-----------------|--|
| G Deficient and Bankrupt | | | | Q | Bankrupt |
| H Deficient and Delinquent J Delinquent and Bankrupt K Deficient, Delinquent and Bankrupt C Creations and/or Redemptions Suspended for Exchange Traded Product N Normal (Default): Issuer is NOT Deficient, Delinquent, or Bankrupt c Company is in compliance, if Nasdaq-listed issue Company is in compliance, if Nasdaq-listed issue Company is in compliance, if Nasdaq-listed issue Denotes the number of shares that represent a round lot for the issue Indicates if Nasdaq system limits order entry for issue: Nasdaq system limits order entry for issue: Nasdaq system only accepts round lots orders for this security. N Nasdaq system does not have any order size restrictions for this security. Odd and mixed lot orders are allowed. Issue Sub-Type IssueSub-Type Indicates if Saecurity Issub-Pypoduction Indicates if Saecurity Issub-Pypoduction Indicates if Saecurity Issub-Pypoduction Indicates if Saecurity Issub-Pypoduction Indicates InsueDefault-Type IssueSub-Type Indicates InsueDefault-Type IssueSub-Type Indicates InsueD | | | | | · |
| J Delinquent and Bankrupt K Deficient, Delinquent and Bankrupt | | | | | |
| Round Lot Size roundLotSize int Denotes the number of shares that represent a round lots orders for this security. | | | | | - |
| Bankrupt C Cerations and/or Redemptions Suspended for Exchange Traded Product N Normal (Default): Issuer is NOT Deficient, Delinquent, or Bankrupt <space code<="" company="" compilance,="" entry="" for="" if="" in="" indicates="" is="" issue="" issue:="" limits="" nasdaq="" nasdaq-listed="" order="" system="" td="" =""><td></td><td></td><td></td><td> -</td><td></td></space> | | | | - | |
| C Creations and/or Redemptions Suspended for Exchange Traded Product | | | | K | = |
| Suspended for Exchange Traded Product N Normal (Default): Issuer Is NOT Deficient, Delinquent, or Bankrupt < space> Company is in compliance, if Nasdaq-listed issue Nasdaq-listed issue Nasdaq-listed issue Nasdaq-listed issue Nasdaq-listed issue Indicates if Nasdaq system only accepts round lot for the issue Indicates if Nasdaq system only accepts round lots orders for this security. Nasdaq system only accepts round lots orders for this security. Nasdaq system only accepts restrictions for this security. Nasdaq system only accepts restrictions for this security. Odd and mixed lot orders are allowed. Susue Classification Identifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. Identifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. Authenticity String Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. | | | | | • |
| Product N Normal (Default): Issuer Is NOT Deficient, Deliniquent, or Bankrupt | | | | C | |
| Normal (Default): Issuer Is NOT Deficient, Delinquent, or Bankrupt | | | | | · |
| Deficient, Delinquent, or Bankrupt <space> Company is in compliance, if Nasdaq-listed issue </space> | | | | | |
| Company is in compliance, if Nasdaq-listed lissue Company is in compliance, if Nasdaq-listed lissue Poentes the number of shares that represent a round lot for the issue Indicates if Nasdaq system limits order entry for issue: Indicates if Nasdaq system limits order entry for issue: | | | | N | |
| Space Company is in compliance, if Nasdaq-listed issue Pound Lot Size Round Lot Size roundLotSize Int Denotes the number of shares that represent a round lot for the issue Indicates if Nasdaq system limits order entry for issue: | | | | | |
| Round Lot Size roundLotSize int Denotes the number of shares that represent a round lot for the issue round lot for the issue: Code Definition Part | | | | | |
| Round Lot Size roundLotSize int Denotes the number of shares that represent a round lot for the issue | | | | <space></space> | |
| Round Lots Only roundLotOnly string Indicates if Nasdaq system limits order entry for issue: | Dayned Lat Cina | no dl atCina | : | Devented the | |
| Round Lots Only FoundLotOnly String Indicates if Nasdaq system limits order entry for issue: Code | Round Lot Size | roundLotSize | Int | | |
| Issue: | Dayned Late Only | na con all a t O a lo | atui a a | | |
| Code Definition Y Nasdaq system only accepts round lots orders for this security. N Nasdaq system does not have any order size restrictions for this security. Odd and mixed lot orders are allowed. | Round Lots Only | roundLotOnly | String | | vasdaq system limits order entry for |
| Y Nasdaq system only accepts round lots orders for this security. | | | | issue: | |
| Y Nasdaq system only accepts round lots orders for this security. | | | | Code | Definition |
| Issue Classification IssueClass Identifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. | | | | | |
| Security. Nasdaq system does not have any order size restrictions for this security. Odd and mixed lot orders are allowed. | | | | | |
| N Nasdaq system does not have any order size restrictions for this security. Odd and mixed lot orders are allowed. Issue Classification issueClass String Identifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. Issue Sub-Type issueSubtype String Identifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. Authenticity authenticity String Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test | | | | | |
| Same Classification Issue Class Identifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. | | | | N | - |
| Issue Classification issueClass string issueSubtype issueSubtype string issue Sub-Type issueSubtype string issue or quoting participant record is set- up in Nasdaq. See Appendix for allowable values. Authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator string Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3). N Issue is not restricted | | | | | |
| Issue Classification issueClass string ldentifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. Issue Sub-Type issueSubtype string ldentifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. Authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator string Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3). N Issue is not restricted | | | | | |
| Issue Classification Issue Class Identifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. | | | | | |
| Issue Classification issueClass string Identifies the security class for the issue as assigned by Nasdaq. See Appendix for allowable values. Issue Sub-Type issueSubtype string Identifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. Authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator string Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | | | | | |
| assigned by Nasdaq. See Appendix for allowable values. Issue Sub-Type issueSubtype string Identifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. Authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator string Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | Issue Classification | issueClass | string | Identifies the | |
| Same Sub-Type Issue Subtype String Identifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. | | | | | |
| Issue Sub-Type issueSubtype string Identifies the security sub-type for the issue as assigned by Nasdaq. See Appendix for allowable values. Authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test | | | | | The state of the s |
| Authenticity authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator Short Sale Threshold Indicator Authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition Y Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | Issue Sub-Type | issueSubtype | string | | e security sub-type for the issue as |
| Authenticity authenticity string Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator Short Sale Threshold Indicator Authenticity String Denotes if an issue or quoting participant record is set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition Y Issue is restricted under SEC Rule 203(b)(3). N Issue is restricted | ,,,, | | | | |
| set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P | | | | | The second secon |
| set- up in Nasdaq systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P | Authenticity | authenticity | string | Denotes if ar | n issue or quoting participant record is |
| test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | , | , | | | |
| only show live issues and quoting participants on public quotation displays. Code Definition P Live/Production T Test Short Sale Threshold Indicator Short Sale Threshold String Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | | | | • | |
| public quotation displays. Code Definition P Live/Production T Test | | | | | |
| Code Definition P Live/Production T Test Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicator String Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | | | | | |
| Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicator String Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | | | | | |
| Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicator Short Sale Threshold Indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). Code Definition Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | | | | Р | Live/Production |
| Code Definition Y Issue is restricted under SEC Rule 203(b)(3). N Issue is not restricted | | | | Т | · · |
| Code Definition Y Issue is restricted under SEC Rule 203(b)(3). N Issue is not restricted | Short Sale Threshold | shortThreshold | string | Indicates if a | security is subject to mandatory |
| Y Issue is restricted under SEC Rule 203(b)(3) N Issue is not restricted | | | | | |
| 203(b)(3) N Issue is not restricted | | | | Code | Definition |
| N Issue is not restricted | | | | Υ | Issue is restricted under SEC Rule |
| N Issue is not restricted | | | | | 203(b)(3) |
| <pre><space> Threshold Indicator not available</space></pre> | | | | N | Issue is not restricted |
| i space i i i constanti netarando i | | | | <space></space> | Threshold Indicator not available |

| IPO Flag | PO Flag ipo | | Indicates if the Nasdaq security is set up for IPO release. This field is intended to help Nasdaq market participant firms comply with FINRA Rule 5131(b). | | |
|------------------------------|-------------|--------|--|-----------------------------------|---|
| | | | Code | Defin | nition |
| | | | Nasdaq-Listed | Instrume | ents |
| | | | Y | | laq listed instrument is |
| | | | N | | p as a new IPO security laq listed instrument is |
| | | | | | et up as a new IPO |
| | | | | secu | |
| | | | Non-Nasdaq-Li | | |
| | | 1 | <space></space> | Not a | available |
| LULD Reference Price Tier | luldTier | string | calculation par | ameter i | p / Limit Down price band s to be used for the LD Rule for details. |
| | | | Code | | Definition |
| | | | 1 | | Tier 1 NMS Stocks and |
| | | | 2 | | select ETPs |
| | | | <space></space> | | Tier 2 NMS Stocks Not applicable |
| ETP Flag | etf | string | Indicates whether the security is an exchange traded product (ETP): | | |
| | | | Code | | Definition |
| | | | Υ | | Instrument is an ETP |
| | | | N | | Instrument is not an ETP |
| | | | <space></space> | | Not available |
| ETP Leverage Factor | etfFactor | int | underlying inde | ex. Exam value of cates the | |
| | | | _ | rage facto | ed to the nearest integer or 1 would represent .99. |
| | | | This field is used calculation purp | | O Tier I price band |
| | | | ETP Leverage Fa | | ently not supported for |
| Inverse Indicator | inverseETF | string | Indicates the d the ETP and un | | l relationship between index. |

| Code | Definition |
|------|------------------------------|
| Υ | ETP is an Inverse ETP |
| N | ETP is not an Inverse ETP |

Example: An ETP Leverage Factor of 3 and an Inverse value of 'Y' indicates the ETP will decrease by a value of 3.

```
"type": "record",
"name": "SeqDirectoryMessage",
"fields": [
"name": "SoupPartition",
"type": "int"
},
"name": "SoupSequence",
"type": "long"
"name": "msgType",
"type": "string"
},
"name": "trackingID",
"type": "long"
},
"name": "symbol",
"type": "string"
},
"name": "marketCategory",
"type": "string"
},
"name": "fsi",
"type": "string"
},
"name": "roundLotSize",
"type": [
"null",
"int"
},
```

```
"name": "roundLotOnly",
"type": [
"null", "string"
},
{
"name": "issueClass",
"type": [
"null",
"string"
},
"name": "issueSubtype",
"type": [
"null",
"string"
},
"name": "authenticity",
"type": [
"null",
"string"
},
{
"name": "shortThreshold",
"type": [
"null",
"string"
},
"name": "ipo",
"type": [
"null",
"string"
]
},
"name": "luldTier",
"type": [
"null",
"string"
},
"name": "etf",
"type": [
"null",
"string"
```

```
},
"name": "etfFactor",
"type": [
"null",
"int"
},
"name": "inverseETF",
"type": [
"null",
"string"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "R",
"trackingID": 7238625218217,
"symbol": "ZVZZT",
"marketCategory": "Q",
"fsi": "N", "roundLotSize": 250,
"roundLotOnly": "N",
"issueClass": "L",
"issueSubtype": "MF",
"authenticity": "T",
"shortThreshold": "N",
"ipo": "N",
"luldTier": "1",
"etf": "Y",
"etfFactor": 2,
"inverseETF": "N",
```

Regulation SHO Short Sale Price Test Restricted Indicator

In November 2010, the Securities and Exchange Commission (SEC) implemented changes to Rule 201 of the Regulation SHO (Reg SHO). For details, please refer to SEC Release Number 34-61595. In association with the Reg SHO rule change, Nasdaq introduced the following Reg SHO Short Sale Price Test Restricted Indicator message format.

For Nasdaq-listed issues, Nasdaq supports a full pre-opening spin of Reg SHO Short Sale Price Test Restricted Indicator messages indicating the Rule 201 status for all active issues. Nasdaq also sends the Reg SHO Short Sale Price Test Restricted Indicator message in the event of an intraday status change.

For other exchange-listed issues, Nasdaq relays the Reg SHO Short Sale Price Test Restricted Indicator message when it receives an update from the primary listing exchange.

Nasdaq processes orders based on the most Reg SHO Restriction status value.

Details

| Field | Name | Туре | Description | n |
|-----------------------|---------------|--------|---|---|
| SOUP Partition | SoupPartition | int | Message p | artition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incre | menting message sequence number. |
| Message Type | msgType | string | Y = Short S | ale Restriction Indicator |
| Tracking Number | trackingID | long | containin I See the Tr | Tracking number, compound key g: bytes 0-1 = Nasdaq internal tracking number bytes 2-7 = Timestamp in nanoseconds from midnight rackingID class in the daq.ncdsclient.internal.utils ithin the SDK. |
| Issue Symbol | symbol | string | Nasdaq-assigned indicator for issue for which the short sale restriction indicator message is being generated. For details on Nasdaq symbology, please refer to Appendix B. | |
| Reg SHO Action | regSHOAction | string | Denotes the Reg SHO Short Sale Price Test Restriction status for the issue at the time of the message dissemination. Allowable values are: | |
| | | | Code | Definition |
| | | | 0 | No price test in place |
| | | | 1 | Reg SHO Short Sale Price Test |
| | | | | Restriction in effect due to an intra- |
| | | | | day price |
| | | | | drop in security |
| | | | 2 | Reg SHO Short Sale Price Test |
| | | | | Restriction remains in |
| | | | | effect |

```
{
"type": "record",
"name": " SeqRegSHORestrictionMessage",
"fields": [
{
   "name": "SoupPartition",
   "type": "int"
},
{
   "name": "SoupSequence",
   "type": "long"
```

```
},
"name": "msgType",
"type": "string"
},
{
"name": "trackingID",
"type": "long"
},
"name": "symbol",
"type": "string"
"name": "regSHOAction",
"type": "string"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "Y",
"trackingID": 7238625218217,
"symbol": " ZVZZT",
"regSHOAction": "1"
```

Market-Wide Circuit Breaker (MWCB) Message – Decline Level

Informs data recipients what the daily MWCB breach points are set to for the current trading day.

| Field | Name | Туре | Description |
|-----------------|---------------|--------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | V = Market wide circuit breaker Decline Level Message |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: • bytes 0-1 = Nasdaq internal tracking number • bytes 2-7 = Timestamp in nanoseconds from midnight |

| | | | See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. |
|---------|--------|------|--|
| Level 1 | level1 | long | Denotes the MWCB Level 1 Value. |
| Level 2 | level2 | long | Denotes the MWCB Level 2 Value. |
| Level 3 | level3 | long | Denotes the MWCB Level 3 Value. |

```
"type": "record",
"name": " SeqMWCBDeclineMessage",
"fields": [
"name": "SoupPartition",
"type": "int"
},
{
"name": "SoupSequence",
"type": "long"
},
"name": "msgType",
"type": "string"
"name": "trackingID",
"type": "long"
},
{
"name": "level1",
"type": "long"
},
"name": "level2",
"type": "long"
},
"name": "level3",
"type": "long"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "V",
"trackingID": 7238625218217,
"level1": 356735673,
```

"level2": 599877474873,

```
"level3": 42256736573
```

Market-Wide Circuit Breaker (MWCB) Message – Status

Informs data recipients when a MWCB has breached one of the established levels.

Details

| Field | Name | Туре | Description |
|-----------------|---------------|--------|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. |
| Message Type | msgType | string | W = Market-Wide Circuit Breaker Status message |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: • bytes 0-1 = Nasdaq internal tracking number • bytes 2-7 = Timestamp in nanoseconds from midnight See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. |
| Breached Level | breachlevel | string | Denotes the MWCB Level that was breached. |
| | | | "1" = Level 1 "2" = Level 2 "3" = Level 3 |

```
{
"type": "record",
"name": " SeqMWCBStatusMessage",
"fields": [
{
   "name": "SoupPartition",
   "type": "int"
},
{
   "name": "SoupSequence",
   "type": "long"
},
{
   "name": "msgType",
   "type": "string"
},
```

```
{
"name": "trackingID",
"type": "long"
},
{
"name": "level",
"type": "string"
}
]
}

Sample
{
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "W",
"trackingID": 7238625218217,
"level": "1"
}
```

Operational Halt

The Exchange uses this message to indicate the current Operational Status of a security to the trading community. An Operational Halt means that there has been an interruption of service on the identified security impacting only the designated Market Center. These Halts differ from the "Stock Trading Action" message types since an Operational Halt is specific to the exchange for which it is declared, and does not interrupt the ability of the trading community to trade the identified instrument on any other market place.

Nasdaq uses this administrative message to indicate the current trading status of the three market centers operated by Nasdaq.

| Field | Name | Туре | Description | | | |
|-----------------------|---------------|------|--|--|--|--|
| SOUP Partition | SoupPartition | int | Message partition identifier. Ignore. | | | |
| SOUP Sequence | SoupSequence | long | Auto-incrementing message sequence number. | | | |
| Message Type | msgType | | h = Operational Halt | | | |
| Tracking Number | trackingID | long | Message Tracking number, compound key containing: • bytes 0-1 = Nasdaq internal tracking number • bytes 2-7 = Timestamp in nanoseconds from midnight See the TrackingID class in the com.nasdaq.ncdsclient.internal.utils package within the SDK. | | | |
| Stock | symbol | | Denotes the security symbol for the issue in the Nasdaq execution system | | | |
| Market Code | marketCenter | | Code Value | | | |

| | | Q | Nasdaq |
|------------------|--------|------|--|
| | | В | BX |
| | | Χ | PSX |
| Operational Halt | action | Code | Value |
| Action | | Н | Operationally Halted on the identified |
| | | | Market |
| | | Т | Operational Halt has been lifted and |
| | | | Trading resumed |

```
"type": "record",
"name": "SeqMarketCenterActionMessage",
"fields": [
"name": "SoupPartition",
"type": "int"
},
"name": "SoupSequence",
"type": "long"
},
"name": "msgType",
"type": "string"
},
"name": "trackingID",
"type": "long"
},
{
"name": "symbol",
"type": "string"
},
"name": "market",
"type": "string"
},
"name": "action",
"type": "string"
Sample
"SoupPartition": 0,
"SoupSequence": 123,
"msgType": "h",
```

"trackingID": 7238625218217,

```
"symbol": "ZVZZT",
"market": "Q",
"action": "H"
```

Appendix A – Stock Symbol Convention

For Nasdaq-listed issues, Nasdaq currently restricts its symbol length to a maximum of 8 characters. For common stock issuances, Nasdaq, BX and PSX will only assign root symbols of 1 to 4 characters in length with possible fifth and or sixth character denoting a suffix. In certain instances, a dot "." delimiter may be applied to symbols after the root and between the suffix eg., XXXX.A. For subordinate securities, Nasdaq, BX, and PSX will assign a 5 character symbol for which the last character relays information about the issue class or issue type. For the current list of fifth and or six character symbol suffixes, please refer to Ticker Symbol Convention page on the Nasdaq Trader website.

For NYSE-, NYSE American- and NYSE Arca-listed securities with subordinate issue types, please refer to <u>Ticker Symbol Convention</u> page on the Nasdaq Trader website.

Appendix B – Trading Action Reason Codes

For Nasdaq-listed issues, Nasdaq acts as the primary market and has the authority to institute a trading halt or trading pause in an issue due to news dissemination or regulatory reasons.

For CQS issues, Nasdaq, BX and BX abide by any regulatory trading halts and trading pauses instituted by the primary or listing market as appropriate.

For all issue types, Nasdaq, BX and/or BX may also halt trading for operational reasons. Nasdaq, BX and/or BX will send out a trading action message to inform its market participants when the trading status of an issue changes. For informational purposes, Nasdaq and BX also attempt to provide the reason for each trading action update. For bandwidth efficiency reasons, Nasdaq, BX and BX use a 4-byte code for the reason on its outbound data feeds.

| REASON C | REASON CODES FOR TRADING HALT ACTIONS | | | | | |
|----------|---|--|--|--|--|--|
| Code | Value | | | | | |
| T1 | Halt News Pending | | | | | |
| T2 | Halt News Disseminated | | | | | |
| T5 | Single Security Trading Pause In Affect | | | | | |
| Т6 | Regulatory Halt — Extraordinary Market Activity | | | | | |
| Т8 | Halt ETF | | | | | |
| T12 | Trading Halted; For Information Requested by Listing Market | | | | | |
| H4 | Halt Non-Compliance | | | | | |

| Н9 | Halt Filings Not Current |
|-----------------|---|
| H10 | Halt SEC Trading Suspension |
| H11 | Halt Regulatory Concern |
| 01 | Operations Halt; Contact Market Operations |
| LUDP | Volatility Trading Pause |
| LUDS | Volatility Trading Pause – Straddle Condition |
| MWC1 | Market Wide Circuit Breaker Halt – Level 1 |
| MWC2 | Market Wide Circuit Breaker Halt – Level 2 |
| MWC3 | Market Wide Circuit Breaker Halt – Level 3 |
| MWC0 | Market Wide Circuit Breaker Halt – Carry over from previous day |
| IPO1 | IPO Issue Not Yet Trading |
| M1 | Corporate Action |
| M2 | Quotation Not Available |
| <space></space> | Reason Not Available |

| REASON CODES FOR QUOTATION/TRADING RESUMPTION ACTIONS | | |
|---|---|--|
| Code | Value | |
| T3 | News and Resumption Times | |
| T7 | Single Security Trading Pause / Quotation Only Period | |
| R4 | Qualifications Issues Reviewed/Resolved; Quotations/Trading to Resume | |
| R9 | Filing Requirements Satisfied/Resolved; Quotations/Trading To Resume | |
| C3 | Issuer News Not Forthcoming; Quotations/Trading To Resume | |
| C4 | Qualifications Halt ended; Maintenance Requirements Met; Resume | |
| C9 | Qualifications Halt Concluded; Filings Met; Quotes/Trades To Resume | |
| C11 | Trade Halt Concluded By Other Regulatory Auth.; Quotes/Trades Resume | |
| MWCQ | Market Wide Circuit Breaker Resumption | |
| R1 | New Issue Available | |
| R2 | Issue Available | |
| IPOQ | IPO Security Released for Quotation (Nasdaq Securities Only) | |
| IPOE | IPO Security — Positioning Window Extension (Nasdaq Securities Only) | |
| <space></space> | Reason Not Available | |

For the current list of regulatory halts, please refer to the <u>Trading Halts page</u> on the Nasdaq Trader website.

Appendix C - Issue Classification Values

Identifies the security class for the issue as assigned by Nasdaq

| CODES F | CODES FOR ISSUE CLASSIFICATION VALUES | | |
|---------|---------------------------------------|--|--|
| Code | Value | | |
| Α | American Depositary Share | | |
| В | Bond | | |
| С | Common Stock | | |
| F | Depository Receipt | | |
| | 144A | | |
| L | Limited Partnership | | |
| N | Notes | | |
| 0 | Ordinary Share | | |
| Р | Preferred Stock | | |
| Q | Other Securities | | |
| R | Right | | |

| S | Shares of Beneficial Interest |
|---|-------------------------------|
| T | Convertible Debenture |
| U | Unit |
| V | Units/Benif Int |
| W | Warrant |

Appendix D - Issue Sub-Type Values

| CODES FOR ISSUE CLASSIFICATION VALUES | | |
|---------------------------------------|---|--|
| Code | Value | |
| Α | Preferred Trust Securities | |
| Al | Alpha Index ETNs | |
| В | Index Based Derivative | |
| С | Common Shares | |
| СВ | Commodity Based Trust Shares | |
| CF | Commodity Futures Trust Shares | |
| CL | Commodity-Linked Securities | |
| CM | Commodity Index Trust Shares | |
| СО | Collateralized Mortgage Obligation | |
| СТ | Currency Trust Shares | |
| CU | Commodity-Currency-Linked Securities | |
| CW | Currency Warrants | |
| D | Global Depositary Shares | |
| E | ETF-Portfolio Depositary Receipt | |
| EG | Equity Gold Shares | |
| EI | ETN-Equity Index-Linked Securities | |
| EM | Exchange Traded Managed Funds * | |
| EN | Exchange Traded Notes | |
| EU | Equity Units | |
| F | HOLDRS | |
| FI | ETN-Fixed Income-Linked Securities | |
| FL | ETN-Futures-Linked Securities | |
| G | Global Shares | |
| ļ | ETF-Index Fund Shares | |
| IR | Interest Rate | |
| IW | Index Warrant | |
| IX | Index-Linked Exchangeable Notes | |
| J | Corporate Backed Trust Security | |
| L | Contingent Litigation Right | |
| LL | Identifies securities of companies that are set up as a Limited Liability Company (LLC) | |
| М | Equity-Based Derivative | |
| MF | Managed Fund Shares | |
| ML | ETN-Multi-Factor Index-Linked Securities | |

| MT | Managed Trust Securities |
|----|--|
| N | NY Registry Shares |
| 0 | Open Ended Mutual Fund |
| Р | Privately Held Security |
| PP | Poison Pill |
| PU | Partnership Units |
| Q | Closed-End Funds |
| R | Reg-S |
| RC | Commodity-Redeemable Commodity-Linked Securities |
| RF | ETN-Redeemable Futures-Linked Securities |
| RT | REIT |
| RU | Commodity-Redeemable Currency-Linked Securities |
| S | SEED |
| SC | Spot Rate Closing |
| SI | Spot Rate Intraday |
| Т | Tracking Stock |
| TC | Trust Certificates |
| TU | Trust Units |
| U | Portal |
| V | Contingent Value Right |
| W | Trust Issued Receipts |
| WC | World Currency Option |
| Х | Trust |
| Υ | Other |
| Z | Not Applicable |
| | |