



NX FIX Specifications

Version 1.1
Andrew Bowley
Kunal Nandwani

23 April 2010

Table of Contents

Table of Contents	2
1. Introduction	3
1.1. Purpose of document.....	3
2. FIX Connectivity and Contact Details.....	4
2.1. Overview of FIX connectivity at Nomura	4
2.2. Contacts	4
2.3. Logon Details	4
3. FIX Message Structures	5
3.1. Administrative Messages.....	5
3.2. Application Messages	5
4. Other Info.....	10

1. Introduction

1.1. Purpose of document

NX is Nomura's dark crossing platform, providing strategy based and point in time crossing services. NX has been registered in January 2010 as a Multi-lateral Trading Facility (MTF), regulated by the UK Financial Services Authority, and operated by Nomura International plc (Nomura).

Nomura will operate two crossing facilities under the NX MTF:

- NX Mid Match (NXMM) – A periodic auction mid point crossing facility
- NX Strategy Match (NXSM) – Continuous algorithmic order crossing

This document defines the implementation of the Financial Information eXchange (FIX) protocol by Nomura on the connectivity platform. It provides guidance and reference for counterparts who wish to establish FIX connectivity and order flow into NX.

This document covers FIX version 4.0, 4.2 and version 4.4.

This document should be read in conjunction with the FIX specifications on the FIX Protocol website (<http://www.fixprotocol.org>).

2. FIX Connectivity and Contact Details

2.1. Overview of FIX connectivity at Nomura

This document outlines the standard usage and behaviour of FIX protocol based connectivity to Nomura. Some optionality is provided around instrument and product identification. Please do not hesitate to discuss with your sales contact, or with the contacts below any aspect of this document to which you would like further clarification.

2.2. Contacts

Contact	Details
European Client Connectivity Service Desk	+44 (0)20 7103 1211 FIX-Client-Connectivity@uk.nomura.com
European Product Management	Andrew Bowley +44 (0)20 7103 9894 andrew.bowley@nomura.com Kunal Nandwani +44 (0)20 7103 7587 kunal.nandwani@nomura.com

2.3. Logon Details

Production and Integration	Details
CompID	NOMURA and NOMURATEST
SubID	SenderSubID and OnBehalfOfCompID supported
Encryption (Tag 98=5)	PGP-DES-MD5
Encryption Version	2.6.2
FIX Version	4.0, 4.2 or 4.4
Session Start Time	Available from 22:30 GMT
Session End Time	22.00 GMT
Session Initiator	Client (preferred)
Heartbeat Interval	60 seconds
UTC Timestamp format	YYYYMMDD-HH:MM:SS.sss (milliseconds) format

3. FIX Message Structures

Nomura FIX development, application and development is based on FIX version 4.0, 4.2 and FIX 4.4 (see the FIX website <http://www.fixprotocol.org>).

3.1. Administrative Messages

Description	Tag = Value
Logon message	35 = A
Heartbeat	35 = 0
Test request	35 = 1
Resend request	35 = 2
Reject	35 = 3
Sequence reset (Gap fill)	35 = 4
Logout	35 = 5

3.2. Application Messages

Description	Tag = Value
Execution Report	35 = 8
Order Cancel Reject	35 = 9
Order – Single	35 = D
Order Cancel Request	35 = F
Order Cancel / Replace Request	35 = G
Don't Know Trade	35 = Q

3.2.1 FIX Message Constructs

Nomura will ensure that all FIX messages have the required mandatory fields as per the supported version of the FIX protocol. Relevant non-mandatory fields are also documented below. Nomura reserves the right to send additional non-mandatory fields (without notification or revision of this document) provided that the overall validity of the FIX message remains intact.

The following tables represent the key, mainly mandatory, fields that Nomura supports for each message type, and the supported values for each field. Each table does not represent a complete FIX message.

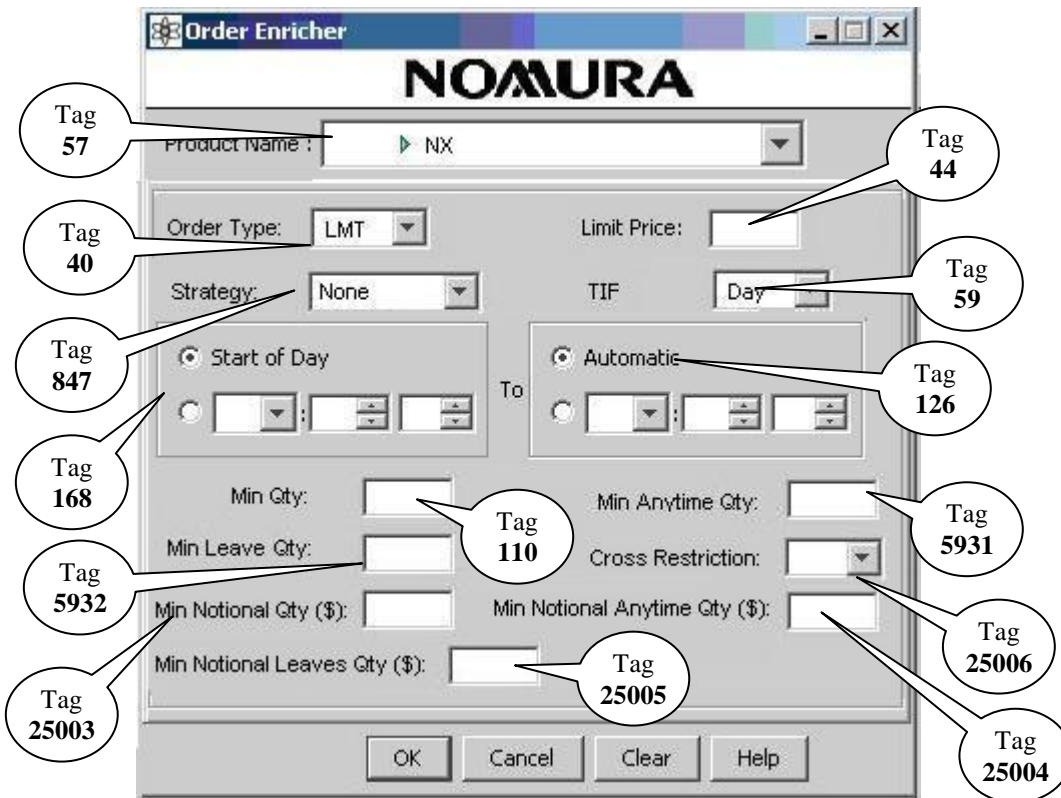
3.2.2 Order – Single

The new order message type is used by clients wishing to send single stock orders to Nomura.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = D, Order – Single
11	ClOrdID	Y	Unique identifier of the order as assigned by institution. Nomura encourage (but do not require) clients to implement date within this field to ensure uniqueness over time
21	HandlInst	Y	Supported values: 1 = Automated private
55	Symbol	Y	Nomura supports various codes in this field, as agreed on connection implementation
22	IDSource	N	Identifies class of SecurityID. Supported values: 1 = CUSIP 2 = SEDOL 3 = QUIK 4 = ISIN number 5 = RIC code A = Bloomberg Symbol
48	SecurityID	N	As defined per field 22
100	ExDestination	N	NXEU
207	SecurityExchange	N	Market used to help identify a security
54	Side	Y	Supported values: 1 = Buy 2 = Sell
38	OrderQty	Y	Number of shares ordered
40	OrdType	Y	Supported values: 1 = Market 2 = Limit P = Pegged
44	Price	N	Required for limit OrdType's
59	TimeInForce	N	Supported values: 0 = Day 3 = Immediate or Cancel 4 = Fill or Kill
57	TargetSubId	Y	NX
15	Currency	N	Identifies currency used for price.
18	ExecInst	N	M (for Mid-point)
81	ProcessCode	N	Used to identify soft trades at order entry. US markets.
110	MinQty	N	Minimum quantity (number of shares) to be executed
5931	MinAnytimeQty	N	Minimum anytime fill quantity (number of shares) on the order, for subsequent fills (for NXMM only)
5932	MinLeavesQty	N	Minimum order quantity (number of shares) that could be left at the completion of the order (for NXMM only)
126	EndTime	N	End time for the order (defaulted to current time or market start time if sent before open)

168	StartTime	N	Start time for the order (required only for NXSM, defaulted to market close)
847	TargetStrategy	N	1 = VWAP (NXSM) 0 = None (NXMM), is the default
25003	MinNotionalQty	N	Minimum notional quantity (in USD) to be executed (for NXMM only)
25004	MinNotionalAnytimeQty	N	Minimum anytime fill notional quantity (in USD) on the order, for subsequent fills (for NXMM only)
25005	MinNotionalLeavesQty	N	Minimum notional order quantity (in USD) to be left on the order (for NXMM only)
25006	CrossRestriction	N	Restricting order to be crossed against IOC order only, and/or Passive orders only. By default, if nothing is specified (for NXMM only), both IOC and Limit crossings can happen. Possible Values: 1 = Cross Against IOC Only 2 = Cross Against Passive Only

Suggested GUI design for order enrichment screens



3.2.3. Execution Report

The Execution Reports sent to the client support the following status.

Description	Tag = Value
New	39 = 0
Partially Filled	39 = 1

Filled	39 = 2
Done For Day	39 = 3
Cancelled	39 = 4
Replaced	39 = 5
Pending Cancel	39 = 6
Pending Replace	39 = E (FIX4.2)
Rejected	39 = 8

Nomura will supply all mandatory fields for execution reports.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 8
37	OrderID	Y	Used by Nomura. It is unique for each chain of orders.
11	CIOrdID	N	Unique identifier of the order as assigned by institution.
41	OrigCIOrdID	N	Conditionally required for response to an electronic Cancel or Cancel/Replace request (ExecType=PendingCancel, Replaced, or Cancelled). CIOrdID of the previous order (NOT the initial order of the day) when cancelling or replacing an order
17	ExecID	Y	Is unique for each Execution Report message
20	ExecTransType	Y	
19	ExecRefID	N	Required for Cancel and Correct ExecTransType messages
150	ExecType	Y	Describes the type of execution report (FIX4.2)
39	OrdStatus	Y	
103	OrdRejReason	N	For optional use with OrdStatus = 8 (Rejected)
55	Symbol	Y	
48	SecurityID	N	
22	IDSrc	N	
30	LastMkt	N	NXEU
54	Side	Y	
38	OrderQty	Y	
40	OrdType	N	
44	Price	N	Order limit price
15	Currency	N	Only populated when clients are setup to trade pounds for London stocks, in which case the setting will be GBP
651	UnderlyingLastPx	N	Provides reference mid price at the time of execution
32	LastShares	Y	Quantity of shares bought/sold on this (last) fill
151	LeavesQty	Y	(FIX4.2)
31	LastPx	Y	Price of this (last) fill
14	CumQty	Y	Currently executed shares for chain of orders
6	AvgPx	Y	
	Standard Trailer	Y	

3.2.4. Order Cancel Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = F

The order cancel request is used to request the cancellation of the remaining quantity of an existing order. An immediate response to this message will be sent:

An ExecutionRpt with ExecType=Pending Cancel will be sent unless the Order Cancel Request has been immediately rejected (Order Cancel Reject message). The sending of an ExecutionRpt with an ExecType=Pending Cancel indicates Nomura receipt of the Order Cancel Request but does not mean that the Order Cancel has been accepted.

3.2.5. Order Cancel/Replace Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = G

The order cancel/replace request is used to change the parameters of an existing order.

An ExecutionRpt with ExecType=Pending Replace will be sent unless the Order Cancel/Replace Request has been immediately rejected (Order Cancel Reject message).

A No-Op amend will be immediately rejected. A No-Op amend is defined as an amend where none of the following has changed: OrderQty, Price, HandInst, Symbol, Side, TimeInForce, Account, Currency, IDSource, SecurityID, OrdType, Text. Note that if one of these has changed, it does not mean that the amend is valid - it just means that it is not classed as a No-Op amend. The amend may therefore still be rejected.

The sending of an ExecutionRpt with an ExecType=Pending Replace indicates Nomura receipt of the Order Cancel/Replace Request but does not mean that the Order Cancel/Replace has been accepted.

3.2.6. Order Cancel Reject

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 9

The order cancel reject message is issued by the broker upon receipt of a cancel request or cancel/replace request message which cannot be honoured. Requests to change price or decrease quantity are executed only when an outstanding quantity exists. Filled orders cannot be changed (i.e. quantity reduced or price change.)

In addition to the standard order reject reasons, the following additional reject reasons exist:

Start Time < Current time

End Time < Start Time

4. Other Info

Settlement

Cash Settled (DVP) - Represents physical delivery of stock on a delivery versus payment (DVP) basis. This is the default.

Account

Nomura offer the facility to process order routing via the use of the account Tag 1 subject to notification. Data content should be agreed with your contact at Nomura so as to aid as far as possible the Straight Through Processing (STP) rates.

This document has been prepared and/or issued by Nomura NX MTF (Nomura International plc) ("Nomura NX") and is made available to you by Nomura NX and/or its affiliates (collectively, "Nomura"). This document has been approved for publication in the EU by Nomura NX, which is authorised and regulated by the UK Financial Services Authority. Information contained herein is intended only for investors who are "eligible counterparties" or professional clients" under the rules of the UK Financial Services Authority, and may not be quoted, circulated or otherwise referred to without our express consent. This material should not be considered as an offer to buy or sell securities or other products discussed herein. Any prices and opinions expressed are subject to change without notice.

The use of NX MTF is subject to the terms and conditions of the Nomura NX Rulebook and the NX Member Connectivity Agreement and Brokerage Agreements (as applicable).

This document may not be reproduced or disseminated without Nomura's permission, www.nomura.com

© 2010 Nomura International plc. All rights reserved.

Version 1.1
23 April 2010