Nasdaq Fund Network (NFN)

File Format Specification for NFN FTP Server Users

10/19/2020

Nasdaq Global Information Services

1 NFN FTP Server Information 3
1.1 Overview 3
1.2 FTPS Server Access Information 3
1.3 NFN FTPS File Naming 4
1.3.1 Data File 5
1.3.2 Token File 5
1.4 NFN FTP Completion file 5
1.4.1 Completion File Name 5
1.4.2 Completion File Format 6
1.5 NFN FTP file archiving 7
2 Data Format Changes 8
2.1 NFN Instrument Code and CSV File Upload Release – October 2020 8
2.2 NFN Instrument Type and Instrument Code Release – March 2018 8
3 File Header (All Versions) 8
4 NFN 0050 Data Formats 10
4.1 Daily Valuation Message for Mutual Funds, Unit Investment Trusts (UITs), Annuities, Structured Products, Alternative Investment Products (AIPs), NextShares, Collective Investment Trust (CIT), Managed Accounts, Separate Accounts, Hedge Funds, and Demand Deposit Account (NFN 0050) 10
4.2 Daily Valuation Message for Money Market Funds (NFN 0050) 25
4.3 Daily Valuation Message for Money Market Funds with Calculation Time (NFN 0050) – New as of July 11, 2016 35
4.4 Distributions Report for All NFN Instruments (NFN 0050) 46
4.5 Dividend / Interest for All NFN Instruments (NFN 0050) 52
5 Contact Information 62
6 Appendices 63
Appendix A – Current validation parameters for the NFN Valuation Module 63
Appendix B – NFN Error Codes 65
Appendix C - Documentation Update Log 94

1 NFN FTP Server Information

1.1 Overview

Through the Nasdaq Fund Network (NFN), Nasdaq facilitates the distribution of daily valuation and corporate action data from fund families and trust sponsors to the market data community.

Nasdaq offers a number of inbound user interface options for fund families, trust sponsors and pricing agents to use to report the NFN data. This document outlines the NFN file formats for the FTP server option.

1.2 FTPS Server Access Information

The FTPS server configuration information is as follows:

Server Name:	sftpdata.nasdaq.com (via internet) sftpdata-int.nasdaq.com (via extranet)
Port Number:	22
File Protocol:	FTP, SSL Explicit Encryption
FTP Protocol Options: **(may be found under "Advanced Options")**	Support for Listing of Hidden File – Select "Auto" IP Address for Passive Mode Connection & Selected

To gain access to the NFN FTPS server, firms must submit a NFN User ID Order Form to Nasdaq Trading Services. Upon receipt of the form, Nasdaq Trading Services will contact the NFN user to arrange for the proper Secure FTP access and directory paths.

Each registered NFN FTP Participant will get its own directory for sending files via FTPS. A Participant's directory will not be visible to other Participants.

Directions:

After access is setup, the Participant should login to the FTPS server.

The Participant should send NFN Price Update Files to the FTPS server followed by a NFN FTP Token file.

The Token file should have an entry for each Price Update file that is to be processed for the next processing interval. A Price Update file that has been uploaded to the NFN system will not be processed by the NFN system if it not listed in the Token file.

The NFN processing intervals are configurable, allowing the NFN system to deal with user emergencies.

As of January 17, 2017, the NFN FTPS processing times are configured as follows:

FTP Retrieval Times (US Eastern Time)	
8:15 a.m. 9:15 a.m. 11:00 a.m. 2:00 p.m. 3:00 p.m. 4:00 p.m. 4:30 p.m. 5:00 p.m. 5:15 p.m. 5:30 p.m. 5:45 p.m. 5:50 p.m. 5:55 p.m. 6:00 p.m. (Last pull prior to first NFN Data Service spin)	6:20 p.m. (Last pull prior to second NFN Data Service spin) 6:30 p.m. (Last pull prior to third NFN Data Service spin) 6:45 p.m. 6:50 p.m. 7:00 p.m. 7:10 p.m. 7:20 p.m. 7:30 p.m. 7:40 p.m. 7:55 p.m. (Last pull for the business day)

All file transfers, including the token file, must be completed prior to the processing time for that interval.

The NFN system will put a Confirmation file in the Participants directory once the Price Update files have been processed.

1.3 NFN FTPS File Naming

When submitting data to the NFN FTPS Server, firms must post both a data file and a token file for processing.

1.3.1 Data File

For the NFN FTPS Server, Nasdaq requires that firms use the following file naming convention:

<Data file name>.<User Transmission Date format: mmddyyyy>.<User Transmission Time in 24 hour format: hhmmss>.data.

Note: Data file name cannot exceed 24 characters in length and cannot contain spaces or special characters.

Example: STST.03212011.105500.data

Please see below for details on the Data file record content.

1.3.2 Token File

For the NFN FTPS Server, firms must submit one (and only one) Token file before the cutoff time for each file processing interval. See section 1.2 for the current NFN FTP processing intervals.

The naming convention for the Token File must be:

DSVF.<Primary MMID(4 Bytes)>.<User Transmission date in mmddyyyy>.<User Transmission time in hhmmss>.tok

Example: DSVF.STST.06132011.110010.tok

The content of the Token file must be as follows:

<Data file name>.<User Transmission date in mmddyyyy>.<User Transmission time in hhmmss>.data<Space Character><File Size in Bytes>

Example: STST.06132011.105500.data 1024

1.4 NFN FTP Completion file

1.4.1 Completion File Name

Nasdaq will append ".comp" to the Price Update file name.

Example: STST.06132011.150022.comp

1.4.2 Completion File Format

For each input Price Update file processed, the NFN system creates a completion file that gives the completion status of each price update message. The original price update message is returned with two comma separated fields appended to it. The first field contains a single digit success indicator, which is set to '0' for an accepted message and '1' for a rejected message. The second field contains formatted text, up to 200 bytes, containing details of the transaction.

The format of a Completion file record is one of the following:

<original price update message>,0,<success message>

<original price update message>,1,<reject message>

For each record that is successfully processed by the NFN FTP server, the acceptance message will include:

- Transaction date in mmddyyyy format (8 bytes)
- Transaction time in hhmmss format (6 bytes)
- First Session Close time in hhmm format (4 bytes)
- Success indicator set to "00" (2 bytes)
- FundID (11 bytes for NFN 0050, inclusive of trailing spaces)

Example: ""MO XYZXX NI MUNICIPAL MONEY MARKET 27 3.43 3.49 4900.2

CR,1, 11142007102700180000AAAAX"

(Note: Quotation marks are used for illustrative purposes only and are not part of the actual record.)

The each record cannot be processed by the NFN FTP server, the reject message will include:

- Reject message in free text format (40 bytes)
- FundID (7 bytes, trailing spaces)
- Cross ref ID (7 bytes, trailing spaces)
- 25 bytes used for NASDAQ internal use

Example: "NAV GREATER THAN OFFER AAAAX 03135000000000000000000000"

(Note: Quotation marks are used for illustrative purposes only and are not part of the actual record.)

Please refer to appendix for the current error codes.

1.5 NFN FTP file archiving

After the NFN system has processed the Token and Price Update files for the processing interval, it appends the processing date and time to the files and moves them to a system archive directory for auditing purposes. The files will remain in the archive for a period of 1 week.

2 Data Format Changes

2.1 NFN Instrument Code and CSV File Upload Release – October 2020

On or about October 19, 2020 Nasdaq will retire legacy 0040 format.

Nasdaq is updating the NFN Managed Account base price to the industry standard of $1,000.

2.2 NFN Instrument Type and Instrument Code Release – March 2018

Based on clients' requests, Nasdaq will add new Instrument Type values for Collective Investment Trust (CIT), Managed Accounts, Separate Accounts and Hedge Fund on or about March 26, 2018. Firms that wish to use the new Instrument Types must use NFN 0050 message formats for data entry.

3 File Header (All Versions)

Each file must be in ASCII format and contain a header used to verify the file as a valid NFN file. The file header must be 18 bytes in length and include the following information:

Field Name	Offset	Length	Format	Description / Values
System Name	0	4	Alpha	System Name: **System Name** / **Scheduled live** "DSVF" / As of August 20, 2018
Data Format Version	4	4	Numeric	Defines the version of the NFN data formats being used for the payload messages in the NFN FTP file. The allowable values are: **Version** / **Scheduled Live Date** 0050 / June 13, 2011
Current Month	8	2	Numeric	Two byte, numeric representation of the current month (e.g., January = 01)
Current Day	10	2	Numeric	Two byte, numeric representation of the current day (e.g., 01 to 31)
Current Year	12	4	Numeric	Four byte, numeric representation of the current year (e.g., 2010, 2011)
End of Row	16	2	Hexadecimal	Two character row marker to denote the placement of the current message within the file.

				(Note: Carriage return command is typically stored as a hexadecimal code of “0xD” and end of file is typically stored as “0xA”.)

Examples: **DSVF005008202018** for a NFN version 0050 file posted on June 13, 2011.

Please note that the date of header record must match the current date in order for the file to be accepted.

Please also note that, where specified in the associated formats, price related fields must be submitted in the dictated format (inclusive of the decimal point).

4 NFN 0050 Data Formats

Due to the fixed nature of the NFN inbound message formats, it is very important that fields be the proper length and format.

- Numeric values must use the correct decimal placement and zero padding. Example: If a firm wanted to report a NAV of $10.01 in NFN 0050 format, it would enter “000010.010000”.
- Text values must be left justified and space padded. Example: If a firm wanted to report NA for Offer/Market Price in NFN 0050 format, it would enter “NA ” (NA followed by 11 spaces).
- Dates must be entered in MMDDYYYY format. Example: June 13, 2011 would be entered as “06132011”.
- NFN system is case sensitive so “NA” must be entered as upper case letters.
- CUSIP must be entered as 9 alphanumeric characters (with no spaces or special codes).

4.1 Daily Valuation Message for Mutual Funds, Unit Investment Trusts (UITs), Annuities, Structured Products, Alternative Investment Products (AIPs), NextShares, Collective Investment Trust (CIT), Managed Accounts, Separate Accounts, Hedge Funds, and Demand Deposit Account (NFN 0050)

This message format should be used to report daily valuation data for all NFN instrument classes except money market funds. The file must contain one record for each instrument being updated. The records must be 180 characters long, in the following format:

Field	Offset	Length	Format	Description	Required	Data Validation
Row Header	0	3	Alphanumeric	Defines inbound data format. “MFU” for mutual fund, UIT, annuity, structured products, alternative investment products, NextShares, collective investment trust, managed accounts, separate accounts, hedge fund, and demand deposit account updates.	Yes	Field level validations: • Row Header not defined. • Message does not match the Row Header value.
Symbol (pka Fund ID)	3	11	Alphanumeric	Defines the NASDAQ assigned ticker symbol for NFN instrument. Note: This field was being expanded to 11 bytes to accommodate for symbology changes as needed.	Yes	Field level validations: • NFN Symbol is not defined in system.

Field	Offset	Length	Format	Description	Required	Data Validation
						• NFN Symbol status is not set to active. • NFN Symbol not associated with the supported instrument types. • Firm not entitled for NFN Symbol.
Footnotes	14	10	Alphanumeric	Any footnotes applicable for the NFN instrument. The allowable values are:	No for normal conditions Yes for ex-date adjustments	Field level validations: • Footnote codes not defined. • Footnote codes are duplicated. • Footnote code not defined for NFN instrument type.

Code	Definition	Instrument Type
D	Capital gains distribution*	All
F	Fund uses prior day prices for NFN reporting purposes	All
H	Deferred sales charge	UIT
I	Repurchase offer period for interval funds	Mutual Fund
N	No load fund	Mutual Fund, CITs, Managed Accounts, Separate Accounts
O	Primary offering	UIT
P	12(b)1 fee	Mutual Fund, CITs, Managed Accounts, Separate Accounts
R	Redemption fee	Mutual Fund, CITs, Managed Accounts, Separate Accounts
S	Stock split or dividend adjustment*	All
W	NRO indicator	UIT
X	Cash dividend, special cash dividend or income distribution adjustment*	All
Y	Secondary offering	UIT

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>C</td><td>Revaluation</td><td>AIP, Hedge Fund, and Structured Product</td></tr>
</table>
*Note: For codes D, S and X, firms must also enter a separate Dividend/Interest or Capital Distribution message.

Please contact NFN Operations if you wish to request a new footnote code.
</td><td></td><td></td></tr>
<tr><td>Instrument Type

(pka Fund Type)</td><td>24</td><td>2</td><td>Alphanumeric</td><td>Indicates the type of NFN instrument being reported. Proposed values are:
<table>
<tr><th>Code</th><th>Definition</th></tr>
<tr><td>MF</td><td>Mutual Fund[1]</td></tr>
<tr><td>UT</td><td>Unit Investment Trust</td></tr>
<tr><td>AN</td><td>Annuity</td></tr>
<tr><td>SP</td><td>Structured Product</td></tr>
<tr><td>AP</td><td>Alternative Investment Product[2]</td></tr>
<tr><td>EM</td><td>NextShares Exchange Traded Managed Fund</td></tr>
<tr><td>CT</td><td>Collective Investment Trust</td></tr>
<tr><td>MA</td><td>Managed Accounts</td></tr>
<tr><td>SA</td><td>Separate Accounts</td></tr>
<tr><td>HF</td><td>Hedge Fund</td></tr>
<tr><td>DD</td><td>Demand Deposit Account</td></tr>
</table>
</td><td>Yes</td><td>Field level validation:

• Instrument Type value is not defined.
• Instrument Type value does not match the value in NFN registration service for NFN Symbol.</td></tr>
</table>

[1] Mutual Fund instrument type is used for Open-End Mutual Funds, Closed End Mutual Funds / ETFs, Interval Fund and Business Development Company (BDC) instruments.
2 Alternative Investment Product instrument type is used for Managed Future Fund, Fund of Hedge Fund, Non-Traded REIT, Non-Traditional Hedge Fund, Commodity Pool Fund and Private Equity Offering.

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Reporting Type</td><td>26</td><td>1</td><td>Alphanumeric</td><td>Indicates the reporting frequency for NFN instrument. Proposed values are:<table><tr><th>Code</th><th>Definition</th></tr><tr><td>R</td><td>Daily / End of Day reporting (Default)
Note: Firms may use the “R” code for funds that report on daily, weekly, bi-weekly, or quarterly basis.</td></tr><tr><td>I</td><td>Intraday Update
Note: On the outbound NFNDS data feed, Nasdaq supports the “I” reporting type value on entries with the current trading date only. For prior entry dates, Nasdaq will treat “R” and “I” values in the same manner so vendors will only update the closing value.</td></tr></table></td><td>Yes</td><td>Field level validations:
Reporting Type value is not defined.</td></tr>
<tr><td>NAV</td><td>27</td><td>13</td><td>$$$$$$.dddddd</td><td>Indicates the net asset value (NAV) for the NFN instrument. If unavailable, please submit “NA”.</td><td>Yes</td><td>NAV price validations:
System price validation parameter for normal price reporting. If current NAV is more than X% higher or lower than prior NAV, firm should enter “#” is override field.
System price validation for ex-date dividends</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
						and distributions. If the current NAV is 100% higher or lower than prior NAV, firm should enter "#" in override field. Firm should also enter "D", "S" or "X" in the Footnotes field. • System price validation: NAV cannot be more than offer price. Instrument Type validation: • UITs must enter Redemption Price (rather than NAV). Field level validations: • NAV format does not match specification. *Note: Starting value for Managed Accounts (SMAs and UMAs) at inception is $1,000.

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>NAV Override</td><td>40</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore % price validations associated with the NAV field. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
• NAV Override value is not defined.</td></tr>
<tr><td>Offer/ Market Price</td><td>41</td><td>13</td><td>$$$$$$.dddddd</td><td>Offer prices are typically reported by open end mutual funds, UITs and annuities. For these instruments, the price should reflect the price at which an investor can purchase shares.

Market prices are typically reported by closed end funds and other exchange traded instruments. For these instruments, the price should reflect the closing price on the primary market.

If unavailable, please submit “NA”.</td><td>Yes</td><td>For Offer Price validations:
• System price validation parameter for normal price reporting. If difference between NAV / Redemption Price and offer / market price fields is greater than X%, firm should enter “#” in override field.
• System price validation parameter for normal price reporting. If Offer / Market price is more than X% higher or lower than prior offer price,</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>firm should enter “#” in override field
• System price validation for ex-date dividends and distributions: If the current offer price is 100% higher or lower than prior offer price, firm should enter “#” in override field. Firm should also enter “D”, “S” or “X” in the Footnotes field.

Format level validations:

• Offer / Market Price format does not match specification.</td></tr>
<tr><td>Offer / Market Price Override</td><td>54</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore % price validations associated with the offer price and market price field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• Offer / Market Price Override value is not defined.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
Redemption Price (UITs only)	55	13	$$$$$$.dddddd	Indicates the amount that an investor would receive if he were to redeem UIT shares. If unavailable, please submit "NA". If space filled, Nasdaq will populate the field as "NA".	Yes for UITs only	Price level validations: • System price validation parameter for normal price reporting. If current Redemption Price is more than X% higher or lower than prior Redemption Price, firm should enter "#" is override field. • System price validation for ex-date dividends and distributions. If the current Redemption Price is 100% higher or lower than prior Redemption Price, firm should enter "#" in override field. Firm must also enter "D", "S" or "X" in the Footnotes field. • System price validation: NAV

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>cannot be more than offer price.
• System price validation: Redemption Price cannot be zero. If unavailable, enter “NA”.

Instrument Type validation:

• Mutual funds, annuities, and demand deposit account should enter NAV price.

Field level validations:

• Redemption Price format does not match specification.</td></tr>
<tr><td>Redemption Price Override

(from UIT format)</td><td>68</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore % price validations associated with the redemption price field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• Redemption Price Override value is not defined.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Wrap Price</td><td>69</td><td>13</td><td>$$$$$$.dddddd</td><td>The price paid to purchase units in a wrap account. If unavailable, please submit “NA”.

If space filled, Nasdaq will populate the field as “NA”.</td><td>Yes for UITs only</td><td>Field level validations:

• Wrap price format does not match specification.</td></tr>
<tr><td>Total Net Assets</td><td>82</td><td>15</td><td>$$$$$$$$$$$$$$$</td><td>Indicates the total net assets (actual amount in dollars) for instrument. If unavailable, please submit “NA”.

If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Total Net Asset validations:

• If the Total Net Assets is less than $ threshold parameter, firm should enter “#” in override field.
• Total Net Assets cannot be zero.

Field level validations:

• Total Net Asset format does not match specification.</td></tr>
<tr><td>Total Net Assets Override</td><td>97</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore system validations associated with the Total Net Asset field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• Total Net Assets Override value is not defined.</td></tr>
<tr><td>Current Yield</td><td>98</td><td>9</td><td>$$$$.dddd</td><td>The annual rate of return on investment.</td><td>No</td><td>Field level validations:</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>If unavailable, please submit “NA”.

If space filled, Nasdaq will populate the field as “NA”.</td><td></td><td>• Wrap price format does not match specification.</td></tr>
<tr><td>Current Yield Direction</td><td>107</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the current yield is a positive or negative number.

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;

Current yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• Yield direction value is not defined.</td></tr>
<tr><td>ELTR</td><td>108</td><td>9</td><td>$$$$.dddd</td><td>Estimated Long Term Return (ELTR) or estimated yield over the life of the portfolio of a UIT or other NFN instrument. If unavailable, please submit “NA”.

If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Field level validations:

• ELTR format does not match specification.</td></tr>
<tr><td>ETLR Direction</td><td>117</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the ELTR value is a positive or negative number.

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;

ELTR is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero ELTR(Default)</td></tr></table></td><td>No</td><td>Field level validations:

• ELTR value is not defined.</td></tr>
<tr><td>Accrued Interest</td><td>118</td><td>13</td><td>$$$$$$.dddddd</td><td>Interest accrued since the last interest payment was made. If unavailable, please submit “NA”.

If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Field level validations:

• Accrued Interest format does not match specification.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Daily Dividend Factor

(pka Daily Dividend)</td><td>131</td><td>9</td><td>$$.dddddd</td><td>Indicates the dividend factor if the fund or UIT declares a daily dividend. Please note that firms should make dividend adjustments for weekends and holidays as necessary.

If unavailable, please submit “NA”. If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Field level validations:

• Daily Dividend format does not match specification.
• Daily Dividend cannot be zero.</td></tr>
<tr><td>Daily Dividend Adjustment Indicator</td><td>140</td><td>1</td><td>Alphanumeric</td><td>Indicates if the Daily Dividend Factor was fattened to reflect weekend, holiday or other non-reported period.

Allowable values are:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>Y</td><td>Fat adjustment reflected in Daily Dividend Factor</td></tr><tr><td>N</td><td>No fat adjustment for Daily Dividend Factor</td></tr><tr><td><space></td><td>Not applicable; no Daily Dividend Factor provided</td></tr></table></td><td>Yes only if Daily Dividend is reported</td><td>Field level validations:

• Daily Dividend Adjustment value is not defined.
• Daily Dividend Adjustment factor does not match logic for associated price field. If Daily Dividend field is populated with numeric value, this field must be populated as Y or N. If Daily Dividend field is populated as “NA” or spaces, this field must be populated as <space>.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
Entry Date	141	8	MMDDYYYY	Reflects the date for which the daily update is valid. Except for prior day corrections, this field should reflect the current day's date.	Yes	Date validations: • Entry date cannot be a future date. • Entry date is not a valid calendar date. • NFN Symbol was not active on entry date. Field level validations: • Entry date does not match specification.
Currency	149	3	Alphanumeric	Indicates the ISO currency code associated with the NFN price-related fields. For this field, Nasdaq will use ISO 4217 currency alphabetic codes. For NFN 0050, if this field is space filled, Nasdaq will populate the value as assigned in the listing.	No	Field validations: • Currency is not a defined value.
CUSIP	152	9	Alphanumeric	Indicates the unique security identifier as assigned by S&P CUSIP Bureau for NFN instrument. If CUSIP is unknown, firm may enter a dummy CUSIP such as "123456789".	Yes	Offline validation: • Nasdaq will compare the CUSIP number reported in this message against the CUSIP number in the

Field	Offset	Length	Format	Description	Required	Data Validation
						NFN system. If the two values do not match, Nasdaq will include the instrument in its mismatched CUSIP report.
Reserved / Filler	161	17	Space filled	Space fill as needed to meet fixed message length requirement.		Row length must be 180 characters (inclusive of carriage return).
End-of-Row Marker	178	2	Hexadecimal	Two character row marker to denote the placement of the current message within the file: Carriage return or end of file. (Note: Carriage return command is typically stored as a hexadecimal code of “0xD” and end of file is typically stored as “0xA”.)	Yes	

4.2 Daily Valuation Message for Money Market Funds (NFN 0050)

This message format should be used to report daily or weekly valuation data for money market funds only.

Note: While this version of the money market fund message format may be used for intraday valuation reporting, it does not support an inbound time stamp. Downstream market data distributors will, therefore, display intraday records with associated NFN dissemination time.

The file must contain one record for each instrument being updated. The records must be 180 characters long, in the following format:

Field	Offset	Length	Format	Description	Required	Data Validation
Row Header	0	3	Alphanumeric	Defines inbound data format. "MMF" for money market fund updates.	Yes	Field level validations: • Row Header value is not defined. • Data format does not match the Row Header value.
Symbol	3	11	Alphanumeric	Defines the NASDAQ assigned ticker symbol for NFN instrument. Note: This field was expanded to 11 bytes to accommodate for symbology changes as needed.	Yes	Field level validations: • NFN Symbol is not defined in system. • NFN Symbol status is not set to active. • NFN Symbol is not associated with the supported instrument types. • Firm not entitled for NFN Symbol.
Footnotes	14	10	Alphanumeric	Any footnotes applicable for the NFN instrument. The allowable values for money market funds are: **Code** | **Definition**	No	Field level validations: • Footnote codes not defined. • Footnote codes are duplicated.

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>A</td><td>Fund’s return may differ due to capital gains or losses</td></tr>
<tr><td>B</td><td>Sales or account charges may impact yield</td></tr>
<tr><td>F</td><td>Fund uses price of day prior to the day of reporting</td></tr>
<tr><td>G</td><td>Redemption Gate In Effect</td></tr>
<tr><td>L</td><td>Liquidity Fee In Effect</td></tr>
<tr><td>S</td><td>Stock split dividend*</td></tr>
<tr><td>D</td><td>Capital Distribution*</td></tr>
<tr><td>X</td><td>Cash dividend, special cash dividend or income distribution adjustment *</td></tr>
</table>
*Note: For codes D, S and X, firms must also enter a separate Dividend/Interest or Capital Distribution message.

Please contact NFN Operations if you wish to request a new footnote code.</td><td></td><td>• Footnote code not defined for NFN instrument type.</td></tr>
<tr><td>Reporting Type</td><td>24</td><td>1</td><td>Alphanumeric</td><td>Indicates the reporting frequency for NFN instrument. Proposed values are:

<table>
<tr><th>Code</th><th>Definition</th></tr>
<tr><td>R</td><td>Daily / End of Day reporting (Default)
Note: Firms may use the “R” code for funds that report on daily, weekly, bi-weekly, or quarterly basis.</td></tr>
<tr><td>I</td><td>Intraday Update</td></tr>
</table></td><td>Yes</td><td>Field level validation:

• Instrument Type value is not defined.
• Instrument Type value does not match the value in NFN registration service for NFN Symbol.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				Note: On the outbound NFNDS data feed, Nasdaq supports the "I" reporting type value on entries with the current trading date only. For prior entry dates, Nasdaq will treat "R" and "I" values in the same manner so vendors will only update the closing value.		
Average Maturity	25	3	Numeric	Average maturity reported in number of days. If unavailable, please submit "NA".	Yes	Average maturity validations: • Average maturity must not exceed 365. Field level valuations: • Average maturity format does not match specification.
Average Life	28	3	Numeric	Average life as calculated in accordance with the SEC Money Market Reform Act. If unavailable, please submit "NA".	Yes	Average life validations: • Average life must not exceed 365. Field level validation: • Average life format does not match specification.
NAV	31	13	$$$$$$.dddddd	Indicates the net asset value (NAV) for the fund. If unavailable, please submit "NA".	Yes	NAV price validations: • System price validation parameter for normal price reporting. If current NAV is more than X% higher or lower than prior

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>NAV, firm should enter “#” is override field.

Field level validations:

• NAV format does not match specification.</td></tr>
<tr><td>NAV Override</td><td>44</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the system should ignore price validations associated with the money market NAV field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• NAV Override value is not defined.</td></tr>
<tr><td>Gross 7 Day Yield</td><td>45</td><td>9</td><td>$$$$.dddd</td><td>Provides yield based on average net income earned by the securities in the fund’s portfolio during the past seven days.

In accordance with the SEC definition, Gross 7 Day Yield should exclude capital changes and income other than investment income. In addition, the gross 7 day yield should not reflect a deduction of shareholders fees and fund operating expenses.

If unavailable, please submit “NA”.</td><td>Yes</td><td>Price level validations:

• System validation with variable parameter: If current Gross 7 Day Yield is more than X% higher or lower than prior Gross 7 Day Yield, firm should enter “#” is override field.

Field level validations:

• Gross 7 Day Yield format does not match specification.</td></tr>
<tr><td>Gross 7 Day Yield Direction</td><td>54</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the gross 7 day yield value is positive or negative. Allowable values:</td><td>Yes only if yield is negative</td><td>Field level validations:</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;
Gross yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table></td><td></td><td>• Yield direction value is not defined.</td></tr>
<tr><td>Gross 7 Day Yield Override</td><td>55</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the system should ignore % validations associated with the Gross 7 Day Yield field.
Allowable values:<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
• Override value is not defined.</td></tr>
<tr><td>Subsidized 7 Day Yield</td><td>56</td><td>9</td><td>$$$$.dddd</td><td>The subsidized yield reflects the yield calculation with expense limitation currently in effect. If unavailable, please submit “NA”.</td><td>Yes</td><td>Price level validations:
• System validation with variable parameter: If current Subsidized 7 Day Yield is more than X% higher or lower than prior Subsidized 7 Day Yield, firm should enter “#” is override field.
Field level validations:
• Subsidized 7 Day Yield format does not match specification.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Subsidized 7 Day Yield Direction</td><td>65</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the subsidized 7 day yield – subsidized value is positive or negative. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;
Subsidized yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table></td><td>Yes only if yield is negative</td><td>Field level validations:
Yield direction value is not defined.</td></tr>
<tr><td>Subsidized 7 Day Yield Override</td><td>66</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the system should ignore % validations associated with the Subsidized 7 Day Yield field. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
Override value is not defined.</td></tr>
<tr><td>Effective Annualized 7 Day Yield</td><td>67</td><td>9</td><td>$$$$.dddd</td><td>Reflects the expected annualized yield assuming that any income earned was reinvested.

If unavailable, please submit “NA”. If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td>No</td><td>Field level validations:
Effective Annualized 7 Day Yield format does not match specification.</td></tr>
<tr><td>Effective Annualized 7 Day Yield Direction</td><td>76</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the effective annualized 7 day yield value is positive or negative. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;</td></tr></table></td><td>No</td><td>Field level validations:
Yield direction value is not defined.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				<table><tr><td></td><td>Effective annualized yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table>		
30 Day Yield	77	9	$$$$.dddd	Indicates the 30 day yield value based on the SEC calculation methodology with expense limitation currently in effect. If unavailable, please submit “NA”. If this field is space filled, Nasdaq will disseminate this field as “NA”.	No	Field level validations: • 30 Day Yield format does not match specification.
30 Day Yield Direction	86	1	Alphanumeric (including special characters)	Indicates if the 30 day yield value is positive or negative. Allowable values: <table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield; 30 day yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table>	No	Field level validations: • Yield direction value is not defined.
30 Day Yield Date	87	8	MMDDYYYY	Indicates the period end date for which the 30 day yield was calculated. If unavailable, please submit “NA”. If this field is space filled, Nasdaq will disseminate this field as “NA”.	Yes only if 30 day yield is reported	Date validations: • 30 Day Yield Date is a future date. • 30 Date Yield Date is more than 365 days in the past. • 30 Day Yield Date is not a valid calendar date. Field level validations:

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>• 30 Day Yield Date does not match specification.</td></tr>
<tr><td>Daily Dividend Factor

(pka Daily Dividend)</td><td>95</td><td>9</td><td>$$.dddddd</td><td>Indicates the dividend factor if the money market fund declares a daily dividend. Please note that firms should make dividend adjustments for weekends and holidays as necessary.

If unavailable, please submit “NA”.

If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td>No</td><td>Field level validations:

• Daily Dividend format does not match specification.
• Daily Dividend cannot be zero.</td></tr>
<tr><td>Daily Dividend Adjustment Indicator</td><td>104</td><td>1</td><td>Alphanumeric</td><td>Indicates if the Daily Dividend Factor was fattened to reflect weekend, holiday or other non-reported period.

Allowable values are:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>Y</td><td>Fat adjustment reflected in Daily Dividend Factor</td></tr><tr><td>N</td><td>No fat adjustment for Daily Dividend Factor</td></tr><tr><td><space></td><td>Not applicable; no Daily Dividend Factor provided</td></tr></table></td><td>Yes only if Daily Dividend is reported</td><td>Field level validations:

• Daily Dividend Adjustment value is not defined.
• Daily Dividend Adjustment factor does not match logic for associated price field. If Daily Dividend field is populated with numeric value, this field must be populated as Y or N. If Daily Dividend field is populated as “NA” or spaces, this field must be populated as <space>.</td></tr>
<tr><td>Total Net Assets</td><td>105</td><td>15</td><td>$$$$$$$$$$$$$$</td><td>Indicates the total net assets (actual amount in dollars) for instrument.

If available, please submit “NA”.</td><td>No</td><td>Total Net Asset validations:

• If the Total Net Assets is less than $ threshold parameter, firm should enter “#” in override field.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td></td><td>• Total Net Assets cannot be zero.

Field level validations:

• Total Net Asset format does not match specification.</td></tr>
<tr><td>Total Net Assets Override</td><td>120</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore system validations associated with the Total Net Asset field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• Total Net Assets Override value is not defined.</td></tr>
<tr><td>Entry Date</td><td>121</td><td>8</td><td>MMDDYYYY</td><td>Reflects the date for which the daily update is valid. Except for prior day corrections, this field should reflect the current day’s date.</td><td>Yes</td><td>Date validations:

• Entry date cannot be a future date.
• Entry date is not a valid calendar date.
• NFN Symbol was not active on entry date.

Field level validations:

• Entry date does not match specification.</td></tr>
<tr><td>Currency</td><td>129</td><td>3</td><td>Alphanumeric</td><td>Indicates the ISO currency code associated with the NFN price-related fields. For this field, Nasdaq will use ISO 4217 currency alphabetic codes.</td><td>No</td><td>Field validations:

• Currency reported is not a defined value.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				For NFN 0050, if this field is space filled, Nasdaq will populate the value as assigned in the listing.		
CUSIP	132	9	Alphanumeric	Indicates the unique security identifier as assigned by S&P CUSIP Bureau for NFN instrument. If CUSIP is unknown, firm may enter a dummy CUSIP such as "123456789".	Yes	Offline validations: • Nasdaq will compare the CUSIP number reported in this message against the CUSIP number in the NFN system. If the two values do not match, Nasdaq will include the instrument in its mismatched CUSIP report.
Reserved / Filler	141	37	Space filled	Space fill as needed to meet fixed message length requirement.		Row length must be 180 characters (inclusive of carriage return).
End-of-Row Marker	178	2	Hexadecimal	Two character row marker to denote the placement of the current message within the file: Carriage return or end of file. (Note: Carriage return command is typically stored as a hexadecimal code of "0xD" and end of file is typically stored as "0xA".	Yes	

4.3 Daily Valuation Message for Money Market Funds with Calculation Time (NFN 0050) – New as of July 11, 2016

This new message format should be used by money market funds to report intraday, daily or weekly valuation data as of **July 11, 2016**. Firms should use this version of the money market fund message format if they wish to have a specific NAV calculation time displayed.

The file must contain one record for each instrument being updated. The records must be 180 characters long, in the following format:

Field	Offset	Length	Format	Description	Required	Data Validation
Row Header	0	3	Alphanumeric	Defines inbound data format. "MMC" for money market fund updates with calculation time.	Yes	Field level validations: • Row Header value is not defined. • Data format does not match the Row Header value.
Symbol	3	11	Alphanumeric	Defines the NASDAQ assigned ticker symbol for NFN instrument. Note: This field was expanded to 11 bytes to accommodate for symbology changes as needed.	Yes	Field level validations: • NFN Symbol is not defined in system. • NFN Symbol status is not set to active. • NFN Symbol is not associated with the supported instrument types. • Firm not entitled for NFN Symbol. • NFN Symbol not associated with Money Market Fund.
Footnotes	14	10	Alphanumeric	Any footnotes applicable for the NFN instrument. The allowable values for money market funds are: **Code** | **Definition**	No	Field level validations: • Footnote codes not defined.

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr>
<td></td><td></td><td></td><td></td>
<td>
<table>
<tr><td>A</td><td>Fund’s return may differ due to capital gains or losses.</td></tr>
<tr><td>B</td><td>Sales or account charges may impact yield.</td></tr>
<tr><td>F</td><td>Fund uses price of day prior to the day of reporting.</td></tr>
<tr><td>G</td><td>Redemption Gate In Effect</td></tr>
<tr><td>L</td><td>Liquidity Fee In Effect</td></tr>
<tr><td>S</td><td>Stock split dividend*</td></tr>
<tr><td>D</td><td>Capital Distribution*</td></tr>
<tr><td>X</td><td>Cash dividend, special cash dividend or income distribution adjustment*</td></tr>
</table>
*Note: For codes D, S and X, firms must also enter a separate Dividend/Interest or Capital Distribution message.

Please contact NFN Operations if you wish to request a new footnote code.
</td>
<td></td>
<td>

Footnote codes are duplicated.
Footnote code not defined for NFN Instrument Type.

</td>
</tr>
<tr>
<td>Reporting Type</td><td>24</td><td>1</td><td>Alphanumeric</td>
<td>
Indicates the reporting frequency for NFN instrument. Proposed values are:

<table>
<tr><th>Code</th><th>Definition</th></tr>
<tr><td>R</td><td>Daily / End of Day reporting (Default)

Note: Firms may use the “R” code for funds that report on daily, weekly, bi-weekly, or quarterly basis.</td></tr>
<tr><td>I</td><td>Intraday Update</td></tr>
</table>
</td>
<td>Yes</td>
<td>
Field level validation:

Instrument Type value is not defined.
Instrument Type value does not match the value in NFN registration service for NFN Symbol.

</td>
</tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				Note: On the outbound NFNDS data feed, Nasdaq supports the "I" reporting type value on entries with the current trading date only. Although all prior day transactions will be marked as "C" reporting type on outbound message formats, Nasdaq will reflect calculation time on all outbound money market fund messages as of July 11, 2016.		
Average Maturity	25	3	Numeric	Average maturity reported in number of days. If unavailable, please submit "NA".	Yes	Average maturity validations: • Average maturity must not exceed 365. Field level valuations: • Average maturity format does not match specification.
Average Life	28	3	Numeric	Average life as calculated in accordance with the SEC Money Market Reform Act. If unavailable, please submit "NA".	Yes	Average life validations: • Average life must not exceed 365. Field level validation: • Average life format does not match specification.
NAV	31	13	$$$$$$.dddddd	Indicates the net asset value (NAV) for the fund. If unavailable, please submit "NA".	Yes	NAV price validations: • System price validation parameter for normal price reporting. If current

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>NAV is more than X% higher or lower than prior NAV, firm should enter “#” is override field.

Field level validations:

• NAV format does not match specification.</td></tr>
<tr><td>NAV Override</td><td>44</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the system should ignore price validations associated with the money market NAV field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• NAV Override value is not defined.</td></tr>
<tr><td>Gross 7 Day Yield</td><td>45</td><td>9</td><td>$$$$.dddd</td><td>Provides yield based on average net income earned by the securities in the fund’s portfolio during the past 7 days.

In accordance with the SEC definition, gross 7 day yield should exclude capital changes and income other than investment income. In addition, the gross 7 day yield should not reflect a deduction of shareholders fees and fund operating expenses.

If unavailable, please submit “NA”.</td><td>Yes</td><td>Price level validations:

• System validation with variable parameter: If current Gross 7 Day Yield is more than X% higher or lower than prior Gross 7 Day Yield, firm should enter “#” is override field.

Field level validations:

• Gross 7 Day Yield format does not match specification.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Gross 7 Day Yield Direction</td><td>54</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the gross 7 day yield value is positive or negative. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;
Gross yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table></td><td>Yes only if yield is negative</td><td>Field level validations:
Yield direction value is not defined.</td></tr>
<tr><td>Gross 7 Day Yield Override</td><td>55</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the system should ignore % validations associated with the Gross 7 Day Yield field. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
Override value is not defined.</td></tr>
<tr><td>Subsidized 7 Day Yield</td><td>56</td><td>9</td><td>$$$$.dddd</td><td>The subsidized yield reflects the yield calculation with expense limitation currently in effect. If unavailable, please submit “NA”.

Note: A direction field is being added to support negative yield values. Once implemented, NASDAQ will discontinue the temporary footnote code of “0”.</td><td>Yes</td><td>Price level validations:
System validation with variable parameter: If current Subsidized 7 Day Yield is more than X% higher or lower than prior Subsidized 7 Day Yield, firm should enter “#” is override field.
Field level validations:</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>• Subsidized 7 Day Yield format does not match specification.</td></tr>
<tr><td>Subsidized 7 Day Yield Direction</td><td>65</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the subsidized 7 day yield – subsidized value is positive or negative. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>- <dash></td><td>Negative yield;
Subsidized yield is less than 0.00% so it should be displayed with negative sign.</td></tr><tr><td><space></td><td>Positive or zero yield (Default)</td></tr></table></td><td>Yes only if yield is negative</td><td>Field level validations:
• Yield direction value is not defined.</td></tr>
<tr><td>Subsidized 7 Day Yield Override</td><td>66</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the system should ignore % validations associated with the Subsidized 7 Day Yield field. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
• Override value is not defined.</td></tr>
<tr><td>Effective Annualized 7 Day Yield</td><td>67</td><td>9</td><td>$$$$.dddd</td><td>Reflects the expected annualized yield assuming that any income earned was reinvested.

If unavailable, please submit “NA”. If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td>No</td><td>Field level validations:
• Effective Annualized 7 Day Yield format does not match specification.</td></tr>
<tr><td>Effective Annualized 7 Day Yield Direction</td><td>76</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the effective annualized 7 day yield value is positive or negative. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr></table></td><td>No</td><td>Field level validations:
• Yield direction value is not defined.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>- <dash></td><td>Negative yield;

Effective annualized yield is less than 0.00% so it should be displayed with negative sign.</td></tr>
<tr><td><space></td><td>Positive or zero yield (Default)</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>30 Day Yield</td><td>77</td><td>9</td><td>$$$$.dddd</td><td>Indicates the 30 day yield value based on the SEC calculation methodology with expense limitation currently in effect.

If unavailable, please submit “NA”. If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td>No</td><td>Field level validations:

• 30 Day Yield format does not match specification.</td></tr>
<tr><td>30 Day Yield Direction</td><td>86</td><td>1</td><td>Alphanumeric (including special characters)</td><td>Indicates if the 30 day yield value is positive or negative. Allowable values:
<table>
<tr><th>Code</th><th>Definition</th></tr>
<tr><td>- <dash></td><td>Negative yield;

30 day yield is less than 0.00% so it should be displayed with negative sign.</td></tr>
<tr><td><space></td><td>Positive or zero yield (Default)</td></tr>
</table>
</td><td>No</td><td>Field level validations:

• Yield direction value is not defined.</td></tr>
<tr><td>30 Day Yield Date</td><td>87</td><td>8</td><td>MMDDYYYY</td><td>Indicates the period end date for which the 30 day yield was calculated.

If unavailable, please submit “NA”.

If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td>Yes only if 30 day yield is reported</td><td>Date validations:

• 30 Day Yield Date is a future date.
• 30 Date Yield Date is more than 365 days in the past.
• 30 Day Yield Date is not avalid calendar date.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>Field level validations:

• 30 Day Yield Date does not match specification.</td></tr>
<tr><td>Daily Dividend Factor</td><td>95</td><td>9</td><td>$$.dddddd</td><td>Indicates the dividend factor if the money market fund declares a daily dividend. Please note that firms should make dividend adjustments for weekends and holidays as necessary.

If unavailable, please submit “NA”.

If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td>No</td><td>Field level validations:

• Daily Dividend format does not match specification.
• Daily Dividend cannot be zero.
• Daily Dividend cannot exceed NAV.</td></tr>
<tr><td>Daily Dividend Adjustment Indicator</td><td>104</td><td>1</td><td>Alphanumeric</td><td>Indicates if the Daily Dividend Adjustment Factor was fattened to reflect weekend, holiday or other non-reported period.

Allowable values are:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>Y</td><td>Fat adjustment reflected in Daily Dividend Factor</td></tr><tr><td>N</td><td>No fat adjustment for Daily Dividend Factor</td></tr><tr><td><space></td><td>Not applicable; no Daily Dividend Factor provided</td></tr></table></td><td>Yes only if Daily Dividend is reported</td><td>Field level validations:

• Daily Dividend Adjustment value is not defined.
• Daily Dividend Adjustment factor does not match logic for associated price field. If Daily Dividend field is populated with numeric value, this field must be populated as Y or N. If Daily Dividend field is populated as “NA” or spaces, this field must be populated as <space>.</td></tr>
<tr><td>Total Net Assets</td><td>105</td><td>15</td><td>$$$$$$$$$$$$$$</td><td>Indicates the total net assets (actual amount in dollars) for instrument.

If available, please submit “NA”.</td><td>No</td><td>Total Net Asset validations:

• If the Total Net Assets is less than $ threshold</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>If this field is space filled, Nasdaq will disseminate this field as “NA”.</td><td></td><td>parameter, firm should enter “#” in override field.
• Total Net Assets cannot be zero.

Field level validations:

• Total Net Asset format does not match specification.</td></tr>
<tr><td>Total Net Assets Override</td><td>120</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore system validations associated with the Total Net Asset field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• Total Net Assets Override value is not defined.</td></tr>
<tr><td>Entry Date</td><td>121</td><td>8</td><td>MMDDYYYY</td><td>Reflects the date for which the daily update is valid. Except for prior day corrections, this field should reflect the current day’s date.</td><td>Yes</td><td>Date validations:

• Entry date cannot be a future date.
• Entry date is not a valid calendar date.
• NFN Symbol was not active on entry date.

Field level validations:

• Entry date does not match specification.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
Currency	129	3	Alphanumeric	Indicates the ISO currency code associated with the NFN price-related fields. For this field, Nasdaq will use ISO 4217 currency alphabetic codes. For NFN 0050, if this field is space filled, Nasdaq will populate the value as assigned in the listing.	No	Field validations: • Currency reported is not a defined value.
CUSIP	132	9	Alphanumeric	Indicates the unique security identifier as assigned by S&P CUSIP Bureau for NFN instrument.	Yes	Offline validations: • Nasdaq will compare the CUSIP number reported in this message against the CUSIP number in the NFN system. If the two values do not match, Nasdaq will include the instrument in its mismatched CUSIP report.

Calculation Time	141	6	HHMMSS	Denotes the calculation time associated with the money market fund record. Calculation time must be stated in military time for the US Eastern Time zone.
				
				Examples:
				
				• 11:00 a.m. Eastern Time should be reported as "110000".
				• 10:00 a.m., Central Time should be reported as "110000".
				• 4:00 p.m., Eastern Time should be reported as "1600000".
				
				If unavailable, enter "NA".
					Yes	Field validation:
						
						• Field must be populated as 6 numeric characters or "NA".
						• Time must be stated in HHMMSS format.
						  ○ HH must be 00 to 23
						  ○ MM must be 00 to 59
						  ○ SS must be 00 to 59

Field	Offset	Length	Format	Description	Required	Data Validation
Reserved / Filler	147	31	Space filled	Space fill as needed to meet fixed message length requirement.		Row length must be 180 characters (inclusive of carriage return).
End-of-Row Marker	178	2	Hexadecimal	Two character row marker to denote the placement of the current message within the file: Carriage return or end of file. (Note: Carriage return command is typically stored as a hexadecimal code of “0xD” and end of file is typically stored as “0xA”.)	Yes	

4.4 Distributions Report for All NFN Instruments (NFN 0050)

This message format should be used to report distributions (other than dividends and interest) for all NFN instruments. The file must contain one record for each instrument being updated. The records must be 180 characters long, in the following format:

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Row Header</td><td>0</td><td>3</td><td>Alphanumeric</td><td>Defines inbound data format. “DST” for distributions.</td><td></td><td>Field level validations:
Row Header value is not defined.
Data format does not match the Row Header value.</td></tr>
<tr><td>Symbol

(pka Fund ID)</td><td>3</td><td>11</td><td>Alphanumeric</td><td>Defines the NASDAQ assigned ticker symbol for NFN instrument.

Note: The NFN processing logic relies on the NFN Symbol field for the NFNDS corporate action spin. If the NFN Symbol field needs to be adjusted, Nasdaq recommends that firms cancel and re-enter the distribution record (rather than correcting the record).</td><td></td><td>Field level Field level validations:
NFN Symbol is not defined in system.
NFN Symbol status is not set to active.
NFN Symbol is not associated with the supported instrument types.
Firm not entitled for NFN Symbol.</td></tr>
<tr><td>Instrument Type

(pka Fund Type)</td><td>14</td><td>2</td><td>Alphanumeric</td><td>Indicates the type of NFN instrument being priced. Allowable values are:<table><tr><th>Code</th><th>Definition</th></tr><tr><td>MF</td><td>Mutual Fund</td></tr><tr><td>MM</td><td>Money Market Fund</td></tr><tr><td>UT</td><td>Unit Investment Trust</td></tr><tr><td>SP</td><td>Structured Product</td></tr></table></td><td>Yes</td><td>Field level validation:
Instrument Type value is not defined.
Instrument Type value reported in record does not match the Instrument Type in the NFN listing data base.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				AN – Annuity AP – Alternative Investment Product EM – NextShares Exchange Traded Managed Fund CT – Collective Investment Trust MA – Managed Accounts SA – Separate Accounts HF – Hedge Fund DD – Demand Deposit Account		
Short Term Capital Gain	16	13	$$$$$$.dddddd	Indicates the portion of the total capital gain that is taxed to the shareholder as ordinary income. If unavailable, please submit "NA".	Yes	Price level validations: • Short Term Capital Gain validation based on NAV price parameter: If the STG as a % of NAV exceeds the NFN system parameter, firm must enter "#" in override field. • Short Term Capital Gains cannot be zero. Field level validation: • Short Term Capital Gains data format does not match specification.
Short Term Capital Gain Override	29	1	Alphanumeric (with special characters)	Indicates if the system should ignore system validations associated with the Total Net Asset field. Allowable values:	No	Field level validations:

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td><table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td></td><td>• STG Override value is not defined.</td></tr>
<tr><td>Long Term Capital Gain</td><td>30</td><td>13</td><td>$$$$$$.dddddd</td><td>Indicates the portion of the total capital gain that is taxed to the shareholder at the long-term capital gains rate. If unavailable, please submit “NA”.</td><td>Yes</td><td>Price level validations:

• Long Term Capital Gain validation based on NAV price parameter: If the Long Term Capital Gain as a % of NAV exceeds the NFN system parameter, firm must enter “#” in override field.
• Long Term Capital Gain cannot be zero.

Field level validation:

• LTG data format does not match specification.</td></tr>
<tr><td>Long Term Capital Gain Override</td><td>43</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore system validations associated with the Total Net Asset field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• LTG Override value is not defined.</td></tr>
<tr><td>Unallocated Distributions</td><td>44</td><td>13</td><td>$$$$$$.dddddd</td><td>Amount of unassigned term gains.

If unavailable, please submit “NA”. If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Field level validation:</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>• Unallocated distributions data format does not match specification.</td></tr>
<tr><td>Return of Capital (ROC)</td><td>57</td><td>13</td><td>$$$$$$.dddddd</td><td>Indicates amount of return of capital (ROC) to the instrument shareholders.

If unavailable, please submit “NA”. If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Price level validations:

• ROC validation based on NAV price parameter: If the ROC as a % of NAV exceeds the NFN system parameter, firm must enter “#” in override field.

Field level validation:

• ROC data format does not match specification.</td></tr>
<tr><td>ROC Override</td><td>70</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore system validations associated with the ROC field. Allowable values:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:

• ROC Override value is not defined.</td></tr>
<tr><td>Payment Date</td><td>71</td><td>8</td><td>MMDDYYYY</td><td>Indicates the payment date for an income distribution or a capital distribution.

If no payment date, please submit “NA”.</td><td>Yes</td><td>Date validations:

• Payment date is not a valid calendar date.

Field level validations:

• Payment date does not match specification.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td>Record Date</td><td>79</td><td>8</td><td>MMDDYYYY</td><td>Indicates the record date for the distribution. Shareholders of the instrument as of this date would receive the distribution.</td><td>Yes</td><td>Date validations:
Record date is not a valid calendar date.
Field level validations:
Record date does not match specification.</td></tr>
<tr><td>Ex Date</td><td>87</td><td>8</td><td>MMDDYYYY</td><td>Indicates the ex date for the distribution. This is the date that NAV should be adjusted.

Note: The NFN processing logic relies on the Ex-Date field for the NFNDS corporate action spin. If the Ex-Date field needs to be adjusted, Nasdaq recommends that firms cancel and re-enter the distribution record (rather than correcting the record).</td><td>Yes</td><td>Date validations:
Ex-date date is not a valid calendar date.
Field level validations:
Ex date does not match specification.</td></tr>
<tr><td>Reinvest Date</td><td>95</td><td>8</td><td>MMDDYYYY</td><td>Indicates the reinvestment date for the distribution. If no reinvestment, please submit “NA”.</td><td>Yes</td><td>Date validations:
Reinvest date is not a valid calendar date.
Field level validations:
Reinvest date does not match specification.</td></tr>
<tr><td>Action</td><td>103</td><td>1</td><td>Alphanumeric</td><td>Indicates if the NFN dividend / distribution report is a new entry or corrected entry. Allowable values are:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>N</td><td>New entry</td></tr></table></td><td>Yes</td><td>Field level validations:
Action value is not defined.
Action value is not correct based on prior entries for the symbol and ex-date. Initial entries must be</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				<table><tr><td>C</td><td>Corrected entry</td></tr><tr><td>X</td><td>Canceled distribution</td></tr></table> Note: Please enter the full record for cancelled and corrected entries. Because the NFN logic is based on the symbol and ex-date fields, Nasdaq highly recommends that firms enter a NFN Symbol or Ex-Date correction as two separate entries: a cancellation for the original entry plus a new entry with the corrected information.		marked as "N". Subsequent / duplicate messages must be marked as "C" or "X".
Entry Date	104	8	MMDDYYYY	Reflects the date on which the distributions were reported to NFN. This field should reflect the current date.	Yes	Date validations: • Entry date cannot be a future date. • Entry date is not a valid calendar date. • NFN Symbol was not active on entry date. Field level validations: • Entry date does not match specification.
Currency	112	3	Alphanumeric	Indicates the ISO currency code associated with the NFN price-related fields. For this field, Nasdaq will use ISO 4217 currency alphabetic codes. For NFN 0050, if this field is space filled, Nasdaq will populate the value as assigned in the listing.	No	Field validations: • Currency reported is not a defined value.
CUSIP	115	9	Alphanumeric	Indicates the unique security identifier as assigned by S&P CUSIP Bureau for NFN instrument.	Yes	Offline validation: • Nasdaq will compare the CUSIP number reported in

Field	Offset	Length	Format	Description	Required	Data Validation
						this message against the CUSIP number in the NFN system. If the two values do not match, Nasdaq will include the instrument in its mismatched CUSIP report.
Reserved / Filler	124	54	Space filled	Space fill as needed to meet fixed message length requirement.		Row length must be 180 characters (inclusive of carriage return).
End-of-Row Marker	178	2	Hexadecimal	Two character row marker to denote the placement of the current message within the file: Carriage return or end of file. (Note: Carriage return command is typically stored as a hexadecimal code of "0xD" and end of file is typically stored as "0xA".)	Yes	

4.5 Dividend / Interest for All NFN Instruments (NFN 0050)

This message format should be used to report dividends and interest payments for all NFN instruments. The file must contain one record for each instrument being updated. The records must be 180 characters long, in the following format:

Field	Offset	Length	Format	Description	Required	Data Validation
Row Header	0	3	Alphanumeric	Defines inbound data format. "DIV" for dividends and interest.	Yes	Field level validations: • Row Header value is not defined. • Data format does not match the

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>Row Header value.</td></tr>
<tr><td>Symbol

(pka Fund ID)</td><td>3</td><td>11</td><td>Alphanumeric</td><td>Defines the NASDAQ assigned ticker symbol for NFN instrument.

<u>Note</u>: The NFN processing logic relies on the NFN Symbol field for the NFNDS corporate action spin. If the NFN Symbol field needs to be adjusted, Nasdaq recommends that firms cancel and re-enter the distribution record (rather than correcting the record).</td><td>Yes</td><td>Field level validations:

• NFN Symbol is not defined in system.
• NFN Symbol status is not set to active.
• NFN Symbol is not associated with the supported instrument types.
• Firm not entitled for NFN Symbol.</td></tr>
<tr><td>Instrument Type

(pka Fund Type)</td><td>14</td><td>2</td><td>Alphanumeric</td><td>Indicates the type of NFN instrument being priced. Allowable values are:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>MF</td><td>Mutual Fund</td></tr><tr><td>MM</td><td>Money Market Fund</td></tr><tr><td>UT</td><td>Unit Investment Trust</td></tr><tr><td>SP</td><td>Structured Product</td></tr><tr><td>AN</td><td>Annuity</td></tr><tr><td>AP</td><td>Alternative Investment Product</td></tr><tr><td>EM</td><td>NextShares Exchange Traded Managed Fund</td></tr><tr><td>CT</td><td>Collective Investment Trust</td></tr></table></td><td>Yes</td><td>Field level validation:

• Instrument Type value is not defined.
• Instrument Type value reported in record does not match the Instrument Type in the NFN listing data base.</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><td>MA</td><td>Managed Accounts</td></tr>
<tr><td>SA</td><td>Separate Accounts</td></tr>
<tr><td>HF</td><td>Hedge Fund</td></tr>
<tr><td>DD</td><td>Demand Deposit Account</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>Cash Distribution Type</td><td>16</td><td>1</td><td>Alphanumeric</td><td>Indicates the type of cash distribution being reported. The allowable values would be:

<table>
<tr><th>Code</th><th>Definition</th></tr>
<tr><td>D</td><td>Cash Dividend (Default for Mutual Funds)</td></tr>
<tr><td>I</td><td>Interest Income (Default for UITs)</td></tr>
<tr><td>S</td><td>Special Cash Dividend</td></tr>
<tr><td><space></td><td>Not applicable, no cash distribution being reported (only stock dividend)</td></tr>
</table>

Note: As of the 3rd Quarter 2013, Nasdaq modified the Action processing logic to include the Cash Distribution Type field. If a firm needs to change the Cash Distribution Type, Nasdaq recommends that firms cancel and re-enter the distribution record (rather than correcting the record).</td><td>Yes</td><td>Field level validations:

• Cash Distribution Type value is not defined.</td></tr>
<tr><td>Total Cash Distribution</td><td>17</td><td>13</td><td>$$$$$$.dddddd</td><td>Reflects the total cash dividend or total interest distribution being reported for the NFN instrument.

Funds may report the breakdown of cash dividends/ interest distribution in the fields that follow.

If not applicable, please submit “NA”.</td><td>Yes</td><td>Price level validations:

• Total Cash Distribution validation based on NAV price parameter: If the Total Cash Dividend as a % of NAV exceeds</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>the NFN system parameter, firm must enter “#” in override field.
• Total Cash Distribution cannot be zero.

Field level validations:
• Total Cash Distribution value does not match specification.</td></tr>
<tr><td>Total Cash Distribution Override</td><td>30</td><td>1</td><td>Alphanumeric (with special characters)</td><td>Indicates if the system should ignore system validations associated with the Total Cash Distribution field. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
• Total Cash Distribution Override value is not defined.</td></tr>
<tr><td>Non-Qualified Cash Distribution</td><td>31</td><td>13</td><td>$$$$$$.dddddd</td><td>Reflects the portion of the cash dividend or interest income that is taxed as ordinary income to the shareholder. Please note that this value should be entered as a dollar amount (not a percentage).

If unavailable, please submit “NA”. If space filled, Nasdaq will populate the field as “NA”.</td><td>No</td><td>Field level validations:
• Non-Qualified Cash Distribution value cannot exceed Total Cash Distribution value.</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
						Non-Qualified Cash Distribution value does not match specification.
Qualified Cash Distribution	44	13	$$$$$$.dddddd	Reflects the portion of the cash dividend or interest that is taxed as a qualified dividend to shareholder. Please note that this value should be entered as a dollar amount (not a percentage). If unavailable, please submit "NA". If space filled, Nasdaq will populate the field as "NA".	No	Field level validations: • Qualified Cash Distribution value cannot exceed Total Cash Distribution value. • Qualified Cash Distribution value does not match specification.
Tax-Free Cash Distribution	57	13	$$$$$$.dddddd	Reflects the portion of the cash dividend or interest attributable to bonds that is not taxed to the shareholder. Please note that this value should be entered as a dollar amount (not a percentage). If unavailable, please submit "NA". If space filled, Nasdaq will populate the field as "NA".	No	Field level validations: • Tax Free Cash Distribution value cannot exceed Total Cash Distribution value. • Tax Free Cash Distribution value does not match specification.
Ordinary Foreign Tax Credit	70	13	$$$$$$.dddddd	Reflects the portion of the cash dividend or interest from a foreign corporation that is not "qualified" by the IRS. Please note	No	Field level validations: • Ordinary Foreign Tax Credit value

Field	Offset	Length	Format	Description	Required	Data Validation
				that this value should be entered as a dollar amount (not a percentage). If unavailable, please submit "NA". If space filled, Nasdaq will populate the field as "NA".		cannot exceed Total Cash Distribution value. • Ordinary Foreign Tax Credit value does not match specification.
Qualified Foreign Tax Credit	83	13	$$$$$$.dddddd	Reflects the portion of the cash dividend or interest attributable to qualified foreign corporation as defined by the IRS. Please note that this value should be entered as a dollar amount (not a percentage). If unavailable, please submit "NA". If space filled, Nasdaq will populate the field as "NA".	No	Field level validations: • Qualified Foreign Tax Credit value cannot exceed Total Cash Distribution value. • Qualified Foreign Tax Credit value does not match specification.
Stock Dividend Ratio	96	11	$$$$.dddddd	Indicates the stock split/dividend ratio. Examples: • 2-for-1 stock split should be reported as "0002.000000". • 1-for-2 reverse stock split should be reported as "0000.500000". • 10% stock dividend would be reported as "0001.100000". If unavailable, please submit "NA".	Yes	Field level validations: • Stock Dividend cannot be zero. • Stock Dividend value does not match specification.

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>If space filled, Nasdaq will populate the field as “NA”.</td><td></td><td></td></tr>
<tr><td>Stock Dividend Override</td><td>107</td><td>1</td><td>Alphanumeric</td><td>Indicates if the system should ignore validations on the stock dividend fields. Allowable values:
<table><tr><th>Code</th><th>Definition</th></tr><tr><td>#</td><td>Override On</td></tr><tr><td><space></td><td>Override Off (Default)</td></tr></table></td><td>No</td><td>Field level validations:
• Stock Dividend Override value is not defined.</td></tr>
<tr><td>Payment Date</td><td>108</td><td>8</td><td>MMDDYYYY</td><td>Indicates the payment date for a dividend or income interest.

If no payment date, please submit “NA”.</td><td>Yes</td><td>Date validations:
• Payment date is not a valid calendar date.

Field level validations:
• Payment date does not match specification.</td></tr>
<tr><td>Record Date</td><td>116</td><td>8</td><td>MMDDYYYY</td><td>Indicates the record date for a dividend or income interest. Indicates the record date for the distribution. Shareholders of the instrument as of this date would receive the distribution.</td><td>Yes</td><td>Date validations:
• Record date is not a valid calendar date.

Field level validations:
• Record date does not match specification.</td></tr>
<tr><td>Ex Date</td><td>124</td><td>8</td><td>MMDDYYYY</td><td>Indicates the ex date for a dividend or distribution. This is the date that NAV should be adjusted.</td><td>Yes</td><td>Date validations:</td></tr>
</table>

<table>
<tr><th>Field</th><th>Offset</th><th>Length</th><th>Format</th><th>Description</th><th>Required</th><th>Data Validation</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Note: The NFN processing logic relies on the Ex-Date field for the NFNDS corporate action spin. If the Ex-Date field needs to be adjusted, Nasdaq recommends that firms cancel and re-enter the distribution record (rather than correcting the record).</td><td></td><td>• Ex date date is not a valid calendar date.

Field level validations:

• Ex date does not match specification.</td></tr>
<tr><td>Reinvest Date</td><td>132</td><td>8</td><td>MMDDYYYY</td><td>Indicates the reinvestment date for dividend and/ or distribution.

If no reinvestment, please submit “NA”.</td><td>Yes</td><td>Date validations:

Reinvest date is not a valid calendar date.

Field level validations:

• Reinvest date does not match specification.</td></tr>
<tr><td>Action</td><td>140</td><td>1</td><td>Alphanumeric</td><td>Indicates if the NFN dividend / distribution report is a new entry, corrected entry or cancelled entry. Allowable values are:

<table><tr><th>Code</th><th>Definition</th></tr><tr><td>N</td><td>New entry</td></tr><tr><td>C</td><td>Corrected entry</td></tr><tr><td>X</td><td>Cancelled entry</td></tr></table>
Note: Please enter the full record for cancelled and corrected entries.</td><td>Yes</td><td>Field level validations:

• Action value is not defined.
• Action value is not correct based on prior entries for the symbol, cash distribution type and ex-date combination. Initial entries must be marked as “N”. Subsequent /</td></tr>
</table>

Field	Offset	Length	Format	Description	Required	Data Validation
				Because the NFN logic is based on the symbol, cash distribution type and ex-date fields, Nasdaq highly recommends that firms enter a NFN Symbol, Cash Distribution Type and/or Ex-Date correction as two separate entries: a cancellation for the original entry plus a new entry with the corrected information.		duplicate messages must be marked as "C" or "X".
Entry Date	141	8	MMDDYYYY	Reflects the date on which the dividends and interest were reported to NFN. This field should reflect current date.	Yes	Date validations: • Entry date cannot be a future date. • Entry date is not a valid calendar date. • NFN Symbol was not active on entry date. Field level validations: • Entry date does not match specification.
Currency	149	3	Alphanumeric	Indicates the ISO currency code associated with the NFN price-related fields. For this field, Nasdaq will use ISO 4217 currency alphabetic codes. For NFN 0050, if this field is space filled, Nasdaq will populate the value as assigned in the listing.	No	Field validations: • Currency reported is not a defined value.
CUSIP	152	9	Alphanumeric	Indicates the unique security identifier as assigned by S&P CUSIP Bureau for NFN instrument.	Yes	Offline validation: • Nasdaq will compare the CUSIP number reported in this

Field	Offset	Length	Format	Description	Required	Data Validation
						message against the CUSIP number in the NFN system. If the two values do not match, Nasdaq will include the instrument in its mismatched CUSIP report.
Reserved / Filler	161	17	Space filled	Space fill as needed to meet fixed message length requirement.		Row length must be 180 characters (inclusive of carriage return).
End-of-Row Marker	178	2	Hexadecimal	Two character row marker to denote the placement of the current message within the file: Carriage return or end of file. (Note: Carriage return command is typically stored as a hexadecimal code of "0xD" and end of file is typically stored as "0xA".)	Yes	

5 Contact Information

Please refer to the NFN Support page on the Nasdaq Trader website for information on how to access the NFN website.

Questions about the NFN FTP file format specification should be directed to Nasdaq Fund Network Operation at +1 301 978 5307 (Option #6) or NFNOps@nasdaq.com.

Questions about the NFN FTPS configuration should be directed to Nasdaq Trading Services at +1 212 231 5180 or tradingservices@nasdaq.com.

6 Appendices

Appendix A – Current validation parameters for the NFN Valuation Module

(Note: This appendix is intended for informational purposes only. Nasdaq reserves the right to modify the validation parameters for the NFN system as market conditions dictate without advance notification.)

Price Validations	Definition	Value	
NFN System Open Time	The NFN Valuation Module open time. (All entries entered before this time will be rejected.)	9:00 am., ET	
NFN Close Time	The NFN Valuation Module close time. (All entries entered after this time will be rejected.)	8:00 p.m., ET	
NAV / Redemption Price	The net change percentage parameter for the NAV and Redemption Price override prompts.	10.0%	
Offer / Market Price	The net change percentage parameter for the offer / market price for override prompt.	10.0%	
NAV vs. Offer/Market	The percent difference between NAV/Redemption Price and Offer/Market fields for override prompt.	9.5%	
Total Net Assets	The minimum total net asset amount for override prompt.	$100,000	NFN 0050 formats only
NAV (Money Market Funds)	The net change percentage parameter for NAV override prompts for money market funds.	10.0%	
Subsidized 7 Day Yield and Gross 7 Day Yield values for Money Market Funds	The net change percentage for Subsidized 7 Day Yield and Gross 7 Day Yield override prompts.	10.0%	
Total Cash Distribution	The percentage of NAV / Redemption Price for override prompt.	10.0%	
Stock Dividend Ratio - Lower Level	The minimum stock dividend ratio before override prompt.	0.10	One-for-ten reverse stock split ratio
Stock Dividend Ratio - Higher level	The maximum stock dividend ratio before override prompt.	100	100-for-one stock split ratio
Short Term Capital Gains	The percentage of NAV / Redemption Price for override prompt.	7.5%	

Long Term Capital Gains	The percentage of NAV / Redemption Price for override prompt.	7.5%
Return of Capital (ROC)	The percentage of NAV / Redemption Price for override prompt.	7.5%

Appendix B – NFN Error Codes

This appendix is intended to show the NFN error codes for NFN 0050. Nasdaq reserves the right to add or delete error codes as needed.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	All		004	TERMINAL NOT AUTHORIZED	**Entitlement error - Terminal not authorized for subscriber function.** While user is authorized for NFN, he does not have the necessary access rights for the current NFN function. Contact NASDAQ Subscriber Services to update user profile.
All	All		013	SYSTEM UNAVAILABLE	**System unavailable - NFN valuation module is unavailable for data entry.** NFN valuation module is temporarily unavailable for data entry.
All	All		063	INVALID PRI. MMID	**Entitlement error - Invalid MPID for pricing agent.** Entitlement validation is handled at the NFN interface level. Please contact NFN Operations to confirm MPID. (Note: This error is supported for CTCI and FTP interfaces only.)
All	All		103	NO FUND ACTIVITY ALLOWED	**System unavailable - NFN valuation module is unavailable for all activity.** NFN valuation module is temporarily unavailable for any and all activity.
All	All		125	TERMINAL NOT IN FUNDS	**Entitlement error - User is not entitled to enter data for MPID.** Entitlement validation is handled at the NFN interface level. Please contact Nasdaq Subscriber Services to confirm user entitlement set-up. (Note: This error is supported for CTCI interface only.)
All	All		127	MMID NOT ACTIVE	**Entitlement error - MPID is not active in NFN system.** Entitlement validation is handled at the NFN interface level. Please contact NFN Operations to confirm MPID.
All	All		131	NOT WITHIN ALLOW HRS	**System unavailable - NFN valuation module is closed.** NFN update cannot be processed because it was received outside of normal operational hours.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	All		300	INCORRECT FILE DATE	**Invalid value - File Date is not equal to NFN system date.** NFN system will only process files in which the file date is equal to the NFN system date. Please note that firms should use the "Entry Date" within the individual NFN records to indicate historical data updates.
All	All		301	INVALID FORMAT VERSION	**Invalid message format - NFN data format version number is not valid.** Through August 17,2018, the supported NFN versions are "0040" and "0050". As of August, 20, 2018, the supported NFN version will be "0050".
Money Market Funds	MMF, MMC	30 Day Day Yield	449	30 DAY YLD NOT NUMERIC OR NA	**Invalid field format - 30 Day Yield.** 30 Day Yield value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Money Market Funds	MMF, MMC	30 Day Yield Date	341	30 DAY YLD DATE GREATER THAN TODAY	**Invalid value - 30 Day Yield Date cannot be a future date.** For NFN valuation module, the 30 Day Yield Date must be equal to or less than the NFN system date.
Money Market Funds	MMF, MMC	30 Day Yield Date	342	30 DAY YLD DATE GREATER THAN 1 YR AGO	**Invalid value - 30 Day Yield Date cannot be more than 365 days in the past.** NFN limits historical data entry and price corrections to one year from system date.
Money Market Funds	MMF, MMC	30 Day Yield Date	343	INVALID 30 DAY YLD DATE	**Invalid field format - 30 Day Yield Date.** If 30 Day Yield field is populated with numeric value, this Date field must be populated in MMDDYYYY format. If 30 Day Yield field is not populated, this field should be populated as NA or space filled.
Money Market Funds	MMF, MMC	30 Day Yield Date	344	30 DAY YLD DATE MUST BE ACTUAL DATE	**Invalid value - 30 Day Yield Date is not a valid calendar date.** If entered as numeric value, 30 Day Date must be populated in MMDDYYYY format and reflect an actual calendar date.
Money Market Funds	MMF, MMC	30 Day Yield Direction	450	30 DAY YLD DIR NOT DASH OR SPACE	**Invalid field format - 30 Day Yield Direction.** Yield direction value should be populated as "-" (Dash) or space. For positive or zero yield, field should be space

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
					filled. For negative yield, field should contain "-" (dash).
UITs - Debt	MFU	Accrued Interest	255	ACCRUED INTEREST NOT NUMERIC OR NA	**Invalid field format - Accrued Interest value does not match specified field format.** Accrued interest value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: In NFN 0040 version, this field is supported for UITs - Debt only. In NFN 0050 version, this field will also be supported for UITs - Equity, mutual funds, annuities, structured products and AIPs.)
All	DIV, DST	Action	368	INVALID ACTION	**Invalid field format - Action.** Required field for NFN 0050 version. Action value does not match specified format or field length. Allowable values are: "N" (New), "C" (Correction) or "X" (Cancellation).
All	DIV, DST	Action	473	INVALID ACTION - DUPLICATE ENTRY	**Invalid value - Action. Duplicate record needs to be marked as "C" (Correction) or "X" (Cancellation).** Nasdaq received a previous record with same symbol and ex-date via the NFN interface. Subsequent entries for this ex-date must be marked as "C" (Correction) or "X" (Cancellation).
All	DIV, DST	Action	474	INVALID ACTION - NEW ENTRY	**Invalid value - Action. No record on file to correct or cancel.** Nasdaq did not receive any previous records with the same symbol and ex-date via NFN interface to cancel or correct. To correct the ex-date and/or symbol, firms must enter two records (a cancellation record for the original ex-date/symbol entry and a new record for the corrected ex-date/symbol entry).
Money Market Funds	MMF, MMC	Average Life	441	AVG LIFE NOT NUMERIC OR NA	**Invalid field format - Average Life.** Required field in NFN 0050 version. Average life must be populated as three digit whole number (000 to 364) or as NA.
Money Market Funds	MMF, MMC	Average Life	442	AVG LIFE MAY NOT EXCEED 364	**Invalid value - Average life cannot exceed 365 days.** Money markets, by definition, must have an average life of less than one standard year.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Money Market Funds	MMF, MMC	Average Maturity	161	AVG MATURITY NOT NUMERIC OR NA	**Invalid field format - Average Maturity.** Required field. Average maturity must be populated as three digit whole number (000 to 364) or as NA.
Money Market Funds	MMF, MMC	Average Maturity	112	AVG MATURITY MAY NOT EXCEED 364	**Invalid value - Average maturity cannot exceed 365 days.** Money markets, by definition, must have an average maturity of less than one standard year.
Money Market Funds	MMC	Calculation Time	451	CALCULATION TIME NOT PROPER FORMAT	**Invalid field format – Calculation Time.** Calculation Time must be reported in HHMMSS format: HH must be 00-24, MM must be 00 to 59, SS must be 00-59. Enter NA if value is not available.
UITs - Debt and UITs - Equity		Return of Capital (pka Capital Distribution)	245	CAP DIST MAY NOT BE ZERO	**Invalid value - Capital distribution cannot be zero.** Capital Distribution cannot be zero. Enter NA if value is not available.
UITs - Debt and UITs - Equity		Return of Capital (pka Capital Distribution)	246	CAP DIST FNOTE D MISSING	**Missing footnote code - Capital Distribution.** Within UTE and UTD messages, firm must enter the footnote value "D" when reporting a Capital Distribution value.
UITs - Debt and UITs - Equity		Return of Capital (pka Capital Distribution)	257	CAP DIST NOT NUMERIC OR NA	**Invalid field format - Capital Distribution.** Capital Distribution value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DIV	Cash Distribution Type	461	INVALID CASH DIST TYPE	**Invalid field format - Cash Distribution Type.** Required field for NFN 0050 version. Cash Distribution Type value does not match specified format or field length. Allowable values are: "D" (Cash Dividend), "I" (Interest), “S” (Special Cash Dividend) or space (No cash distribution/stock only).
All	DIV	Cash Distribution Type	475	CASH DIST TYPE MISMATCH	**Invalid value - Cash Distribution Type does not match message contents.** Value must be "D", “S” or "I" if Total Cash Distribution field is populated with numeric value. Value must be populated as "NA".
Mutual Funds and Annuities		Total Cash Distribution (pka Cash Dividend)	100	TOTAL CASH DIST/NAV RANGE	**Validation parameter – Total Cash Distribution exceeds NAV percentage.** Total Cash Distribution is greater that the system validation parameter. Please note that the most recent NAV / Redemption Price

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
					value is used for this validation. Enter # in override field to bypass validation logic.
Mutual Funds and Annuities		Total Cash Distribution (pka Cash Dividend)	145	TOTAL CASH DIST MAY NOT BE ZERO	**Invalid value – Total Cash Distribution cannot be zero.** Total Cash Distribution cannot be zero. Enter NA if value is not available.
Mutual Funds and Annuities		Total Cash Distribution (pka Cash Dividend)	146	TOTAL CASH DIST NOT NUMERIC OR NA	**Invalid field format – Total Cash Distribution.** Total Cash Distribution value does not match specified format or field length. Refer to NFN inbound file specification document for proper field format.
Mutual Funds and Annuities		Total Cash Distribution (pka Cash Dividend)	147	FOOTNOTE X/C.DIV	**Missing footnote code – Total Cash Distribution / Cash Dividend.** Within MFL message, firm must enter the footnote value "X" when reporting a Total Cash Distribution value. (Note: This error code is not supported for NFN 0050 version.)
Mutual Funds and Annuities		Total Cash Distribution Override	148	TOTAL CASH DIST OVER NOT # OR BLANK	**Invalid field format – Total Cash Distribution Override.** Override field should be populated as "#" or space.
All	All	Currency	366	INVALID CURRENCY	**Invalid field format - Currency.** The indicated Currency is not what is indicated in the instrument listing. Currency field should be populated with the appropriate currency code. If this field is left blank or space field the Currency will default to the Currency in the listing.
UITs - Debt	MFU	Current Yield	253	CURRENT YLD NOT NUMERIC OR NA	**Invalid field format - Current Yield.** Current Yield value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: In NFN 0040 version, this field is supported for UITs - Debt only. In NFN 0050 version, this field will also be supported for UITs - Equity, mutual funds, annuities, structured products and AIPs.)

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt	MFU	Current Yield Direction	425	CURRENT YLD DIR NOT DASH OR BLANK	**Invalid field format - Current Yield Direction.** Yield direction value should be populated as "-" (Dash) or space. For positive or zero yield, field should be space filled. For negative yield, field should contain "-" (dash). While Current Yield is typically associated with UITs - Debt, Nasdaq will also support field for UITs - equity, mutual funds, annuities, structured products and AIPs.
All	All	CUSIP	332	CUSIP MUST BE 9 ALPHANUM BYTES	**Invalid field format - CUSIP.** Required field. CUSIP must be entered as a 9-byte alphanumeric value (with no spaces or special characters).
All	MFU, MMF, MMC	Daily Dividend Factor	364	DAILY DIV/NAV RANGE	**Validation parameter - Daily Dividend Factor exceeds NAV percentage.** Daily Dividend is greater that the system validation parameter. Enter # in override field to bypass validation logic.
All	MFU, MMF, MMC	Daily Dividend Factor	372	DAILY DIV NOT NUMERIC OR NA	**Invalid field format - Daily Dividend Factor.** Daily Dividend Factor value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	MFU, MMF, MMC	Daily Dividend Factor	373	DAILY DIV MAY NOT BE ZERO	**Invalid value - Daily Dividend Factor cannot be zero.** Daily Dividend value cannot be zero. Enter NA if value is not available.
All	MFU, MMF, MMC	Daily Dividend Adjustment Indicator	374	INVALID DAILY DIV ADJUST IND	**Invalid field format - Daily Dividend Adjustment Indicator.** If Daily Dividend field is populated with numeric value, this field should be populated as "Y" or "N". If Daily Dividend field is not populated, this field should be space filled.
Mutual Funds and Annuities		Ex Date	237	EX-DATE NOT NUMERIC	**Invalid field format - Ex Date.** Ex-Date does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Money Market Funds	MMF, MMC	Effective Annualized 7 Day Yield	165	ANNUALIZED YLD NOT NUMERIC OR NA	**Invalid field format - Effective Annualized 7 Day Yield.** Effective Annualized 7 Day Yield value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Money Market Funds	MMF, MMC	Effective Annualized 7 Day Yield Direction	448	ANNUALIZED YLD DIR NOT DASH OR BLANK	**Invalid field format - Effective Annualized 7 Day Yield Direction.** Yield direction value should be populated as "-" (Dash) or space. For positive or zero yield, field should be space filled. For negative yield, field should contain "-" (dash).
All	All	Entry Date	214	ENTRY DATE NOT NUMERIC	**Invalid field format - Entry Date.** Required field in NFN 0050. Entry Date value does not match specified format or field length. Field must be entered in MMDDYYYY format.
All		Entry Date	214	ENTRY DATE NOT NUMERIC	**Invalid field format - Entry Date.** Entry Date value does not match specified format or field length. For NFN 0040 version, Nasdaq will allow data to be entered in MMDDYYYY format, NA or space filled. If user enters NA or spaces, Nasdaq will populate field on the outbound with current day's date.
All	All	Entry Date	215	INVALID ENTRY DATE	**Invalid value - Entry date is not an actual calendar date.** In NFN system, the entry date must be entered in MMDDYYYY format. Nasdaq validates that the Entry Date is an actual calendar date.
All	All	Entry Date	216	ENTRY DATE GREATER THAN TODAY	**Invalid value - Entry date is greater than NFN system date.** For NFN valuation module, the Entry Date must be equal to or less than the NFN system date. Firms should use the Record Date, Payment Date, Ex Date and Reinvestment Date fields within the Dividend/Interest and Capital Distribution message formats to relay corporate actions with future effective dates.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	DIV, DST	Entry Date	347	ENTRY DATE MUST EQUAL TODAY	**Invalid value - Entry Date must be equal to NFN system date for Dividend/Interest and Capital Distribution messages only.** For the Dividend/Interest and Capital Distribution messages, downstream processing logic is based on the Ex-Date field.
UITs - Debt	MFU	Estimated Long Term Return (ELTR)	254	ELTR NOT NUMERIC OR NA	**Invalid field format - Estimated Long Term Return (ELTR).** ELTR value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: In NFN 0040 version, this field is supported for UITs - Debt only. In NFN 0050 version, this field will also be supported for UITs - Equity, mutual funds, annuities, structured products and AIPs.)
UITs - Debt	MFU	ELTR Direction	426	ELTR DIR NOT DASH OR BLANK	**Invalid field format - ELTR Direction.** Yield direction value should be populated as "-" (Dash) or space. For positive or zero yield, field should be space filled. For negative yield, field should contain "-" (dash). (Note: While ELTR is typically associated with UITs - Debt, Nasdaq will also support field for UITs - equity, mutual funds, annuities, structured products and AIPs in NFN 0050 version.)
All	DIV, DST	Ex Date	237	EX-DATE NOT NUMERIC	**Invalid field format - Ex Date.** Required field for NFN 0050. Ex-Date must be entered in MMDDYYYY format.
All	DIV, DST	Ex Date	348	INVALID EX-DATE	**Invalid value - Ex Date is not an actual calendar date.** Ex-Date must be entered in MMDDYYYY format and represent an actual calendar date.
All	MFU, MMF, MMC	Footnotes	045	INVALID FOOTNOTE CODE	**Invalid value - Footnote code not defined in NFN system.** Footnote code is not an alphabetic character or is not a defined character for current use in the NFN system.
All	MFU, MMF, MMC	Footnotes	050	DUPLICATE FOOTNOTE CODE	**Invalid value - Footnote code duplicated.** Duplicate footnote codes. Please check footnotes to validate that each code is entered only one time in flagged record.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	MFU, MMF, MMC	Footnotes	129	INVALID FOR CATEGORY	**Invalid value - Footnote code not supported for NFN instrument type.** Please refer to the field definition for allowable footnote codes by NFN instrument type.
Mutual Funds and Annuities		Instrument Code (pka Fund Category)	175	INVALID FUND CATEGORY	**Invalid field format - Instrument Code.** For MFL format, the allowable Instrument Code values are: O, C, R, S, T, U, V, W, M and N.
All	All	NFN Symbol (pka Fund ID)	066	FUND ID IS NOT VALID	**Invalid value - NFN Symbol not found.** NFN Symbol is not recognized by NFN system. Refer to NFN Symbol Directory for active NFN Symbols.
All	All	NFN Symbol (pka Fund ID)	078	MMID NOT IN FUND	**Entitlement Error - NFN Symbol not associated with MPID.** Firm is not listed in NFN system as being the pricing agent for this NFN Symbol. Contact NFN Operations for assistance.
All	All	NFN Symbol (pka Fund ID)	126	FUND NOT ACTIVE	**Invalid value - NFN Symbol not active in NFN system.** NFN Symbol is not active in NFN system. Contact NFN Operations for current status information.
All	MFU, MMF, MMC	NFN Symbol (pka Fund ID)	130	INVALID FUNC/FUNDID COMB	**Invalid value - NFN Symbol not associated with supported Instrument Type / Instrument Code.** For MFL format, NFN Symbol must be registered as mutual fund or annuity to use format. For MFU format, NFN Symbol must be registered as mutual fund, unit investment trust, annuity, structured product, alternative investment product, collective investment trust, managed accounts, separate accounts, hedge funds or demand deposit account to use format. For MO or MMF format, NFN Symbol must be registered as a money market fund to use format.
All	MFU, DIV, DST	Instrument Type (pka Fund Type)	311	INVALID FUND TYPE	**Validation parameter- Instrument Type value does not match NFN registration module value for symbol.** Please refer to NFN Symbol Directory for the Instrument Type value in the NFN Registration module.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	MFU, DIV, DST	Instrument Type (pka Fund Type)	365	INVALID FUNC/FUNDID COMB	**Invalid field format - Instrument Type.** For MFU format, the allowable Instrument Type values are: MF, UT, AN, AP, SP, CT, MA, SA and HF. For DIV and DST formats, the allowable Instrument Type values are: MF, MM, UT, AN, AP, SP, CT, MA, SA and HF.
Money Market Funds	MMF, MMC	Gross 7 Day Yield	444	GROSS YLD NOT NUMERIC OR NA	**Invalid field format - Gross 7 Day Yield.** Required field in NFN 0050 version. Gross 7 Day Yield value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Money Market Funds	MMF, MMC	Gross 7 Day Yield	445	GROSS YLD CHANGE MORE THAN PARAMETER	**Validation parameter- Gross 7 Day Yield net change exceeded NFN validation parameter.** Gross 7 Day Yield net change exceeded the system validation parameter. Enter # in override field to bypass validation logic.
Money Market Funds	MMF, MMC	Gross 7 Day Yield Override	447	GROSS YLD OVER NOT # OR BLANK	**Invalid field format - Gross 7 Day Yield Override.** Override field can only be populated as "#" or space.
Money Market Funds	MMF, MMC	Gross 7 Day Yield Direction	446	GROSS YLD DIR NOT DASH OR BLANK	**Invalid field format - Gross Yield Direction.** Yield direction value should be populated as "-" (Dash) or space. For positive or zero yield, field should be space filled. For negative yield, field should contain "-" (dash).
UITs - Debt and UITs - Equity		Total Capital Distribution (pka Income Distribution)	241	INCOME DIST MAY NOT BE ZERO	**Invalid value - Total Cash Distribution cannot be zero. Total Cash** Distribution cannot be zero. Enter NA if value is not available.
UITs - Debt and UITs - Equity		Total Capital Distribution (pka Income Distribution)	242	INCOME DIST NOT NUM OR NA	**Invalid field format – Total Cash Distribution. Total Cash** Distribution value does not match specified format or field length. Refer to NFN inbound file specification document for proper field format.
UITs - Debt and UITs - Equity		Total Cash Distribution (pka Income Distribution)	243	FOOTNOTE X/I.DIV	**Missing footnote code - Total Cash Distribution.** Within UTE and UTD messages, firm must enter the footnote value "X" when reporting an Income Distribution value.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt and UITs - Equity		Total Cash Distribution Override	244	INCOME DIST OVER NOT # OR BLANK	**Invalid field format - Total Cash Distribution Override.** Override field can only be populated as "#" or space.
Mutual Funds and Annuities		Long Term Capital Gain	133	CAP GAIN DIST FNOTE D MISSING	**Validation parameter- Missing footnote code for capital distribution.** In NFN 0040 version, a firm is required to enter a footnote code of "D" when a numeric Long Term Capital Gain (or Short Term Capital Gain) value is entered.
All	DST	Long Term Capital Gain	180	INVALID LT GAIN	**Invalid field format - Long Term Capital Gain.** Long Term Capital Gain value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Mutual Funds and Annuities		Long Term Capital Gain	180	INVALID LT GAIN	**Invalid field format - Long Term Capital Gain.** Long Term Capital Gain value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DST	Long Term Capital Gain	486	LT GAIN MAY NOT BE ZERO	**Invalid value - Long Term Capital Gain cannot be zero.** Long Term Capital Gains cannot be zero. Enter NA if value is not available.
All	DST	Long Term Capital Gain	219	LT GAIN/NAV RANGE	**Validation parameter - Long Term Capital Gain exceeds NAV percentage parameter.** Long Term Capital Gain exceeds % of NAV system validation parameter. Enter # in override field to bypass validation logic.
Mutual Funds and Annuities		Long Term Capital Gain	219	LT GAINS /NAV RANGE	**Validation parameter - Long Term Capital Gain exceeds NAV percentage parameter.** Long Term Capital Gain exceeds % of NAV system validation parameter. Enter # in override field to bypass validation logic.
All	DST	Long Term Capital Gain Override	181	LT GAINS OVER NOT # OR BLANK	**Invalid field format - Long Term Capital Gain Override.** Override field should be populated as "#" or space.
Mutual Funds and Annuities		Long Term Capital Gain Override	181	LT GAINS OVER NOT # OR BLANK	**Invalid field format - Long Term Capital Gain Override.** Override field should be populated as "#" or space.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds (Closed End)		Market Price	182	MARKET NOT NUMERIC OR NA	**Invalid field format - Market Price.** For NFN 0040 Version, this error code would be used for Offer / Market Price field validation purposes for Closed End Mutual Funds.
Mutual Funds (Closed End)		Market Price	183	MARKET CHANGE MORE THAN 100%	**Validation parameter - Market Price net change was greater than 100% on ex-date.** On Ex-Date, NFN uses a net change parameter of 100% for Market Price validation. Firms must enter a footnote value of S, X or D to trigger this logic. Enter # in override field to bypass validation logic.
Mutual Funds (Closed End)		Market Price	184	MARKET CHANGE MORE THAN PARAMETER	**Validation parameter - Market Price net change exceeded percentage parameter.** Market Price net change exceeded the system validation parameter. Please note that the Market Price validation uses the same % parameter as NAV and Offer Price. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.
Mutual Funds (Closed End)		Market Price	226	NOT OFFER AND MARKET	**Invalid field format - Market Price and Offer Price cannot be reported in combination.** For NFN 0040 Version, this error code would be used for Offer / Market Price field validation purposes for Closed End Mutual Funds.
Mutual Funds (Closed End)		Offer Price	228	MUST BE MARKET PRICE	**Invalid value - Market Price (not Offer Price) field should be populated for Closed End Funds.** For NFN 0040 version, Nasdaq requires that Closed End Funds report Market Price values and Open End Funds and Annuities report Offer Price values. NFN Symbol would get this error if it were a Closed End Fund or Structured Product reporting an Offer Price value.
Mutual Funds (Closed End)	MFU	Market Price Override	185	MARKET PRICE OVER NOT # OR BLANK	**Invalid field format - Market Price Override.** Override field should be populated as "#" or space.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds and Annuities	MFU	NAV	134	NAV NOT NUMERIC OR NA	**Invalid field format – NAV.** Required field. NAV does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	MFU, MMF, MMC	NAV	376	NAV MAY NOT BE ZERO	**Invalid value - NAV cannot be zero.** NAV cannot be zero. Enter NA if not available.
Money Market Funds	MMF, MMC	NAV	134	NAV NOT NUMERIC OR NA	**Invalid field format - NAV.** Required field. NAV does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Mutual Funds and Annuities	MFU	NAV	135	NAV GREATER THAN OFFER	**Validation parameter - NAV is greater than Offer Price.** The NAV must be equal to or less than the Offer Price value in the NFN valuation message. This validation logic is used for Open-End Mutual Funds and Annuities only.
Mutual Funds and Annuities	MFU	NAV	137	NAV CHANGE GREATER THAN 100%	**Validation parameter - NAV net change was greater than 100% on ex-date.** On Ex-Date, NFN uses a net change parameter of 100% for NAV validation. Firms must enter a footnote value of S, X or D to trigger this logic. Enter # in override field to bypass validation logic.
All	MFU, MMF, MMC	NAV	138	NAV CHANGE GREATER THAN PARAMETER	**Validation parameter - NAV net change exceeded NFN validation parameter.** NAV net change exceeded the system validation parameter. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.
Mutual Funds and Annuities	MFU	NAV	138	NAV CHANGE GREATER THAN PARAMETER	**Validation parameter - NAV net change exceeded NFN validation parameter.** NAV net change exceeded the system validation parameter. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt and UITs - Equity	MFU	NAV	420	NAV NON-STANDARD FIELD FOR UITS	**Invalid value - UITs should use Redemption Price field for daily reporting.** NFN system expects UITs and Structured Products to report Redemption Price (rather than Standard NAV).
All	MFU, MMF, MMC	NAV Override	139	NAV OVER NOT # OR BLANK	**Invalid field value - NAV Override.** Override field can only be populated as "#" or space.
Mutual Funds and Annuities	MFU	NAV Override	139	NAV OVER NOT # OR BLANK	**Invalid field value - NAV Override.** Override field can only be populated as "#" or space.
All	DIV	Non-Qualified Cash Distribution	462	NON-QUAL DIST NOT NUMERIC OR NA	**Invalid field format - Non-Qualified Cash Distribution.** Non-Qualified Cash Distribution value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DIV	Non-Qualified Cash Distribution	463	NON-QUAL DIST/TOTAL CASH DIST	**Validation parameter- Non-Qualified Cash Distribution cannot exceed Total Cash Distribution.** NFN system does not allow the Non-Qualified Cash Distribution value to exceed the Total Cash Distribution value. Please verify amounts.
Mutual Funds and Annuities		Offer Price	136	OFFER VS NAV GREATER THAN PARAMETER	**Validation parameter - Difference between NAV and Offer Price is more than allowable % parameter.** For NFN 0040 Version, this error code would be used for Offer / Market Price field validation purposes for Open End Mutual Funds and Annuities.
UITs - Debt and UITs - Equity		Offer Price	136	OFFER VS NAV GREATER THAN PARAMETER	**Validation parameter - Difference between Redemption Price and Offer Price is more than allowable % parameter.** NFN system expects that the difference between NAV and Offer Price will never exceed a set % parameter.
Mutual Funds and Annuities		Offer Price	140	OFFER NOT NUMERIC OR NA	**Invalid field format - Offer Price.** For NFN 0040 Version, this error code would be used for Offer / Market Price field validation purposes for Open End Mutual Funds and Annuities.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt and UITs - Equity		Offer Price	140	OFFER NOT NUMERIC OR NA	**Invalid field format - Offer Price.** Offer Price value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Mutual Funds and Annuities		Offer Price	141	OFFER CHANGE GREATER THAN 100%	**Validation parameter - Offer Price net change was greater than 100% on ex-date.** On Ex-Date, NFN uses a net change parameter of 100% for Offer Price validation. Firms must enter a footnote value of S, X or D to trigger this logic. Enter # in override field to bypass validation logic.
UITs - Debt and UITs - Equity		Offer Price	141	OFFER CHANGE MORE THAN 100%	**Validation parameter - Offer Price net change was greater than 100% on ex-date.** On Ex-Date, NFN uses a net change parameter of 100% for Offer Price validation. Firms must enter a footnote value of S, X or D to trigger this logic. Enter # in override field to bypass validation logic.
Mutual Funds and Annuities		Offer Price	142	OFFER CHANGE MORE THAN PARAMETER	**Validation parameter - Offer Price net change exceeded percentage parameter.** Offer Price net change exceeded the system validation parameter. Please note that the Offer Price validation uses the same % parameter as NAV and Market Price. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.
UITs - Debt and UITs - Equity		Offer Price	142	OFFER CHANGE MORE THAN PARAMETER	**Validation parameter - Offer Price net change exceeded percentage parameter.** Offer Price net change exceeded the system validation parameter. Please note that the Offer Price validation uses the same % parameter as NAV and Market Price. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds and Annuities		Market Price	227	OFFER NOT MARKET	**Invalid value - Offer Price (not Market Price) field should be populated for Open End Funds and Structured Products.** For NFN 0040 version, Nasdaq requires that Closed End Funds report Market Price values and Open End Funds and Annuities report Offer Price values. NFN Symbol would get this error if it were a Open End Fund or Annuity reporting a Market Price value.
Mutual Funds and Annuities		Offer Price Override	143	OFFER OVER NOT # OR BLANK	**Invalid field format - Offer Price Override.** Override field should be populated as "#" or space.
UITs - Debt and UITs - Equity		Offer Price Override	143	OFFER OVER NOT # OR BLANK	**Invalid field format - Offer Price Override.** Override field should be populated as "#" or space.
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Separate Accounts, Hedge Funds	MFU	Offer/Market Price	401	OFF/MKT VS NAV GREATER THAN PARAMETER	**Validation parameter - Difference between NAV and Offer/Market Price is more than allowable % parameter.** In NFN 0050 version, this validation logic applies to all Mutual Funds, Unit Investment Trusts and Annuities. NFN system expects that the absolute difference between NAV and Offer Price will not exceed a set % parameter.
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Managed Accounts, Separate Accounts, Hedge Funds	MFU	Offer/Market Price	402	OFF/MKT NOT NUMERIC OR NA	**Invalid field format - Offer / Market Price.** Required field. For NFN 0050 version, the Offer / Market Price value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Separate Accounts, and Hedge Funds	MFU	Offer/Market Price	403	OFF/MKT CHANGE GREATER THAN 100%	**Validation parameter - Offer / Market price net change was greater than 100% on ex-date.** On Ex-Date, NFN uses a net change parameter of 100% for Offer / Market Price validation. Firms must enter a footnote value of S, X or D to trigger this logic. Enter # in override field to bypass validation logic.
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Separate Accounts, and Hedge Funds	MFU	Offer/Market Price	404	OFF/MKT CHANGE GREATER THAN PARAMETER	**Validation parameter - Offer / Market Price net change exceeded percentage parameter.** Offer / Market Price net change exceeded the system validation parameter. Please note that the Offer / Market Price validation uses the same % parameter as NAV. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Managed Accounts, Separate Accounts, and Hedge Funds	MFU	Offer/Market Price	406	OFF/MKT MAY NOT BE ZERO	**Invalid value – Offer / Market Price.** Offer / Market Price cannot be zero. Enter NA if not available.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Managed Accounts, Separate Accounts, and Hedge Funds	MFU	Offer/Market Price Override	405	OFF/MKT OVER NOT # OR BLANK	**Invalid field format - Offer / Market Price Override.** Override field should be populated as "#" or space.
All	DIV	Ordinary Foreign Tax Credit	468	ORD FOREIGN CREDIT NOT NUMERIC OR NA	**Invalid field format - Ordinary Foreign Tax Credit.** Ordinary Foreign Tax Credit value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DIV	Ordinary Foreign Tax Credit	469	ORD FOREIGN CREDIT/TOTAL CASH DIST	**Validation parameter - Ordinary Foreign Tax Credit cannot exceed Total Cash Distribution.** NFN system does not allow the Ordinary Foreign Tax Credit value to exceed the Total Cash Distribution value. Please verify amounts.
All	DIV, DST	Payment Date	233	PAYMENT DATE NOT NUMERIC OR NA	**Invalid field format - Payment Date.** Payment Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Mutual Funds and Annuities		Payment Date	233	PAYMENT DATE NOT NUMERIC OR NA	**Invalid field format - Payment Date.** Payment Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt and UITs - Equity		Payment Date	247	PAYMENT DATE NOT NUMERIC OR NA	**Invalid field format - Payment Date.** Payment Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. Note: For NFN 0050, Nasdaq will use the same error code (233) for all NFN instruments.
All	DIV, DST	Payment Date	234	INVALID PAYMENT DATE	**Invalid value - Payment Date is not an actual calendar date.** If entered as numeric value, Payment Date must be enter in MMDDYYYY format and reflect an actual calendar date.
Mutual Funds and Annuities		Payment Date	234	INVALID PAYMENT DATE	**Invalid value - Payment Date is not an actual calendar date.** If entered as numeric value, Payment Date must be enter in MMDDYYYY format and reflect an actual calendar date.
UITs - Debt and UITs - Equity		Payment Date	249	INVALID PAYMENT DATE	**Invalid value - Payment Date is not an actual calendar date.** If entered as numeric value, Payment Date must be enter in MMDDYYYY format and reflect an actual calendar date. Note: For NFN 0050, Nasdaq will use the same error code (234) for all NFN instruments.
All	DIV	Qualified Cash Distribution	464	QUAL CASH DIST NOT NUMERIC OR NA	**Invalid field format - Qualified Cash Distribution.** Qualified Cash Distribution value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DIV	Qualified Cash Distribution	465	QUAL CASH DIST/TOTAL CASH DIST	**Validation parameter - Qualified Cash Distribution cannot exceed Total Cash Distribution.** NFN system does not allow the Qualified Cash Distribution value to exceed the Total Cash Distribution value. Please verify amounts.
All	DIV	Qualified Foreign Tax Credit	470	QUAL FOREIGN CREDIT NOT NUMERIC OR NA	**Invalid field format - Qualified Foreign Tax Credit.** Qualified Foreign Tax Credit value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	DIV	Qualified Foreign Tax Credit	471	QUAL FOREIGN CREDIT/TOTAL CASH DIST	**Validation parameter - Qualified Foreign Tax Credit cannot exceed Total Cash Distribution.** NFN system does not allow the Qualified Foreign Tax Credit value to exceed the Total Cash Distribution value. Please verify amounts.
All	DIV, DST	Record Date	235	RECORD DATE NOT NUMERIC OR NA	**Invalid field format - Record Date.** Record Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Mutual Funds and Annuities		Record Date	235	RECORD DATE NOT NUMERIC OR NA	**Invalid field format - Record Date.** Record Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
UITs-Debt and UITs-Equities		Record Date	248	RECORD DATE NOT NUMERIC OR NA	**Invalid field format - Record Date.** Record Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. Note: For NFN 0050, Nasdaq will use the same error code (235) for all NFN instruments.
All	DIV, DST	Record Date	236	INVALID RECORD DATE	**Invalid value - Record Date is not an actual calendar date.** If entered as numeric value, Record Date must be entered in MMDDYYYY format and reflect an actual calendar date.
Mutual Funds and Annuities		Record Date	236	INVALID RECORD DATE	**Invalid value - Record Date is not an actual calendar date.** If entered as numeric value, Record Date must reflect an actual calendar date.
UITs-Debt and UITs-Equities		Record Date	250	INVALID RECORD DATE	**Invalid value - Record Date is not an actual calendar date.** If entered as numeric value, Record Date must reflect an actual calendar date. Note: For NFN 0050, Nasdaq will use the same error code (236) for all NFN instruments.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt and UITs - Equity		Redemption Price	134	NAV NOT NUMERIC OR NA	**Invalid field format - Redemption Price.** For NFN 0040 version, Nasdaq uses the same error codes for NAV and Redemption Price. Redemption Price does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: In NFN 0050 version, there are separate error codes for NAV and Redemption Price.)
UITs - Debt and UITs - Equity		Redemption Price	137	NAV CHANGE GREATER THAN 100%	**Validation parameter - Redemption Price net change was greater than 100% on ex-date.** For NFN 0040 version, Nasdaq uses the same error codes for NAV and Redemption Price.
UITs - Debt and UITs - Equity		Redemption Price	138	NAV CHANGE GREATER THAN PARAMETER	**Validation parameter - Redemption Price net change exceeded NFN validation parameter.** For NFN 0040 version, Nasdaq uses the same error codes for NAV and Redemption Price. Redemption Price net change exceeded the system validation parameter. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic.
UITs - Debt and UITs – Equity		Redemption Price	427	REDEMPTION MAY NOT BE ZERO	**Invalid value – Redemption Price.** Redemption Price cannot be zero. Enter NA if not available.
Mutual Funds, Annuities, Structured Products, AIPs, and ETMFs	MFU	Redemption Price	400	REDEMPTION NON-STANDARD	**Invalid value - Mutual Funds and Annuities should use NAV field for daily reporting.** NFN system expects Mutual Funds and Annuities to report NAV (rather than Redemption Price).
UITs - Debt and UITs - Equity	MFU	Redemption Price	421	REDEMPTION NOT NUMERIC OR NA	**Invalid field format - Redemption Price.** New code for NFN 0050 version. Redemption Price does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: In NFN 0040 version, firms would receive reject code 134 for this validation error.)

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs - Debt and UITs - Equity	MFU	Redemption Price	422	REDEMPTION CHANGE GREATER THAN 100%	**Validation parameter - Redemption Price net change was greater than 100% on ex-date.** New code for NFN 0050 version. On Ex-Date, NFN uses a net change parameter of 100% for Redemption Price validation. Firms must enter a footnote value of S, X or D to trigger this logic. Enter # in override field to bypass validation logic. (Note: In NFN 0040 version, firms would receive reject code 137 for this validation error.)
UITs - Debt and UITs - Equity	MFU	Redemption Price	423	REDEMPTION CHANGE GR THAN PARAMETER	**Validation parameter - Redemption Price net change exceeded NFN validation parameter.** New code for NFN 0050 version. Redemption Price net change exceeded the system validation parameter. The standard % logic will be used unless there is a distribution footnote code in the message. Enter # in override field to bypass validation logic. (Note: In NFN 0040 version, firms would receive reject code 138 for this validation error.)
UITs - Debt and UITs – Equity	MFU	Redemption Price	427	REDEMPTION MAY NOT BE ZERO	**Invalid value – Redemption Price.** Redemption Price cannot be zero. Enter NA if not available.
UITs - Debt and UITs - Equity	MFU	Redemption Price	428	REDEMPTION GREATER THAN OFFER	**Validation parameter – Redemption Price is greater than Offer Price.** The Redemption Price must be equal to or less than the Offer Price value in the NFN valuation message. This validation logic is used for UITs only.
UITs - Debt and UITs - Equity	MFU	Redemption Price Override	424	REDEMPTION OVER NOT # OR BLANK	**Invalid field format - Redemption Price Override.** Override field should be populated as "#" or space.
All	DIV, DST	Reinvest Date	345	REINVEST DATE NOT NUMERIC OR NA	**Invalid field format - Reinvest Date.** Reinvest Date value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	DIV, DST	Reinvest Date	346	INVALID REINVEST DATE	**Invalid value - Reinvest Date is not an actual calendar date.** If entered as numeric value, Reinvest Date must be entered in MMDDYYYY format and reflect an actual calendar date.
All	MFU, MMF, MMC	Reporting Type	370	INVALID REPORTING TYPE	**Invalid field format - Reporting Type.** Required field in NFN 0050. For Reporting Type, the allowable values are "I" (Intra-day) and "R" (end of day). Unless the fund family plans to price multiple times each day, it should enter "R".
All	DST	Return of Capital (ROC)	480	INVALID ROC	**Invalid field format - Return of Capital (ROC).** Return of Capital value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DST	Return of Capital (ROC)	481	ROC MAY NOT BE ZERO	**Invalid value - Return of Capital (ROC) cannot be zero.** Return of Capital cannot be zero. Enter NA if value is not available.
All	DST	Return of Capital (ROC)	483	ROC/NAV RANGE	**Invalid value - Return of Capital (ROC) exceeds NAV percentage parameter.** Please note that Nasdaq uses the same NAV % parameter for all capital distribution fields including ROC. Enter # in override field to bypass validation logic.
All	DST	ROC Override	484	ROC OVER NOT # OR BLANK	**Invalid field format - ROC Override.** Override field should be populated as "#" or space.
All	All	Row Header	121	INVALID FORMAT	**Invalid message format - Data format does not match the row header value.** Please refer to the NFN inbound file specification documents for data field layout and size.
Mutual Funds and Annuities		Row Header	167	WRONG LEN FOR MFL MSG	**Invalid message format - Wrong row length for legacy Valuation - Mutual Fund message format.** The MFL message length should be 180 bytes.
UITs - Equity		Row Header	168	WRONG LEN FOR UTE MSG	**Invalid message format - Wrong row length for UITs Equity (legacy) record.** The UTE message length should be 180 bytes.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
UITs – Debt		Row Header	170	WRONG LEN FOR UTD MSG	**Invalid message format - Wrong row length for UITs Debt (legacy) record.** The UTD message length should be 180 bytes.
Mutual Funds, UITs, Annuities, Structured Products, AIPs, ETMFs, CITs, Managed Accounts, Separate Accounts, and Hedge Funds	MFU	Row Header	360	WRONG LEN FOR MFU MSG	**Invalild message format - Wrong row length for new Valuation - Mutual Fund, UIT, Annuity message format.** The MFU message length should be 180 bytes.
Money Market Funds	MMF	Row Header	361	WRONG LEN FOR MMF MSG	**Invalid message format - Wrong row length for Valuation - Money Market Fund record.** The MMF message length should be 180 bytes.
Money Market Funds	MMC	Row Header	452	WRONG LEN FOR MMC MSG	**Invalid message format - Wrong row length for Valuation - Money Market Fund w/Calculation Time record.** The MMC message length should be 180 bytes.
All	DIV	Row Header	362	WRONG LEN FOR DIV MSG	**Invalid message format - Wrong row length for Dividends / Interest.** The DIV message length should be 180 bytes.
All	DST	Row Header	363	WRONG LEN FOR DST MSG	**Invalid message format - Wrong row length for Capital Distributions.** The DST message length should be 180 bytes.
Money Market Funds		Row Header	174	WRONG LEN FOR MO MSG	**Invalid message format - Wrong row length for legacy Money Market Fund record.** The MO message length should be 180 bytes.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	All	Row Header	005	INVALID FUNCTION CODE	**Invalid value - Row header value is not defined for NFN 0040 or NFN 0050.** Required field. For NFN 0040, the allowable row header values are: MFL, MO, UTD and UTE. For NFN 0050, the allowable row header values will be: MFU, MMF, DIV and DST.
Money Market Funds		Subsidized 7 Day Yield (pka Seven Day Yield)	162	SUBSIDIZED YLD NOT NUMERIC OR NA	**Invalid field format – Subsidized 7 Day Yield.** Required field in NFN 0040 version. Subsidized 7 Day Yield value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Money Market Funds		Subsidized 7 Day Yield (pka Seven Day Yield)	164	SUBSIDIZED YLD GR THAN PARAMETER	**Validation parameter- Subsidized 7 Day Yield net change exceeded NFN validation parameter.** Subsidized 7Day Yield net change exceeded the system validation parameter. Enter # in override field to bypass validation logic.
Money Market Funds		Subsidized 7 Day Yield Override	163	SUBSIDIZED YLD OVER NOT # OR BLANK	**Invalid field format – Subsidized 7 Day Yield Override.** Override field can only be populated as "#" or space.
All	DST	Short Term Capital Gain	217	ST GAIN/NAV RANGE	**Validation parameter - Short Term Capital Gain exceeds NAV percentage parameter.** Short Term Capital Gain exceeds % of NAV system validation parameter. Please note that Nasdaq uses the same % of NAV parameter for all Capital Distribution fields. Enter # in override field to bypass validation logic.
Mutual Funds and Annuities		Short Term Capital Gain	217	ST GAIN/NAV RANGE	**Validation parameter - Short Term Capital Gain exceeds NAV percentage parameter.** Short Term Capital Gain exceeds % of NAV system validation parameter. Please note that Nasdaq uses the same % of NAV parameter for all Capital Distribution fields. Enter # in override field to bypass validation logic.
All	DST	Short Term Capital Gain	176	INVALID ST GAIN	**Invalid field format - Short Term Capital Gain.** Short Term Capital Gain value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds and Annuities		Short Term Capital Gain	176	INVALID ST GAIN	**Invalid field format - Short Term Capital Gain.** Short Term Capital Gain value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DST	Short Term Capital Gain	485	ST GAIN MAY NOT BE ZERO	**Invalid value - Short Term Capital Gain cannot be zero.** Short Term Capital Gains cannot be zero. Enter NA if value is not available.
Mutual Funds and Annuities		Short Term Capital Gain	133	CAP GAIN DIST FNOTE D MISSING	**Validation parameter- Missing footnote code for capital distribution.** In NFN 0040 version, a firm is required to enter a footnote code of "D" when a numeric Short Term Capital Gain (or Long Term Capital Gain) value is entered. (Note: Nasdaq will not support this error code in NFN 0050 version.)
All	DST	Short Term Capital Gain Override	177	ST GAIN OVER NOT # OR BLANK	**Invalid field format - Short Term Capital Gain Override.** Override field should be populated as "#" or space.
Mutual Funds and Annuities		Short Term Capital Gain Override	177	ST GAIN OVER NOT # OR BLANK	**Invalid field format - Short Term Capital Gain Override.** Override field should be populated as "#" or space.
Mutual Funds and Annuities		Stock Dividend	101	FOOTNOTE S / S.DIV	**Validation parameter- Missing footnote code for stock dividend.** In NFN 0040 version, a firm is required to enter a footnote code of "S" when a numeric Stock Dividend value is entered. (Note: Nasdaq will not support this error code in NFN 0050 version.)
All	DIV	Stock Dividend	153	ST GAIN OVER NOT # OR BLANK	**Invalid value - Stock dividend cannot be zero.** Stock Dividend cannot be zero. Enter NA if value is not available.
Mutual Funds and Annuities		Stock Dividend	153	ST GAIN OVER NOT # OR BLANK	**Invalid value - Stock dividend cannot be zero.** Stock Dividend cannot be zero. Enter NA if value is not available.
All	DIV	Stock Dividend	154	STOCK DIV NOT NUM OR NA	**Invalid field format - Stock Dividend.** Stock Dividend value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
Mutual Funds and Annuities		Stock Dividend	154	STOCK DIV NOT NUM OR NA	**Invalid field format - Stock Dividend.** Stock Dividend value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DIV	Stock Dividend	472	STOCK DIV GR THAN PARAMETERS	**Validation parameter - Stock dividend ratio is outside validation parameters.** In NFN 0050 version, Stock Dividend field will be subject to minimum and maximum validation parameters. Enter # in override field to bypass validation logic.
All	DIV	Stock Dividend Override	460	STOCK DIV OVER NOT # OR BLANK	**Invalid field format - Stock Dividend Override.** Override field should be populated as "#" or space.
Money Market Funds	MMF, MMC	Subsidized 7 Day Yield	162	SUBSIDIZED YLD NOT NUMERIC OR NA	**Invalid field format - Subsidized 7 Day Yield.** Required field in NFN 0050 version. Subsidized 7 Day Yield value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Money Market Funds	MMF, MMC	Subsidized 7 Day Yield	164	SUBSIDIZED YLD GR THAN PARAMETER	**Validation parameter- Subsidized 7 Day Yield net change exceeded NFN validation parameter.** Subsidized 7 Day Yield net change exceeded the system validation parameter. Enter # in override field to bypass validation logic.
Money Market Funds	MMF, MMC	Subsidized 7 Day Yield Override	163	SUBSIDIZED YLD OVER NOT # OR BLANK	**Invalid field format - Subsidized 7 Day Yield Override.** Override field can only be populated as "#" or space.
Money Market Funds	MMF, MMC	Subsidized 7 Day Yield Direction	443	SUBSIDIZED YLD DIR NOT DASH OR BLANK	**Invalid field format - Subsidized 7 Day Yield Direction.** Yield direction value should be populated as "-" (Dash) or space. For positive or zero yield, field should be space filled. For negative yield, field should contain "-" (dash).
All	DIV	Tax Free Cash Distribution	466	TAX FREE DIST NOT NUMERIC OR NA	**Invalid field format - Tax Free Cash Distribution.** Tax Free Cash Distribution value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	DIV	Tax Free Cash Distribution	467	TAX FREE DIST/TOTAL CASH DIST	**Validation parameter - Tax Free Cash Distribution cannot exceed Total Cash Distribution.** NFN system does not allow the Tax Free Cash Distribution value to exceed the Total Cash Distribution value. Please verify amounts.
All	DIV	Total Cash Distribution	100	TOTAL CASH DIST/NAV RANGE	**Validation parameter- Total Cash Distribution exceeds NAV percentage parameter.** Total Cash Distribution is greater that the system validation parameter. Please note that NFN uses the most recent NAV / Redemption Price entry for this validation. Enter # in override field to bypass validation logic.
All	DIV	Total Cash Distribution	145	TOTAL CASH DIST MAY NOT BE ZERO	**Invalid value - Total Cash Distribution cannot be zero.** Cash Dividend / Total Cash Distribution cannot be zero. Enter NA if value is not available.
All	DIV	Total Cash Distribution	146	TOTAL CASH DIST NOT NUM OR NA	**Invalid field format - Total Cash Distribution.** Cash Dividend / Total Cash Distribution value does not match specified format or field length. Refer to NFN inbound file specification document for proper field format.
All	DIV	Total Cash Distribution Override	148	TOTAL CASH DIST OVER NOT # OR BLANK	**Invalid field format - Total Cash Distribution Override.** Override field should be populated as "#" or space.
All	MFU, MMF, MMC	Total Net Assets (pka Assets)	166	TOTAL NET ASSETS NOT NUMERIC OR NA	**Invalid field format - Total Net Assets does not match specified field format.** Assets / Total Net Assets value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: UITs may only report Total Net Assets via NFN 0050 formats.)
All	MFU, MMF, MMC	Total Net Assets (pka Assets)	221	TOTAL NET ASSETS MAY NOT BE ZERO	**Invalid value - Total New Assets cannot be zero.** Assets / Total Net Assets cannot be zero. Enter NA if value is not available. (Note: UITs may only report Total Net Assets via NFN 0050 formats.)

Instrument Type(s)	0050 Message Format(s)	Field	Rej Code	Displayed Error Code	Description
All	MFU, MMF, MMC	Total Net Assets (pka Assets)	371	TOTAL NET ASSETS LESS THAN PARAMETER	**Validation parameter - Total Net Assets is less than dollar threshold parameter.** Assets / Total Net Assets is less than the system validation parameter. Enter # in override field to bypass validation logic.
All	MFU, MMF, MMC	Total Net Assets Override (pka Assets Override)	375	TOTAL NET ASSETS OVER NOT # OR BLANK	**Invalid field format - Total Net Assets Override.** Override field can only be populated as "#" or space.
All	DST	Unallocated Distributions	186	UNALLOCATED DIST NOT NUM OR NA	**Invalid field format - Unallocated Distributions.** Unallocated Distributions value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
Mutual Funds and Annuities		Unallocated Distributions	186	UNALLOCATED DIST NOT NUM OR NA	**Invalid field format - Unallocated Distributions.** Unallocated Distributions value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values.
All	DST	Unallocated Distributions	220	UNALLOCATED DIST MAY NOT BE ZERO	**Invalid value - Unallocated Distributions cannot be zero.** Unallocated Distributions cannot be zero. Enter NA if value is not available.
Mutual Funds and Annuities		Unallocated Distributions	220	UNALLOCATED DIST MAY NOT BE ZERO	**Invalid value - Unallocated Distributions cannot be zero.** Unallocated Distributions cannot be zero. Enter NA if value is not available.
UITs - Debt and UITs - Equity	MFU	Wrap Price	252	WRAP PRICE NOT NUMERIC OR NA	**Invalid field format - Wrap Price.** Wrap Price value does not match specified format or field length. See field definition for numeric format and allowable non-numeric values. (Note: In NFN 0040 version, this field is supported for UITs only. In NFN 0050 version, this field will also be supported for mutual funds, annuities, structured products and AIPs.)

Appendix C - Documentation Update Log

Posting Date	Summary of Changes
July 1, 2010	• Updated NFN FTP Server document to include NFN 0050 formats.
September 27, 2010	• Updated NFN 0050 release dates. • Updated seven day yield definitions to match data mapping document.
January 14, 2011	• Updated the NFN FTP Server document format to more closely align the NFN Website Batch Upload file formats. • Updated NFN 0050 release dates. • Fixed definition for the "end of row" to match the current logic. • Corrected the values for the Reporting Type field in the Money Market Fund (MMF) message format. • Added validation logic for the Action field in the Dividend / Interest (DIV) and Capital Distributions (DST) message formats in NFN 0050. • Added Appendix A– System Validation Parameters.
January 25, 2011	• Added D, S and X footnote codes to new NFN money market valuation message format since Nasdaq will allow pricing agents to enter Dividend/Interest and Capital Distributions for all instrument types.
January 28, 2011	• Modified the NFN Symbol in the "Completion File Format" (Section 1.4.2) to reflect the expanded field size for NFN 0050 version messages. For NFN 0050 completion files, the NFN Symbol field length is 11 bytes inclusive of trailing spaces.
February 11, 2011	• Added the following guidance on field formatting for NFN 0050. ○ Numeric values must use the correct decimal placement and zero padding. Example: If a firm wanted to report a NAV of $10.01 in NFN 0050 format, it would enter "000010.010000". ○ Text values must be left justified and space padded. Example: If a firm wanted to report NA for Offer/Market Price in NFN 0050 format, it would enter "NA " (NA followed by 11 spaces). ○ Dates must be entered in MMDDYYYY format. Example: June 13, 2011 would be entered as "06132011". ○ CUSIP must be entered as 9 alphanumeric characters (with no spaces or special codes). • Added Appendix B – NFN Error Codes.
February 23, 2011	• Corrected error codes numbers for Action field in matrix.
April 12, 2011	• Updated Error Display code text so that no message exceeds 40 characters (NFN system limitation).
May 11, 2011	• Clarified the processing logic for the following fields: ○ Daily Dividend Adjustment Indicator in the MFU and MMF formats: Field should only be populated as Y or N if the Daily Dividend Factor field is populated with a numeric value. Please leave field blank if the Daily Dividend Factor field is populated as "NA". ○ Cash Distribution Type in DIV format: Field should be left blank if NFN pricing agent is only reporting a stock dividend.

	○ Action in DIV and DST formats: Please enter the full record for cancelled and corrected entries. Because the NFN logic is based on the symbol and ex-date fields, Nasdaq highly recommends that firms enter a NFN Symbol or Ex-Date correction as two separate entries: a cancellation for the original entry plus a new entry with the corrected information. • Removed error code for incorrect footnote field length from appendix.
May 18, 2011	• Updated the NFN 0050 release date. New date is Monday, June 13, 2011.
May 19, 2011	• Updated the Reporting Type field definition to clarify the processing of prior day corrections.
July 8, 2011	• Updated Footnote code matrix for NFN 0050 valuation messages to denote that the "F" footnote code is available for all instrument types.
January 2, 2013	• Extended NFN 0040 conversion deadline to June 30, 2013. • Added NFN code changes for Alternative Investment Product (AIP) release on or about March 11, 2013: ○ Added Instrument Type value of "AP" for Alternative Investment Products (AIPs) to the NFN 0050 message formats MFU, DIV and DST. ○ Added Footnote code value of "C" (Revaluation) to the NFN 0050 - MFU message format. (Note: Nasdaq intends to use the footnote code for AIPs and Structured Products only.) ○ Updated error code list as needed for AIPs • Corrected NAV and Redemption Price field level processing notes in NFN 0050 – MFU format for Structured Products. As outlined in the NFN 0050 data mapping document, Structured Products should report NAV (not Redemption Price). • Removed outdated references as appropriate.
May 18, 2013	• Extended NFN 0040 conversion deadline to December 31, 2013. • Updated Daily Dividend Factor field format to denote that the inbound price format will be changed from $$$$.dddd to $$.dddddd in the third quarter of 2013. The Daily Dividend Factor field is included in the NFN 0050 Valuation message formats. • Added new Cash Distribution Type of "S" for Special Cash Dividends. The Cash Distribution Type field is included in the NFN 0050 Dividend/Distribution message format.
July 5, 2013	• Added implementation date for Dividend and Structured Product release of Monday, September 9, 2013. • Added a new FTP pull time of 9:15 a.m., ET, to be supported as of September 9, 2013. • Removed Instrument Code / Fund Category values for structured products from NFN 0040 message formats. As of September 9th release, NFN pricing agents must use the NFN 0050 message formats to report structured products as well as AIPs.
July 31, 2013	• Added note that, as of 3rd Quarter 2013, Action processing will be updated to use a combination of Symbol, Cash Distribution Type and Ex-Date for "DIV" messages. • Updated Redemption Price validation logic to match NAV validation logic. The associated error codes are: ○ 406 - OFF/MKT MAY NOT BE ZERO (NFN 0050, All Funds Except Money Markets) ○ 427 - REDEMPTION MAY NOT BE ZERO (NFN 0040 and NFN 0050 – UITS only) ○ 428 - REDEMPTION GREATER THAN OFFER
April 28, 2014	• Updated NFN release schedule to denote planned test symbol release.

<table>
<tr><td></td><td>

Updated NFN specification to reflect NFN standardized field names.
Extended NFN 0040 conversion deadline to September 30, 2014.

</td></tr>
<tr><td>December 15, 2014</td><td>

Added new NFN footnote codes in NFN 0050 messages for:

<table>
<tr><th>Code</th><th>Definition</th><th>Instrument Type</th></tr>
<tr><td>G</td><td>Redemption Gate In Effect</td><td>Money Market Fund</td></tr>
<tr><td>L</td><td>Liquidity Fee In Effect</td><td>Money Market Fund</td></tr>
<tr><td>I</td><td>Repurchase Offer Period for Interval Fund</td><td>Mutual Funds</td></tr>
</table>

Extended NFN 0040 conversion deadline to June 30, 2015. (Note: Nasdaq will not add any new functionality to NFN 0040 during its limited life. Service is supported “as is”.)

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<tr><td>March 2, 2015</td><td>

Updated release date for the new NFN Footnote codes and NFN web landing page improvements to April 13, 2015.

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<tr><td>March 6, 2015</td><td>

Added NextShares Exchanged Traded Managed Fund as supported asset class on NFN system.

Added new Instrument Code of “EM” to NFN 0050 Valuation, Dividend and Distribution message formats.

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<tr><td>May 15, 2015</td><td>

Revised the NextShares symbololgy for NFN to be a 7 character ticker ending with “NX” (no delimiter).
Added earlier NFN system open time (8 a.m., ET) to the NextShares release scope. Also added a corresponding FTP server pull time of 8:15 a.m., ET.
Updated NextShares release date to September 14, 2015.

</td></tr>
<tr><td>March 7, 2016</td><td>

Added a new Money Market Fund with Calculation Time (MMC) message format. Please note that calculation time must be stated in military time (to nearest second) for U.S. Eastern Time (ET) zone. Data format will be released on or about July 11, 2016.
Added two error codes for new MMC message format.
Updated 0040 money market fund termination date to July 8, 2016.

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<tr><td>January 17, 2017</td><td>

Added four new FTP pull times as requested by client firms:

6:50 p.m., ET
7:10 p.m., ET
7:20 p.m., ET
7:40 p.m., ET

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<tr><td>March 30, 2017</td><td>

Added release notes for June 2017 release.
Removed NFN 0040 money market fund message format that was discontinued in July 2016 from document.

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<tr><td>April 4, 2017</td><td>

Added footnote with instrument type mapping information for NFN 0050 valuation message format.

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<tr><td>January 9, 2018</td><td>

Addition of new instrument type mapping information for NFN 0050 valuation message format.

</td></tr>
<tr><td>March 22, 2018</td><td>

Currency code link updated.

</td></tr>
<tr><td>May 14, 2018</td><td>

Document updated to Nasdaq Fund Network (NFN).
Addition of Instrument Code for Demand Deposit Accounts. Code “DD”.
Retirement of legacy 0040 as of August 20, 2018.

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</table>

September 20,2018	• Removed the 365 day limit for Entry Date. • Added Managed Account Nasdaq Standard starting price of $100.
October 19, 2020	• Retired legacy 0040 data format. • Adjusted the Managed Account Nasdaq base price to $1,000.