# Currenex® FIX Orders Specification

Version 2.5, November 1, 2006
Revision 006

## NOTICE

# Table of Contents

# 1 Introduction

## 1.1 Purpose

The purpose of this document is to present in detail the Financial Information eXchange (FIX) protocol subset used by the Currenex Executable Streaming Prices (ESP) service.

The Currenex FIX offering supports automated FX rate price streams, order entry, and order execution on the Currenex FXTrades platform.

This document describes the Currenex ESP and FIX offerings and provides a detailed description of the supported FIX streaming message set.

## 1.2 Executable Streaming Prices (ESP)

ESP enable market participants (MPs), such as corporations, managed funds, etc., to trade on real-time streaming foreign exchange (FX) rates provided by market makers (MMs).

Currenex FIX Maker ESP extends the existing ESP service, enabling MMs to stream market rates to multiple MPs via FIX that can be directly executed. MPs can also submit orders to be matched against these rates by the Currenex matching engine.

The end result is increased market liquidity and cost saving efficiencies for both MMs and MPs.
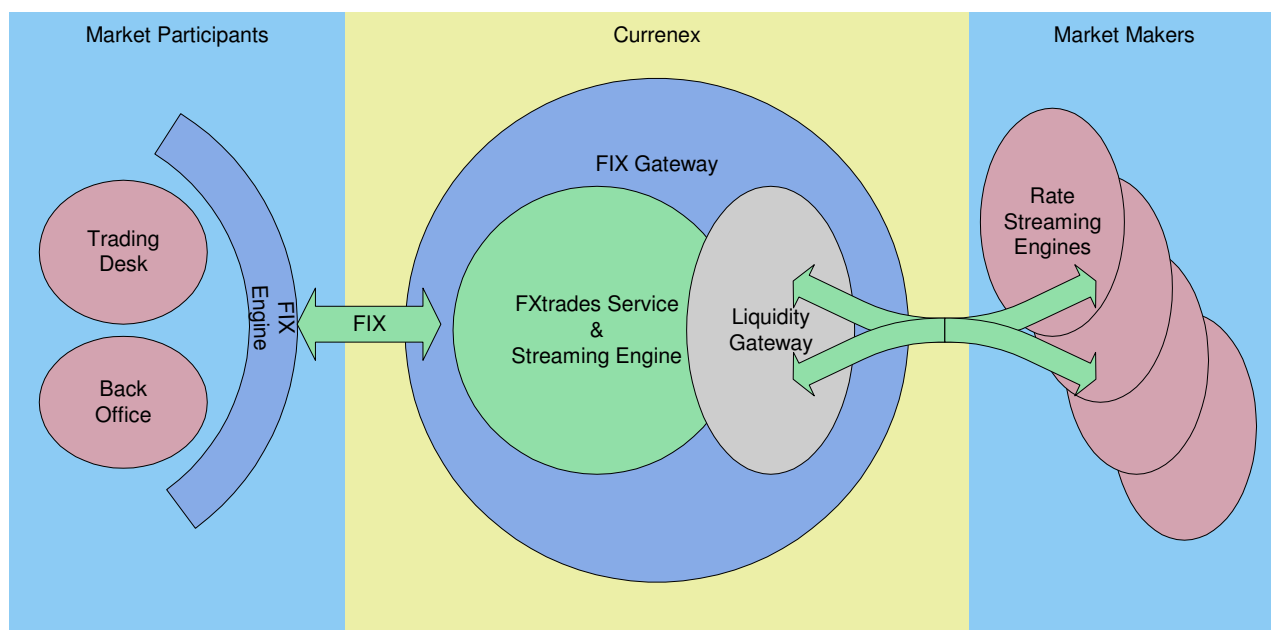
Figure 1: Currenex FIX Architecture.

# 2 Product Offering

## 2.1 Supported Order Types

- **Market**

  a buy or sell order immediately executed at the best price currently available in the system.

- **Limit**

  an order executed when a specific price is met.

- **Iceberg**

  an order type that's functionally the same as a limit order with the exception that the amount displayed to others viewing the order is only a fraction of the actual order amount.

- **Stop-Loss**

  an order that becomes a market order when a specific price level is reached or surpassed. E.g., a stop-loss order to buy becomes a market order in the system when the market rate is at or above the stop price, while a stop-loss order to sell becomes a market order in the system when the market rate is at or below the stop price.

## 2.2 Other features

### 2.2.1 Partial Fills

Except for orders with the Fill or Kill (FOK) expiry type, all submitted orders have the partial fill flag enabled. The MinQty (110) tag can be used to eliminate partial fills on other order types.

### 2.2.2 Order Expiry Types

Valid order expiry types are described in the following table.

All times should be in Greenwich Mean Time (GMT).

| Expiry Condition | Description |
| --- | --- |
| Good Till Cancel (GTC) | Orders with this expiry setting remain open and active until either executed or explicitly canceled by the client. |
| Immediate or Cancel (IOC) | The order is compared against the entire Currenex book. If no match is found, the order or remaining portions not immediately filled are canceled. Similar to the Fill or Kill (FOK) expiry type, except partial fills are possible. |
| Good Till Date/Time | The submitting client explicitly specifies the date and time at which an order is to be expired if not already executed. If only the date is specified, the system defaults the time to be 23:59:59 GMT. |
| Day | Orders with this expiry type that have not been executed will be expired by the system at the end of the Currenex system day on which they were entered. |
| Fill or Kill | The order is compared against the entire Currenex book. If no match is found or if the order cannot be executed in its entirety, it is canceled. Similar to the IOC expiry type except partials fills are not allowed. |
| Good For Seconds | Allows the placing of an order that is valid for a specific number of seconds after the time it is received by Currenex.  Once the specified seconds have passed, if the order has not been executed, it is automatically expired by Currenex. |

### 2.2.3 Order Modification

A MP can update or cancel its outstanding orders.

Order parameters such as quantity and expiry can be amended on an outstanding order without having to cancel and resubmit the order.

Clients can cancel an outstanding order. Only the outstanding amount can be canceled on an order that has been partially filled.  Cancel requests can be rejected by the system if the order is currently being processed.

### 2.2.4 Market Minimum

The Currenex trading service maintains a market minimum.

Orders entered for amounts less than this market minimum shall be rejected.

Outstanding amounts resulting from partial fills that fall below the market minimum will not be filled, and must be directly canceled by the client to be removed from the system.

Currenex treats orders with residuals amounts for less than the equivalent of one unit in either currency, i.e., tag 151 `LeavesQty` < than 1 currency unit, as completely filled. Attempts to cancel these orders will be rejected, since they are no longer active.

Clients will be notified before any change in the market minimum is put into effect.

### 2.2.5 Supported Currency Pairs

Currenex supports direct and cross currency pairs.  For a complete list of supported currency pairs for ESP please see the appendix section, Supported Currency Pairs.

# 3 Connectivity

MMs and MPs can connect to the Currenex FIX Gateway via the Public Internet or a private network.

- **Public Internet**

  Clients can connect to the Currenex FIX Gateway over the public Internet. A Secure Socket Layer (SSL) channel must be used to ensure privacy and data integrity. The related Currenex server certificates are signed by established signing authorities and are available on line for verification.

**Private Networks**

Clients can connect to Currenex via Radianz, a private network provider. Use of SSL is optional for connections established over Radianz.

Provisioning for alternative private network connections is also available. Please contact your Currenex representative for further details.
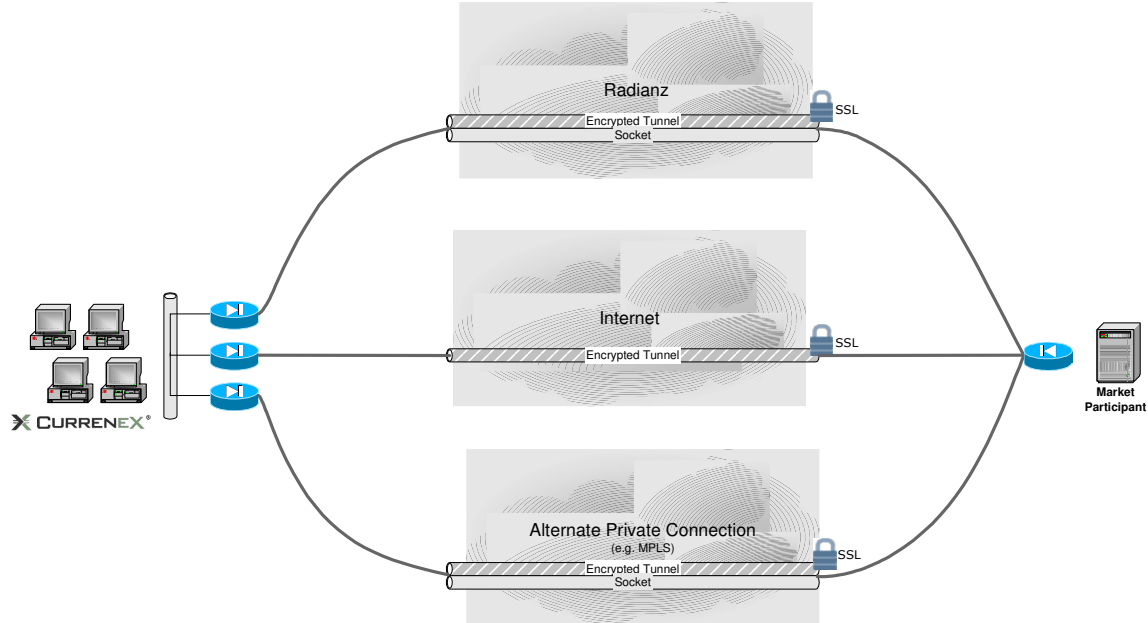


**Figure 1: MMs and MPs can connect to the Currenex FIX Gateway via the Public Internet or a private network.**

## 3.1 Account Types

Currenex provides two distinct connections for MPs to receive rates and submit orders:

1. Stream

    Used to request and receive market data.

2. Orders

    Used to place supported order types into the Currenex FIX Gateway.  All Execution Reports are sent back to an MP on this connection.

To receive streams and to send orders and receive fills, MPs must make two connections.

The orders connection requires sequence numbers to be persisted throughout the day.  The prior inbound and outbound sequence number must be preserved after intraday reconnects.  They must be reset to one (1) each night. Refer to the Nightly Sequence Number Reset section for more details.

The streaming connection is not persisted. Any reconnection must be made with the inbound and outbound sequence numbers set to one (1).

## 3.2 Secure Sockets Layer (SSL) Tunneling

Secure Sockets Layer (SSL) is required when the public Internet is used to access the FIX Gateway.  Its use is optional for users connecting across private networks.  Any SSL implementation that supports SSL V3 with mutual authentication can be used.

If SSL support is not available in an MPs FIX implementation, Currenex recommends Stunnel, an open-source implementation used widely as an SSL proxy tool.  Refer to http:/www.stunnel.org for more information.

Currenex issues digital certificates for its integration and production environments.  Initial connectivity and testing can be performed without SSL, but prior to going live, SSL connectivity must be tested.

## 3.3 Nightly Sequence Number Reset

The Currenex FIX Gateway service is offline each weekday from 17:00:00 EST/EDT until 17:05:00 EST/EDT.   During this time, Currenex resets the FIX sequence number for both FIX Maker and Taker connections.

After 17:05:00 EST/EDT, the Currenex FIX Gateway service expects the initial message from each client reconnecting to have a sequence number equal to one (1). Currenex will reply to this with an outbound message with a sequence number also equal to one (1).

Prior to the FIX Gateway service being shutdown, all connected FIX trade clients will be sent tag 340, `TradSesStatus`, = 5, to indicate the sequence number reset process is about to occur. Once received, users will be unable to send new orders or replace outstanding orders, but can cancel outstanding orders. Currenex will send updates to outstanding orders; e.g., fills, cancels, etc, that occur.

Currenex will then send a Logout message to disconnect all active client sessions.  Upon receiving the Logout message, a client should disconnect. Upon reconnecting to the Currenex FIX Gateway, the inbound and outbound sequence numbers should be reset to one (1).

# 4 Supported Messages

The Currenex FIX specification supports FIX version 4.2 messaging.

The following convention is used in this document to indicate message direction:

- In   – a message sent to Currenex
- Out  – a message sent by Currenex.
- In/Out – a message that can be sent to or from Currenex

Available fields, requirements, values and their associated meanings are documented in the Message Details section.

## 4.1 Session Messages

Session messages establish, maintain and terminate a Currenex connection.

- Logon  – (In) message sent to initiate a FIX session to Currenex.  The Logon message establishes the communication session, authenticates the connecting client, and initializes the message sequence number.

- Heartbeat  – (In/Out) message sent by Currenex during periods of application inactivity to ensure connection validity.  The receiving party should always respond with a heartbeat message.

- Resend Request  – (In/Out) request that certain messages be resent.  Often used when gaps are detected in the sequence numbering, when a message is lost, or during the initialization process.

- Test Request – (In/Out) used to verify session connectivity and to synchronize sequence numbers. The receiving party should always respond with a heartbeat message.

- Logout  – (In) signals the normal termination of the trading session.  A session terminated without a Logout message will be considered an abnormal

condition.  The Currenex FIX gateway treats a MP as logged out whenever the communication session is dropped.

## 4.2 Application Messages

Once a proper session is established, MPs use application messages to receive market rates, to submit orders, and to receive executions reports.

Refer to the [Message Details](#) section beginning on page 32 for descriptions of individual message.

In all messages, the symbol field refers to a foreign exchange (FX) currency pairs, e.g., EUR/USD.

Currenex follows the International Organization for Standardization (ISO) currency pair symbol convention of BASE/TERM or CCY1/CCY2. Rates are expressed as one (1) unit of a quoted or BASE currency in units of the quoting or TERM currency.  E.g., EUR/USD rate = 1.2000 means 1.2000 units of USD per one (1) unit of EUR.

- Trading Session Status – (Out) application message sent from Currenex to a MP indicating the trading session is fully initialized.  A MP should not send application messages until it receives this message with a `TradeSesStatus` of Open.  A MP shall receive a Business Message Reject for any application messages sent prior to receiving this message.

- Business Message Reject – (Out) application message sent in response to any application level message that cannot be replied to with a normal matching response message.  For example, Currenex sends it when an application level message is received prior to a Trading Session Status message having been sent.

  Also sent when a request message is received during

non-Currenex trading hours. For a schedule of non-trading hours, please contact your Currenex member service representative.

- Market Data Request – (In) message is used to subscribe/unsubscribe to FX rate information. Only supported request type is snapshot plus updates. MPs can request best-price or aggregated instrument view. Each request message must contain one requested instrument type. Repeating instrument (currency pair) requests are not supported at this time.

- Market Data Request Reject – (Out) message sent to an MPs to indicate a Market Data Request message cannot be processed. For example, do to the system being down, no permission, or system off hours.

- Market Data (incremental) – (Out) message sent in response to a Market Data Request message. Contains rate entries for one currency pair only. Can contain a best price bid and offer entry or show an aggregated content of the book where the total number of quotes is shown, but the sizes are aggregated into a single entry for all equal prices.

- New Order (single) – (In) message sent by the MP to input an order into the Currenex trading system. Refer to the Product Offering section for supported order types.

- Execution Report – (Out) message returned to a MP in response to a New Order, the completion of an order, the partial fill of an order, an order cancel request or an order status request. In each case, the Execution Report will show the current state of the order in question.

- Order Replace Request – (In) message MP sends to amend an outstanding order. Only open orders that can be replaced will be honored. An Order Cancel Reject message will be sent if the requested order cannot be replaced. An Execution Report with the

appropriate *execution type* will be immediately sent for all other conditions.

- Order Cancel Request – (In) message MP sends to cancel a particular order. If an order has been partially filled, only the outstanding amount can be cancelled.

- Order Cancel Reject – (Out) message sent when the request to cancel an order cannot be processed. E.g., rejection due to technical issues, setup issues, or if the order has already been filled.

- Order Status Request – (In) message requesting status on a specified order. Replied to by Currenex with an Execution Report. This message can also be used to request all outstanding/open orders for a particular user, in which case, a List Status message is returned.

- List Status – (Out) message Currenex sends reporting all outstanding/open orders for a particular user in response to an Order Status Request message.

# 5  Message Workflow

## 5.1  General Workflow

Before it can send messages to Currenex, a MP must first receive a Trading Session Status message with `TradSesStatus` = Open. Though normally received immediately after logon, if the MPs previous session terminated abnormally, a few seconds delay can be encountered while cleanup operations are performed.
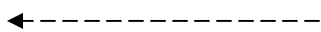
Currenex will respond to any application level messages received prior to its having sent a Trading Session Status message with a Business Message Reject.

The following codes are used to indicate trading level errors and can appear in the `BusinessRejectReason` field:

    0  – Other
    1  – Unknown ID
    2  – Unknown Security
    3  – Unsupported message type
    4  – Application not available
    5  – Conditionally required field missing

## 5.2 Market Data Feed

The following symbols are used in the below workflow:

    ←————————    Required Message flow and direction

    ←- - - - - - - - - - -    Optional or conditional message

Market Participant                                    Currenex

Market Data Request (EUR/USD)

Market Data Request (GBP/USD)

Market Data Request Reject

Market Data (EUR/USD)

Market Data (GBP/USD)

Market Data (EUR/USD) *update
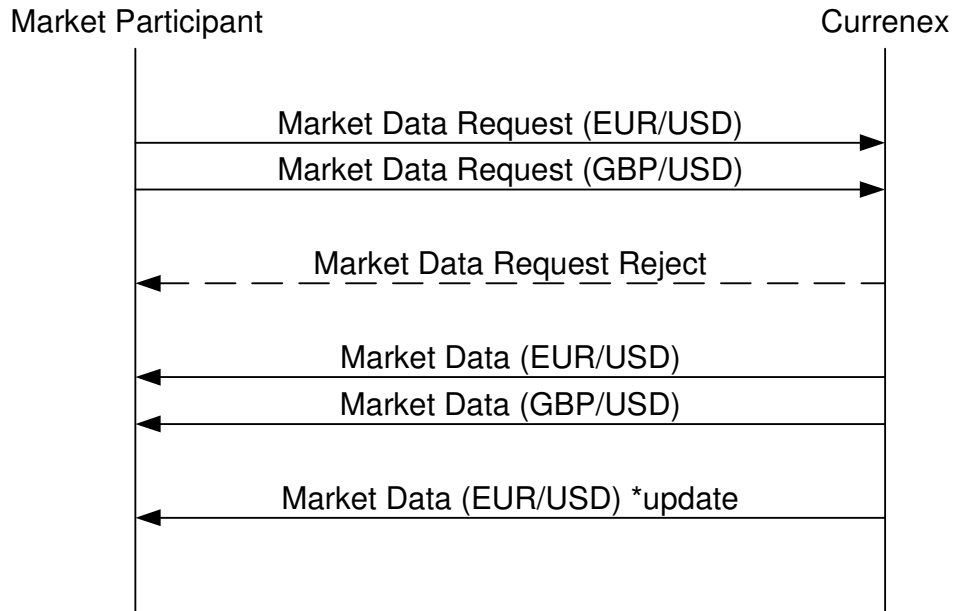
**Figure 2: Market Data Workflow.**

A MP makes a request for a Currenex rate stream by sending a Market Data Request message.  Requests for repeated groups of instruments are not currently supported. Each Market Data Request message should include only one currency pair or instrument.

The results returned depend on the request format.  The following list is of possible Market Data Request message types and field values:

SubscriptionRequestType

- 1 – Snapshot and updates: a subscription to the Market Data message until it is either unsubscribed or the session is disconnected.

- 2 – Disable request: a unsubscribe request type that stops all market data feeds for the specified symbol.

MarketDepth

- 0 – Full book: All entries in the book are delivered to the customer aggregated.  Customer is required to update, delete and maintain book entry ordering.

- 1– Top of book: Only the requested currency pair's best bid and offer rates are delivered.

`MDUpdateType`

- 1 – Incremental: provides new or updated rates. Default = 1.

`AggregatedBook`

- Y –All like prices of a currency pair are grouped together so that total amounts are shown.  Size is reported in the `NumberOfOrders` field.

- N –Individual prices and are sent. Amounts are not aggregated.

Example Market Data messages are shown below.

1) Top-of-book Snapshot: includes the best bid and best offer prices.

| Field Name | Example Value |
|---|---|
| MsgType | X |
| MDReqID | 1234 |
| NoMDEntries | 2 |
| MDEntryType | 0 |
| MDEntryID | BID-EUR/USD-SP1.21230000 |
| Symbol | EUR/USD |
| MDEntryPx | 1.2123 |
| Currency | EUR |
| MDEntrySize | 1000000 |
| Text | Bid price |
| MDEntryType | 1 |
| MDEntryID | OFFER-EUR/USD-SP1.21240000 |
| Symbol | EUR/USD |
| MDEntryPx | 1.2124 |
| Currency | EUR |
| MDEntrySize | 1000000 |
| Text | Offer price |

2) Incremental update: has the same message structure as snap-shot updates except for the following changes and additions:

MDUpdateAction
- 0 – New rate.
- 2 – Deleted or cancelled rate.

MDDeleteReason
- 0 – Normal cancel or timeout of rate.
- 1 – Cancel of rate due to error.

Unless a MP specifically requests only a single snap-shot, Currenex will continue to stream rates until either the stream is canceled by another market data request or the session is closed.

A Market Data Request message can be rejected.  For example, a sample reject message:

| Field Name | Value |
|---|---|
| MsgType | Y |
| MDReqID | 1234 |
| MDReqRejReason | 0 |
| Text | ABC/XYZ is an unsupported symbol. |

Possible values for MDReqRejReason defined by FIX are:

| Value | Description |
|---|---|
| 0 | Unknown symbol |
| 1 | Duplicate MDReqID |
| 2 | Insufficient bandwidth |
| 3 | Insufficient permission |
| 4 | Unsupported SubscriptionRequestType |
| 5 | Unsupported MarketDepth |
| 6 | Unsupported MDUpdateType |
| 7 | Unsupported Aggregated book |
| 8 | Unsupported MDEntryType |

## 5.2.1 Rate updates and cancels

If the SubscriptionRequestType equals 1, snapshot plus updates, Currenex continuously sends new rate updates to the client and reports when a rate is no longer available.  Three fields affect the subsequent rate reporting:
1) MarketDepth

```
2) MDUpdateType
3) AggregatedBook
```

For `MDUpdateType`, Currenex supports incremental updates with the following possible request types:

- FullBook - aggregate incremental
- FullBook – non-aggregate incremental
- TopOfBook – aggregate incremental

In the following sections, the rate workflow for each possible request type is described.

### 5.2.1.1    FullBook Aggregated Incremental

1. A complete aggregated book is sent to the client. If more than one maker sends the same price in the same currency pair, only one price will be displayed with the amounts aggregated into one.
2. Rate cancels from the server can appear as cancels of a particular rate or as updates to an aggregate if other prices exist in the with the same `MDEntryID` (278).
3. Rate updates from the server effectively cancel or update the old price by replacing it with the new price.

### 5.2.1.2    FullBook Non-aggregated Incremental

1. A complete non-aggregated book is sent to the client.
2. Rate cancels from the server can appear as cancels of a particular rate or as an update if another price exists with the same `MDEntryID` (278).
3. Rate updates from the server effectively cancel or update the old price by replacing it with the new price.

### 5.2.1.3    TopOfBook Aggregated Incremental

1. Only the best prices for each currency pair, with all prices and amounts aggregated in the best price tier, are sent to the client.
2. Cancels are only delivered if the best price is affected in the particular currency pair.  This could mean a new best price, if the

previous best price was cancelled, or a new aggregate size, if the cancel removed one of many best prices.

3. Updates are only delivered to the client if the best price for a particular currency pair is affected.  This could be a new best price or a new aggregate size.

### 5.2.1.4    Handling MDEntryID

With full book updates, more than one rate can be active for a particular currency pair. The MP is responsible for monitoring the Market Data message rate ID field to keep track of these updates.

Market Data new rate messages include the field `MDEntryID` (278), which is unique for all new rate updates within an active FIX session. When subsequent updates arrive with a `MDUpdateAction` = 0, new, or 2, delete, the `MDEntryID` (278) of a previously streamed rate is referenced. In a full book scenario, the MP uses this id to determine the rates to remove from the book.

### 5.2.1.5    Attributed Pricing

Each full book non-aggregated prices can be attributed to a maker if the id is enabled and `MarketDepth` (264) = 0, `AggregatedBook` (266) = N, `AttibutedPrices` (7560) = Y are sent on the Market Data request.

### 5.2.1.6    Re-subscriptions

Rate subscriptions are session based and are not permanent.  A MP must re-subscribe to the currencies it is interested in receiving on each new connection.  In cases of an abnormal shutdown or network caused disconnects, a MP will need to re-subscribe to the desired currency pairs.

## 5.3 Order Input and Execution

A New Order Single message is used to place orders into the Currenex system. Currenex replies to a New Order Single message with an Execution Report message, which will indicate whether or not the order has been accepted.

### 5.3.1 Order Types

Currenex supports market and limit orders and a basic stop-loss order type. An order type is specified via the `OrdType`. Supported values are

- C – Foreign exchange market order
- F – Foreign exchange limit order
- 3 – Stop-loss order
- Z – Foreign exchange iceberg order

Orders with an unsupported `OrdType` value shall be rejected.

### 5.3.2 Order Expiry Types

By default all orders are "Day" orders, meaning if they have not already been expired or canceled, they will automatically expire at the end of the Currenex business day. Clients can set different expiry conditions through the `TimeInForce` field.

The following `TimeInForce` values are supported:

- 0 = Day
- 1 = Good till cancel
- 3 = Immediate or cancel
- 4 = Fill or kill
- 6 = Good till date
- X = Good for seconds

For a `TimeInForce = 0`, the Currenex business day ends at 17:00:00 (EST/EDT). An order received at 17:00:00 (EST/EDT) will be in effect until 17:00:00 the next business day.

A `TimeInForce = 4`, Fill or Kill, is an Immediate or Cancel order that does not permit partial fills.  It is either filled immediately with a single Execution Report message or it is cancelled.

A `TimeInForce = 6` must also have either the `ExpireDate` or `ExpireTime` fields set.

A `TimeInForce = X` must also has the `ExpireSeconds` field set. The order will expire after the number of seconds defined in `ExpireSeconds` is reached.


### 5.3.3 Execution Reports

Currenex sends Execution Report messages to

- Confirm the receipt of an order
- Confirm changes to an existing order
- Reply to order status messages
- Relay order fill information on active orders
- Reject an order

In a normal workflow, after sending an Execution Report message to indicate the receipt of the order, Currenex will continue to send one or more Execution Report messages to the MP to relay order fill information.  If the order is filled in full, it will be indicated in the Execution Report.  In cases of partial fills, Currenex will send Execution Report messages indicating partial fills until the order is completely filled, the client actively cancels the remaining portion of the order, or the remaining portion expires.

Two fields in the Execution Report message warrant explanations, the `ExecType` and the `OrdStatus`.  For a multiple filled order, the `ExecType` field reports information on the individual fill and the `OrdStatus` field reports information on the overall order status.

For example, if a client sends an Order Cancel Request for an order that has already received 2 partial fills, an Execution Report will be returned containing
- `ExecType = 6`, pending cancel.
- `OrdStatus = 1`, partially filled.

An `Order Replace Request` message is used to update an active order. An `Order Cancel Request` message is used to cancel an order or any remaining portion of an order.  Currenex immediately responds to both with an Execution Report confirming or rejecting the request.

The following are example messages for order input and order confirmation:

| Field Name | Example Value |
|---|---|
| ClOrdID | A12343004ZZY |
| ClientID | LakeFundXYZ |
| Account | European |
| HandlInst | None |
| Symbol | EUR/USD |
| Side | 0 |
| TransactTime | 2003-07-16T19:20:21 |
| OrderQty | 2000000 |
| OrdType | C |
| Currency | EUR |

**Figure 3: Sample market order**

| Field Name | Example Value |
|---|---|
| ClOrdID | A12343004ZXX |
| ClientID | LakeFundXYZ |
| Account | Asia |
| HandlInst | None |
| Symbol | EUR/USD |
| Side | 0 |
| TransactTime | 2003-07-16T19:20:21 |
| OrderQty | 2000000 |
| OrdType | F |
| Price | 1.1834 |
| Currency | EUR |
| TimeInForce | 6 |
| ExpireDate | 7/8/2003 |

**Figure 4: Sample limit order with good-till-date**

| Field Name | Example Value |
|---|---|
| MsgType | 8 |
| ClOrdID | A12343004ZXX |
| ExecID | DG#2003DFF2 |
| ExecTransType | 0 |
| ExecType | 2 |
| OrdStatus | 2 |
| Account | XYZ Fund |
| FutSettDate | 2003-07-23 |
| Symbol | EUR/USD |
| Side | 0 |
| OrderQty | 2000000 |
| Currency | EUR |

| Field Name | Example Value |
|---|---|
| LeavesQty | 0 |
| CumQty | 2000000 |
| AvgPx | 1.1834 |
| TradeDate | 2003-07-21 |
| TransactTime | 2003-07-21T12:23:34 |

**Figure 5: Sample execution report for one complete fill**

| Field Name | Example Value |
|---|---|
| MsgType | 8 |
| ClOrdID | A12343004ZXX |
| ExecID | DG#2003DFF2 |
| ExecTransType | 0 |
| ExecType | 0 |
| OrdStatus | 8 |
| OrdRejReason | Trade limit reached. |
| Account | XYZ Fund |
| Symbol | EUR/USD |
| Side | 0 |
| LeavesQty | 2000000 |
| CumQty | 0 |
| AvgPx | 0 |

**Figure 6: Execution report for rejected order**

### 5.3.3.1 Handling Fill Type Execution Reports

Within an Execution Report, the field `ExecType`(150) indicates the status of an individual fill; the field `OrdStatus` (39) indicates the overall status of the order.

A partially filled order will cause an Execution Report with `ExecType` = 2, fill, and `OrderStatus` = 1, partial fill, to be returned.

Both the `ExecType` (150) and `OrdStatus` (39) fields need to be examined to properly process an Execution Report.

### 5.3.3.2 Time Outs

Note: Customers connected to hubs are never subject to time outs and can ignore this section.

Customers receiving streams directly from a bank can be subject to deal time outs. When a bank fails to respond to an order request

within a specified period of time, usually ten (10) seconds, an execution report will be sent with tag 150 = 9, indicating the order's status is in an indeterminate state that must be manually resolved by the bank and the Currenex Customer Support desk.

Receipt tag 150 = 9 means all communication via FIX for the order has terminated. Regardless of the manual resolution of the order's state, no further FIX messages will be sent.

### 5.3.3.3    Below Minimum Execution Reports

As stated earlier in section 2.2.4, Currenex maintains a trading minimum.  Orders entered for amounts less than the trading minimum will be rejected. Order amounts that fall below the minimum due to partial fills will automatically be canceled by the system.

An Execution Report with the custom defined field 7530, `BelowMin`, set to "`Y`" means the order amount has fallen below the system minimum.

A separate execution report will be sent indicating this remaining amount has been canceled by the system.

### 5.3.4 Account and ClientID

The New Order Single `(NewOrder)` message's `Account` and `ClientID` fields are used to  identify the booking account and user.

- `Account` – represents a trading account or fund within an entity.
- `ClientID` – represents a booking user under the same entity as the trading account.

These fields can be configured so that a client with multiple trading entities can trade on behalf of these entities via a single FIX connection.

There are four possible `Account` and `ClientID` field value combinations, each described below. Booking user is the id used to enter a deal in the Currenex book.

1. Both `ClientID` and `Account` fields are present

Booking user = `ClientID`
Subfund = A valid Account under the booking user entity
`SenderCompID` must have permission to book under `ClientID`.


2. `ClientID` is present; `Account` is not present

   Booking user = `ClientID`
   Subfund = default `Account` (subfund) of the booking user
   `SenderCompID` must have permission to book under `ClientID`.


3. `ClientID` is not present; `Account` is present

   Booking user = `SenderCompId`
   Subfund = `Account`
   Booking user entity must have a subfund = `Account`.


4. Both the `ClientID` and `Account` fields are not present

   Booking user = `SenderCompID`
   Subfund = the default `Account` (subfund) of the booking user's entity

The `Account` and `ClientID` fields on cancel, replace, and order status request messages must match those used in the original `NewOrder` message.


### 5.3.5 Order Update and Replace

It is possible to update or replace an unfilled outstanding order without first having to cancel it.

The following `NewOrder` message fields can be updated:

- `OrderQty` (38) – Specified amount
- `Price` (44) – Limit rate
- `TimeInForce` (59) – Expiration type: if = 6  then the conditionally required fields `ExpireDate` and `ExpireTime` can be changed.

Only unfilled open orders can be modified.  Order replace requests on filled or partially filled orders will be rejected. The remaining amount on a partially filled order must be canceled and a new order entered to effect any change.

### 5.3.6 Trading Through a Third Party (Order Routing)

New Orders entered via a FIX client connection established by a third party and not the end client under which the orders will be booked must indicate the actual client and account in the `NewOrder` message.

Message header information must also reflect the third party relationship by using the "on behalf of" fields.  These header fields are explained later in the section Trading On-Behalf-Of.

| Field Name | Example Value |
|---|---|
| ClOrdID | A12343004ZZY |
| ClientID | LakeFund |
| Account | LakeFundEurope |
| HandlInst | None |
| Symbol | EUR/USD |
| Side | 0 |
| TransactTime | 2003-07-16T19:20:21 |
| OrderQty | 2000000 |
| OrdType | C |
| Currency | EUR |

**Figure 7: New order request for LakeFund from third party**

### 5.3.7  Order Processing Exceptions

If a streamed rate and the rate on an outstanding order match, Currenex sends the MM that streamed the rate an execution request. Currenex expects to receive an acceptance message within a specified number of seconds, usually 10.   If no response is received within this time, the order is placed in an exception state. Currenex will notify the responsible MM and the MP.

An Execution Report message has three amount related fields:
- `OrderQty` – the amount for which the order is placed.
- `LeavesQty` – the amount left over, if any, after a fill. Most meaningful with partial fills.
- `CumQty` – the total amount filled on the order including the latest fill.

If the MM does not respond within the configured time, e.g., 10 seconds, Currenex will NOT mark the fill as executed. However, it will continue to decrement the `LeavsQty` and increment the CumQty fields. The Execution Report will have a value of "X" in the `ExecType` field. If an exception occurs on the last partial fill needed to complete an order, the parent order is closed.

The Currenex Support Desk is automatically notified of an order placed in an exception state. It will work to resolve the issue through an out-of-band process. Ultimately, the exception will either be filled or rejected. The MP will be notified of the outcome directly by the Currenex Support Desk.
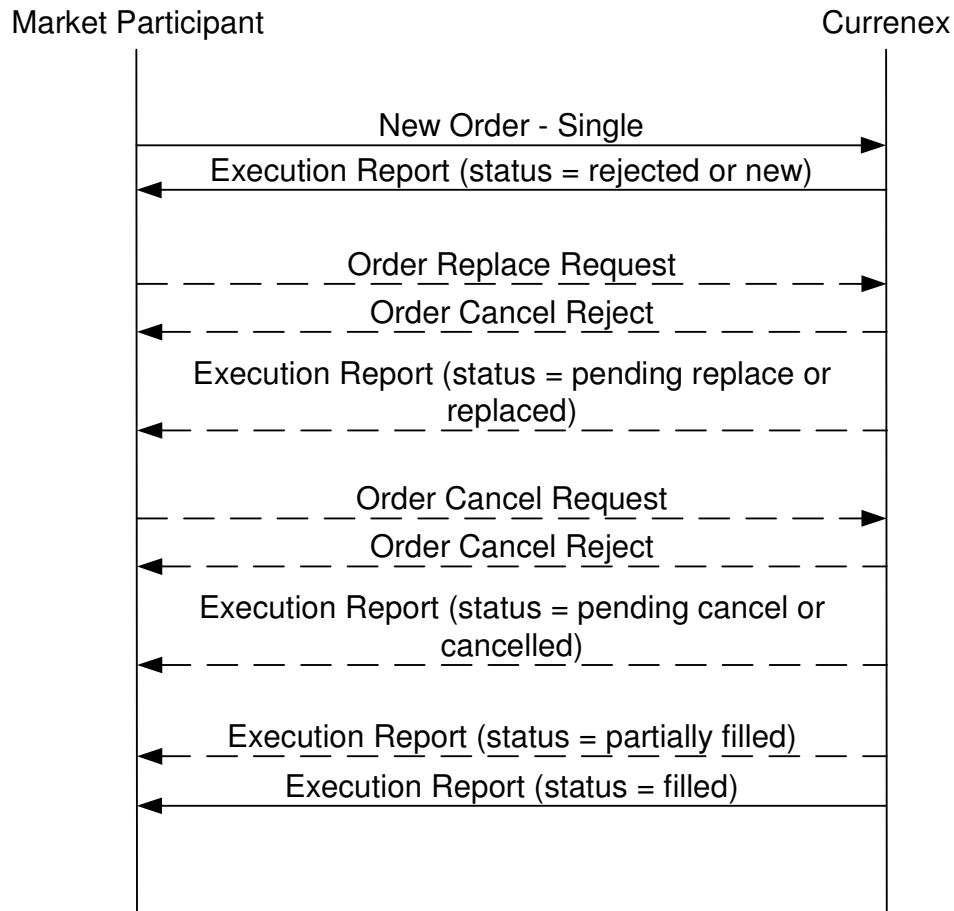


**Figure 8: Order input and execution workflow**

## 5.4 Order Status Request

An Order Status Request can be made at anytime. Currenex responds to an Order Status Request with an Execution Report showing the status of the original client order.

If an order has partial fills, the Execution Report will show only the parent order, not the partials.

Execution Reports sent in response to Order Inquiry Requests will have an `ExecTransType` (20) field = 3, indicating it is a response to a status request.

| Field Name | Example Value |
|---|---|
| MsgType | H |
| ClOrdID | SKJD09234.XSY |
| Symbol | EUR/USD |
| Side | 0 |

**Figure 9: Order inquiry request message**

| Field Name | Example Value |
|---|---|
| MsgType | 8 |
| ClOrdID | A12343004ZXX |
| ExecID | DG#2003DFF2 |
| ExecTransType | 3 |
| ExecType | 0 |
| OrdStatus | 0 |
| Account | XYZ Fund |
| Symbol | EUR/USD |
| Side | 0 |
| OrderQty | 0 |
| LeavesQty | 2000000 |
| CumQty | 0 |
| AvgPx | 0 |

**Figure 10: Execution Report in response to an Order Inquiry Request**

### 5.4.1 Open Order Request

A client can request the status on all outstanding orders by sending an `OrderStatusRequest` message with the custom defined field `OpenOrders` (7559) = 'Y.' In response, Currenex will return all outstanding orders for the user specified in the request's `ClientID`

field.  If the `ClientID` field is not present, then the `SenderCompID` field value is used as the enquiring user.

The reply is sent as a `ListStatus` message containing a set of repeated fields for all the open orders.  If `OrderStatusRequest` is for all open orders, the Account field is not mandatory.
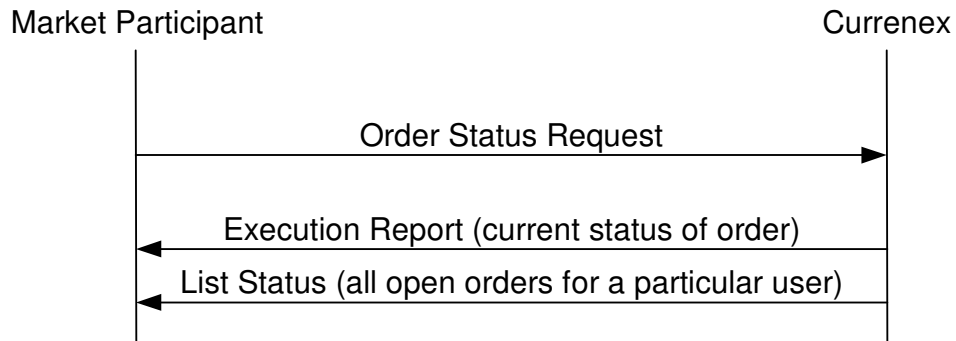


**Figure 11:  Order inquiry workflow**

# 6 Message Details

Currenex supports all FIX version 4.2 required fields and a portion of the non-required fields. The fields that make up each message are described in this section.

Note the following conventions:

**Bold italics** font is used to indicate fields that can hold repeating groups of data.

The values under the "Required" column indicate one of the following:

- 'Y' – field is mandatory and must be sent or received as a part of the message.
- 'N' – Non-required field that should be omitted unless directed otherwise by Currenex.
- 'C' – field is required if the condition in the associated comment box is met.

## 6.1 Session Messages

### 6.1.1 Standard Header

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| 8 | BeginString | Y | Message start. Handled by FIX engine. |
| 9 | BodyLength | Y | Message length. Handled by FIX engine. |
| 34 | MsgSeqNum | Y | Message sequence number. Handled by FIX engine. |
| 35 | MsgType | Y | The message type. Refer to individual messages for valid values. |
| 49 | SenderCompID | Y | Provided by Currenex - the user's trading account id. |
| 52 | SendingTime | Y | The GMT timestamp on the message. Handled by FIX engine. |
| 56 | TargetCompID | Y | Standard value is "CNX," though this can be changed at the client's request. |
| 115 | OnBehalfOfCompID | N | ID used with trading via a third party. |
| 142 | SenderLocationID | N | Sender's location ID provided by Currenex. Omit unless otherwise directed. |
| 143 | TargetLocationID | N | Provided by Currenex – geographical location and or trading partner desk ID. |
| 116 | OnBehalfOfSubID | N | SubID used when trading via a third party. |
| 144 | OnBehalfOfLocationID | N | Trading party location ID for third party trading. |

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| 50 | SenderSubID | N | Provided by Currenex – not used unless directed. |
| 142 | SenderLocationID | N | Provided by Currenex – not used unless directed. |
| 43 | PossDupFlag | N | Indicates possible retransmission of message with this sequence number:<br>Y = Possible duplicate<br>N = Original transmission<br>Used by Currenex on SequenceResets and ResendRequests. |
| 370 | OnBehalfOfSendingTime | N | Time in GMT when a message is sent via a hub or service bureau. E.g., if 'A' sends message to a hub, which in turn sends it to B via a separate FIX connection, this field would show the time at which the message was sent by 'A' to the hub. |

## 6.1.2 Standard Trailer

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| 10 | CheckSum | Y | A value calculated by the FIX engine from the message data and transferred with the data.  If the data received does not match the CheckSum value, the data was corrupted in transit. |

## 6.1.3 Heartbeat

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = 0 |
| 112 | TestReqID | C | Required if heartbeat is due to a Test Request message. |
|  | *Standard Trailer* | Y |  |

## 6.1.4 Logon

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = A |
| 98 | EncryptMethod | Y | 0 – not encrypted is the only accepted value. |
| 108 | HeartBtInt | Y | Heartbeat interval in seconds. |
| 141 | ResetSeqNumFlag | N | Y – resets both the incoming and outgoing sequence numbers to 1. |
|  | *Standard Trailer* | Y |  |

### 6.1.5 Logout

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = 5 |
| 58 | Text | N | Descriptive text message. |
|  | *Standard Trailer* | Y |  |

### 6.1.6 Resend Request

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = 2 |
| 7 | BeginSeqNo | Y | First sequence number in the range to be resent. |
| 16 | EndSeqNo | Y | Last sequence number in the range to be resent.<br>For single message resend requests, set BeginSeqNo = EndSeqNo.<br>If request is for all messages subsequent to a particular message, EndSeqNo = 0. |
|  | *Standard Trailer* | Y |  |

### 6.1.7 Test Request

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = 1 |
| 112 | TestReqID | Y | Unique ID of test request. |
|  | *Standard Trailer* | Y |  |

## 6.2 Application Messages

### 6.2.1 Trading Session Status

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = h |
| 336 | TradingSessionID | Y | Identifier for this trading session. |
| 340 | TradSesStatus | Y | State of the trading session:<br>2 = Open<br>5 = Pre-Close |
| 58 | Text | N | Descriptive text message. |
|  | *Standard Trailer* | Y |  |

## 6.2.2 Business Message Reject

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
|  | *Standard Header* | Y | MsgType tag 35 = j |
| 45 | RefSeqNum | N | MsgSeqNum of rejected message. |
| 372 | RefMsgType | Y | The MsgType of the FIX message being rejected. |
| 380 | BusinessRejectReason | Y | Code to identify reason for this reject message.<br>0 = Other<br>1 = Unknown ID<br>2 = Unknown Security<br>3 = Unsupported Message Type<br>4 = Application not available<br>5 = Conditional Required Field Missing |
|  | *Standard Trailer* | Y |  |

## 6.2.3 Market Data Request

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
|  | Standard Header | Y | MsgType tag 35 = V |
| 262 | MDReqID | Y | A unique ID assigned by the client to the Market Data Request.  To unsubscribe from market data, the same ID must be sent with tag 263 = 2. |
| 263 | SubscriptionRequestType | Y | Specifies the data request type. A Snapshot + Updates request is for the current state of the market and all subsequent updates. Valid values:<br>1 = Snapshot + Updates (Subscribe)<br>2 = Unsubscribe |
| 264 | MarketDepth | Y | Depth of market for Book Snapshot.<br>0 = Full Book<br>1 = Top of Book |
| 265 | MDUpdateType | C | Required if SubscriptionRequestType = Snapshot + Updates (1):<br>1 = Incremental Refresh |
| 266 | AggregatedBook | Y | N = Non-aggregate<br>Y = Aggregate |
| 267 | NoMDEntryTypes | Y | Number of MDEntryType fields being requested.<br>2 = bid and offer |
| 269 | ***MDEntryType*** | ***Y*** | Market Data entries types list:<br>0 = Bid |

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| | | | 1 = Offer<br>Repeated field: 269=0, 269=1 |
| 146 | NoRelatedSym | Y | Number of related symbols in the request. This value is always equal to '1' in current version. |
| 55 | Symbol | Y | The currency pair for which quotes are being requested. |
| 7560 | AttributedPrices | Y | Currenex customized tag. Must be set to 'Y' and sent with MarketDepth (264) = 0 and AggregatedBook (266) = N to receive attributed pricing. |
| | Standard Trailer | Y | |

## 6.2.4 Market Data Request Reject

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| | *Standard Header* | Y | MsgType tag 35 = Y |
| 262 | MDReqID | Y | A unique ID assigned by the client to the Market Data Request.  To unsubscribe to market data, the same ID must be sent with tag 263 = 2. |
| 281 | MDReqRejReason | N | Text description of the rejection. |
| | *Standard Trailer* | Y | |

## 6.2.5 Market Data (incremental)

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| | *Standard Header* | Y | MsgType tag 35 = X |
| 262 | MDReqID | C | A unique ID assigned by the client to the Market Data Request.  To unsubscribe to market data, the same ID must be sent with tag 263 = 2.<br>Required if message is in response to a Market Data Request. |
| 268 | NoMDEntries | Y | Number of entries following. |
| *279* | *MDUpdateAction* | Y | The Market Data update action type.<br>It must be the first field in the repeating group. The only valid values are<br>0 = New<br>2 = Delete |
| *285* | *DeleteReason* | N | If MDUpdateAction = Delete(2), this field can be used to specify a reason. |
| *269* | *MDEntryType* | C | A list of all the Market Data entries types the requesting firm is interested in receiving.<br>0 = Bid<br>1 = Offer |

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| | | | Only two sided requests are supported; i.e., repeat the field as 269=0, 269=1 |
| 278 | *MDEntryID* | Y | Market data identifier. There is only one MDEntry active at any one time.<br><br>A market data update message with a MDUpdateAction = 0 (New) should replace any active entry with the same MDEntryID (278).<br><br>A market data update message with MDUpdateAction (279) = 2 (Delete) indicates any active entry with the same with the same MDEntryID should be deleted. |
| 55 | *Symbol* | N | The currency pair for which quotes are being requested. |
| 282 | *MDEntryOriginator* | C | Originator of a Market Data Entry. Present on full non-aggregated book attributed market data updates. |
| 270 | *MDEntryPx* | C | The actual rate.<br>Required when MDUpdateAction = New(0). |
| 15 | *Currency* | N | The currency for the amount specified in the OrderQty field. |
| 271 | *MDEntrySize* | C | Required when MDUpdateAction = New(0) and MDEntryType = Bid(0), Offer(1). |
| 432 | *ExpireDate* | C | Required if TimeInForce = GTD and ExpireTime is not specified.<br><br>Optional when Bid or Offer represent an order.<br><br>ExpireDate and ExpireTime cannot both be specified in the same Market Data Entry. |
| 126 | *ExpireTime* | C | Required if TimeInForce = GTD and ExpireDate is not specified.<br><br>Optional when Bid or Offer represent an order.<br><br>ExpireDate and ExpireTime cannot both be specified in the same Market Data Entry. |
| 346 | *NumberOfOrders* | N | Used in an Aggregated Book to show how many individual orders make up an MDEntry |
| 290 | *MDEntryPositionNo* | N | Display position of a bid or offer numbered from most to least competitive per market side beginning with 1. |
| 58 | *Text* | N | Text field used to describe the Market Data Entry. |
| | *Standard Trailer* | Y | |

## 6.2.6 New Order (single)

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| | *Standard Header* | Y | MsgType tag 35 = D |
| 11 | ClOrdID | Y | Client assigned unique identifier for the order. |
| 21 | HandlInst | Y | 1 = Automated execution |
| 15 | Currency | Y | The dealt currency of the order. This is the currency for the amount specified in tag 38, OrderQty field. |
| 54 | Side | Y | Order side:<br>1 = Buy<br>2 = Sell |
| 55 | Symbol | Y | The currency pair of the order. |
| 60 | TransactTime | Y | Time at which the order request was initiated or released by the trader or trading system. |
| 38 | OrderQty | Y | The order amount in the currency specified in tag 15. |
| 40 | OrdType | Y | 3 – Stop loss order<br>C – Foreign exchange market order<br>F – Foreign exchange limit order<br>Z – Foreign exchange iceberg order |
| 1 | Account | C | The account (SubFund id) name as agreed to by Currenex and the client or else defaulted by the system. A FIX connection can have one or more trading accounts. |
| 109 | ClientID | C | Third-party transaction identifier; an explicit value agreed to with Currenex or else defaulted by the system. |
| 44 | Price | C | Required for Limit orders, OrderType = 'F.' The spot rate at which the limit order is to be executed. |
| 99 | StopPx | C | Required for Stop orders, OrderType = '3.' The spot rate at which the stop order becomes effective. |
| 432 | ExpireDate | C | Required when TimeInForce = GTD and ExpireTime is not specified. Optional when Bid or Offer is for an order. Cannot specify both ExpireDate and ExpireTime in one Market Data Entry. |
| 126 | ExpireTime | C | Required when TimeInForce = GTD and ExpireTime is not specified. Optional when Bid or Offer is for an order. Cannot specify both ExpireDate and ExpireTime in one Market Data Entry. |
| 7558 | ExpireSeconds | C | Required when TimeInForce = Good for Seconds.  Must be expressed in whole seconds. |
| 64 | FutSettDate | N | The forward value date for FX forward transactions. |
| 167 | SecurityType | N | FOR = Foreign Exchange Contract |

| Tag | Field Name | Required | Comments |
|------|-----------|----------|----------|
| 59 | TimeInForce | N | Specifies how long an order remains in effect:<br>0 – Day<br>1 – Good Till Cancel<br>3 – Immediate or Cancel<br>4 – Fill or Kill<br>6 – Good Till Date (the ExpireDate or ExpireTime fields must also be included)<br>X – Good for Seconds (the ExpireSeconds field must also be included)<br><br>TimeInForce = 3, 4 and X cannot be used with stop-loss orders, OrdType of 3. |
| 110 | MinQty | N | The minimum quantity for which the order can be executed. Setting MinQty (110) = OrderQty (38) prevents partial fills.<br><br>Defaults to OrderQty (38) for TimeInForce (59) = Fill or Kill or null. Default is zero (0) for all other TimeInForce values. |
| 58 | Text | N | Text field used in passing messages. |
| 210 | MaxShow | N | Optional field used with order type Z, Forex Iceberg to represent the amount to be shown to others viewing the order.  If omitted, the actual order amount is the show amount. |
| 7567 | NoBrokerMatchIDs | C | Number of repeated BrokerMatchID fields to follow. Must be present if BrokerMatchID is present. |
| *7561* | *BrokerMatchID* | *N* | Optional field used to specify or limit target parties with whom an order can be matched. Repeat this field to specify multiple targets. Valid values must be obtained from Currenex. |
|  | *Standard Trailer* | Y |  |

## 6.2.7 Execution Report

| Tag | Field Name | Required | Comments |
|------|-----------|----------|----------|
|  | *Standard Header* | Y | MsgType tag 35 = 8 |
| 37 | OrderID | Y | Unique order identifier assigned by Currenex.<br><br>If 150 = 8 (Rejected), is set to "UNKNOWN."<br><br>Note: this is not the same as the completed trade id, which appears in tag 17, ExecID. |
| 11 | ClOrdID | Y | Client assigned identifier to the current order action. |
| 41 | OrigClOrdID | Y | Original client assigned order id submitted on the order. |

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| 109 | ClientID | C | Third-party transaction identifier; an explicit value agreed to with Currenex or else defaulted by the system. |
| 76 | ExecBroker | N | The executing counterparty on the trade. |
| 17 | ExecID | Y | Completed trade identifying number:<br><br>If tag 150 = 0 and tag 39 = 0, the trade has not been completed yet, shows an internally generated Cx number, e.g., 10813_76982.<br><br>If tag 150 = 4 and tag 39 = 4, order or part of the original order has been canceled, shows an internally generated Cx number, e.g., 10813_76982.<br><br>If tags 150 = 2 and 39 = 2, shows the final executed trade id.<br><br>If tags 150 = 2 and 39 = 1, shows the completed trade id for the partial fill.<br><br>If 150 = 8 (Rejected), is set to "UNKNOWN." |
| 20 | ExecTransType | Y | Execution transaction type:<br>0 = New<br>1 = Cancel<br>2 = Correct<br>3 = Status |
| 150 | ExecType | Y | The execution report's type. Contains one more value than tag 39, OrderStatus.<br>0 = New<br>1 = Partial fill<br>2 = Fill<br>3 = Done for day<br>4 = Canceled<br>5 = Replace<br>6 = Pending Cancel (e.g. an Order Cancel Request)<br>7 = Stopped<br>8 = Rejected<br>9 = Suspended (Direct bank streams only)<br>A = Pending New<br>B = Calculated<br>C = Expired<br>D = Restated (unsolicited ExecutionReport sent by sellside with ExecRestatementReason set)<br>E = Pending Replace (e.g. from an Order Cancel/Replace Request) |
| 39 | OrdStatus | Y | The current state of chain of orders, e.g., when there are partial fills. Takes all the |

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| | | | same values as tag 150, ExecType, except for 'X." Has the same scope as OrderQty, CumQty, LeavesQty, and AvgPx. |
| 103 | OrdRejReason | N | Optional with ExecType = 8, Rejected. |
| 1 | Account | C | The account (SubFund id) name as agreed to by Currenex and the client or else defaulted by the system. A FIX connection can have one or more trading accounts. |
| 64 | FutSettDate | C | GMT forward value date.<br>Not sent if ExecType = 4, Canceled, or 8, Rejected. |
| 55 | Symbol | C | The order currency pair.<br>Not sent if ExecType = 4, Canceled, or 8, Rejected. |
| 54 | Side | C | Order side:<br>1 = Buy<br>2 = Sell<br>Not sent if ExecType = 4, Canceled, or 8, Rejected. |
| 38 | OrderQty | Y | The order amount in the currency specified in tag 15.<br>Not sent if ExecType = 4, Canceled, or 8, Rejected. |
| 40 | OrdType | Y | 3 – Stop loss order<br>C – Foreign exchange market order<br>F – Foreign exchange limit order<br>Z – Foreign exchange iceberg order |
| 44 | Price | C | Required for Limit orders, OrderType = 'F.'<br>The spot rate at which the limit order is to be executed. |
| 99 | StopPx | C | Required for Stop orders, OrderType = '3.'<br>The spot rate at which the stop order becomes effective. |
| 210 | MaxShow | C | Maximum amount shown on an iceberg order.<br>Only applicable for OrdType = Z. |
| 15 | Currency | N | The dealt currency of the order. This is the currency for the amount specified in tag 38, OrderQty field. |
| 32 | LastShares | Y | Quantity bought/sold for this fill.<br>Not present for status requests. |
| 31 | LastPx | C | Price at which the current or last fill was made.<br>Not sent for status requests. |
| 151 | LeavesQty | C | Amount of order open for further execution.<br>If the OrdStatus equals<br>Canceled,<br>DoneForTheDay,<br>Expired,<br>Calculated, |

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| | | | or Rejected, the order is no longer active and LeavesQty can = 0. Otherwise, LeavesQty = OrderQty – CumQty. Not sent if ExecType = 8, Rejected, or if the entire order is canceled, ExecType = 4, Canceled. |
| 14 | CumQty | C | Total amount of an order currently executed in a chain of partial fills. Not sent if ExecType = 8, Rejected, or if the entire order is canceled, ExecType = 4, Canceled. |
| 6 | AvgPx | C | The average price at which the order was filled or partially filled. Not sent if ExecType = 8, Rejected, or if the entire order is canceled, ExecType = 4, Canceled. |
| 75 | TradeDate | N | Used when reporting other than current day trades. |
| 60 | TransactTime | N | Time this order request was initiated or released by the trader or trading system. |
| 110 | MinQty | C | The minimum quantity for which the order can be executed. Returned on initial, fill, pending and end notification execution reports. |
| 58 | Text | N | Descriptive text message. |
| 7530 | BelowMin | C | If = "Y," indicates that the remaining amount of the order is below the Currenex trading minimum and no more fills are possible. The order remains open until actively canceled by the sender. |
| 7566 | PrimeBroker | C | Identifies the prime broker on the trade. Only present if a prime broker relationship exists. |
| | *Standard Trailer* | Y | |

## 6.2.8 Order Replace

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| | *Standard Header* | Y | MsgType tag 35 = G |
| 37 | OrderID | Y | Unique order identifier assigned by Currenex. |
| 41 | OrigClOrdID | Y | The unique client ID assigned to the order to be replaced. |
| 11 | ClOrdID | Y | Unique client id for the *replacement* order. Note that this identifier will be used in ClOrdID field of the Cancel Reject message if the replacement request is rejected. |
| 1 | Account | C | The account (SubFund id) name as agreed to by Currenex and the client or else defaulted by the system. A FIX connection can have one or more trading accounts. |
| 109 | ClientID | C | Third-party transaction identifier; an explicit value agreed to with Currenex or else defaulted by the system. |
| 21 | HandlInst | Y | Instructions for how order is to be handled by Currenex. |
| 55 | Symbol | Y | Currency pair.  Must match original order. |
| 54 | Side | Y | Order side:<br>1 = Buy<br>2 = Sell<br>Must match side specified in original order. |
| 60 | TransactTime | Y | Time this order request was initiated or released by the trader or trading system. |
| 38 | OrderQty | N | Size of the order. |
| 40 | OrdType | Y | 3 – Stop loss order<br>C – Foreign exchange market order<br>F – Foreign exchange limit order |
| 44 | Price | C | Required for Limit orders, OrderType = 'F.' The spot rate at which the limit order is to be executed. |
| 99 | StopPx | C | Required for Stop orders, OrderType = '3.' The spot rate at which the stop order becomes effective. |
| 15 | Currency | N | The order amount in the currency specified in tag 15. Must match original order. |
| 59 | TimeInForce | N | Specifies how long an order remains in effect:<br>0 – Day<br>1 – Good Till Cancel<br>3 – Immediate or Cancel<br>4 – Fill or Kill<br>6 – Good Till Date (the ExpireDate or ExpireTime fields must also be included)<br>X – Good for Seconds (the ExpireSeconds field must also be included) |

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
|  |  |  | TimeInForce = 3, 4 and X cannot be used with stop-loss orders, OrdType of 3. |
| 432 | ExpireDate | C | Required when TimeInForce = GTD and ExpireTime is not specified. Optional when Bid or Offer is for an order. Cannot specify both ExpireDate and ExpireTime in one Market Data Entry. |
| 126 | ExpireTime | C | Required when TimeInForce = GTD and ExpireTime is not specified. Optional when Bid or Offer is for an order. Cannot specify both ExpireDate and ExpireTime in one Market Data Entry. |
| 76 | ExecBroker | N | Used third-party transactions to express the deal executing institution's name. |
| 110 | MinQty | N | The minimum quantity for which the order can be executed. Setting MinQty (110) = OrderQty (38) prevents partial fills. Defaults to OrderQty (38) for TimeInForce (59) = Fill or Kill or null. Default is zero (0) for all other order types. |
| 58 | Text | N | Descriptive text message. |
|  | *Standard Trailer* | Y |  |

## 6.2.9 Order Cancel Request

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
|  | *Standard Header* | Y | MsgType tag 35 = F |
| 11 | ClOrdID | Y | The client assigned unique ID for this cancel request. |
| 41 | OrigClOrdID | Y | The client assigned ID of the order to be canceled. |
| 37 | OrderID | Y | The Currenex assigned ID of the order to be canceled. |
| 1 | Account | C | The account (SubFund id) name as agreed to by Currenex and the client or else defaulted by the system. |
| 109 | ClientID | C | Third-party transaction identifier; an explicit value agreed to with Currenex or else defaulted by the system. |
| 76 | ExecBroker | N | Used for firm identification in third-party transactions. This optional field is used to express the deal execution's institution name. |
| 55 | Symbol | Y | The currency pair. |
| 54 | Side | Y | Side of order. 1 = Buy 2 = Sell |

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| 60 | TransactTime | Y | Time this order request was initiated/released by the trader or trading system. |
| 58 | Text | N | Descriptive text message. |
| | *Standard Trailer* | Y | |

## 6.2.10    Order Cancel Reject

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| | *Standard Header* | Y | MsgType tag 35 = 9 |
| 11 | ClOrdID | Y | The client assigned unique ID for the cancel request being rejected. |
| 41 | OrigClOrdID | Y | ClOrdID for the order that could not be canceled or replaced. |
| 37 | OrderID | Y | The Currenex ID for the order that could not be canceled or replaced. If the order id cannot be determined, i.e., CxlRejReason="Unknown order" or if the order is not active, "NONE" will be specified. |
| 198 | SecondaryOrderID | N | Used when secondary order ids are assigned by exchange or executing system. |
| 39 | OrdStatus | Y | OrdStatus after cancel reject is applied. The current state of chain of orders.  Takes all the same values as tag 150, ExecType, except for 'X."  Has the same scope as OrderQty, CumQty, LeavesQty, and AvgPx. |
| 109 | ClientID | C | Third-party transaction identifier; an explicit value agreed to with Currenex or else defaulted by the system. |
| 60 | TransactTime | N | Time at which the reject occurred on Currenex. |
| 434 | CxlRejResponseTo | Y | Specifies to what the reject is in response: 1 – Order Cancel Request 2 – Order Replace Request |
| 102 | CxlRejReason | N | Reason the order cancellation request was rejected. |
| 58 | Text | N | Descriptive text message. |
| | *Standard Trailer* | Y | |

## 6.2.11    Order Status Request

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| | *Standard Header* | Y | MsgType tag 35 = H |

| Tag | Field Name | Required | Comments |
|---|---|---|---|
| 37 | OrderID | Y | The Currenex assigned id of the order for which a status is being requested. Set to "OPEN_ORDER" to request status of all open orders. |
| 11 | ClOrdID | Y | Unique client ID of the order for which status is being requested. Set to "OPEN_ORDER" to request status of all open orders. |
| 1 | Account | C | The account (SubFund id) name as agreed to by Currenex and the client or else defaulted by the system. |
| 109 | ClientID | C | Third-party transaction identifier; an explicit value agreed to with Currenex or else defaulted by the system. |
| 55 | Symbol | C | Currency pair of order in question. Omit on open order status requests. |
| 54 | Side | C | Side of order: 1 = Buy 2 = Sell Omit on open order status requests. |
| 7559 | OpenOrders | N | Y = requests all open orders under the account specified by tag 1. A List Status message is returned. |
|  | *Standard Trailer* | Y |  |

## 6.2.12    List Status

| Tag | Field Name | Required | Comments |
|---|---|---|---|
|  | *Standard Header* | Y | MsgType tag 35 = N |
| 66 | ListID | Y | Currenex defined list ID. |
| 429 | ListStatusType | Y | Only value supported: 2 (response type.) |
| 82 | NoRpts | Y | Only value supported: 1. |
| 431 | ListOrderStatus | Y | Only value supported: 1 (in bidding status). |
| 83 | RptSeq | Y | Only value supported: 1. |
| 58 | Text | N | Descriptive text message. |
| 68 | TotNoOrders | Y | The total orders outstanding; will always be equal to NoOrders (73). |
| 73 | NoOrders | Y | Number of repeated fields to follow; will always equals TotNoOrders (68). |
| *11* | *ClOrdID* | *Y* | Client assigned order ID. |
| *14* | *CumQty* | *Y* | Total amount of an order currently executed in a chain of partial fills. |
| *39* | *OrdStatus* | *Y* | Order status. Only outstanding order statuses are valid; i.e., 0 or 1. |
| *151* | *LeavesQty* | *Y* | Order amount still outstanding. |
| *6* | *AvgPx* | *Y* | If the order has prior partial fills, equals the Volume Weighted Average Price (VWAP). Equals 0.0 for orders without any partial fills. |
| *58* | *Text* | *N* | Descriptive text message. |

| Tag | Field Name | Required | Comments |
|-----|-----------|----------|----------|
| *37* | *OrderID* | **Y** | Currenex order ID. |
| *55* | *Symbol* | **Y** | Currency pair for the order |
| *54* | *Side* | **Y** | Side of order:<br>1 = Buy<br>2 = Sell |
|  | *Standard Trailer* | Y |  |

# 7 Appendix

## 7.1 Coordinated Universal Time (UTC) Format

All time and date formats must be in Coordinated Universal Time (UTC), more commonly known as Greenwich Mean Time (GMT).  The formats of various dates as defined by the World Wide Web Consortium (W3C) are

- Year:
  YYYY (2003)

- Year and month:
  YYYYMM (200307)

- Complete date:
  YYYYMMDD (20030716)

- Complete date plus hours and minutes:
  YYYYMMDD-hh:mm (20030716-19:20)

- Complete date plus hours, minutes and seconds:
  YYYYMMDD-hh:mm:ss (20030716-19:20:30)

Where

    YYYY = four-digit year
    MM   = two-digit month (01=January, etc.)
    DD   = two-digit day of month (01 through 31)
    hh   = two digits of hour (00 through 23) (am/pm NOT allowed)
    mm   = two digits of minute (00 through 59)
    ss   = two digits of second (00 through 59)
    s    = one or more digits representing a decimal fraction of a
second

## 7.2 Supported Currency Pairs

Contact your Currenex account representative to receive the latest list of currency pairs supported by Currenex for request for quote (RFQ) and streamed prices.