

FINANCIAL INFORMATION EXCHANGE PROTOCOL (FIX)

Version 4.4 with Errata 20030618

VOLUME 7 – FIX USAGE BY PRODUCT

Includes Errata adjustments as of June 18, 2003

Errata Purpose:

This document includes a list of minor adjustments to the FIX 4.4 Specification document due to typographical errors or ambiguities. The nature and scope of Errata adjustments do not introduce new functionality, additional fields, new values for existing fields, or new messages. **Regretably some functionality was introduced in FIX 4.4 which contained errors that required a new value or field on a specific message in order to make the intended functionality implementable. Any such exceptions to the “do not introduce”, “additional fields”, or “new messages” Errata rules were kept to a minimum using the “required to make the intended functionality implementable” rationale.** The list of items has been reviewed and approved by the FIX Technical Committee and Steering Committees. Implementers of FIX version 4.4 should refer to this document to ensure the most consistent implementation and clearest understanding of the FIX protocol.

The specific adjustments made to the original FIX version 4.4 specification as a result of the Errata can be seen and printed via Microsoft Word’s revision feature of this document. A separate document with an itemized list of changes is available via the FIX website.

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Contents – Volume 7

PRODUCT: COLLECTIVE INVESTMENT VEHICLES (CIV)	57
Overview and Scope	57
Market environment	57
CIV Security Type Identification	57
Types of CIV FIX Messages	68
Order Quantities	68
Intermediary identification	79
Investor details	79
Investor identification	79
New Investor -> New Order -> Registration instruction	840
Fund & Unit Identification	840
Order details - single	840
Order details - list	944
Commission Instructions	944
Compliance	944
Settlement instructions	944
Distribution instructions	1042
Unit Prices	1042
Valuation point	1042
Single pricing	1043
Dual pricing	1143
Execution Reports	1143
CIV-specific use of OrdStatus:	1143
CIV EXAMPLES	1345
<i>CIV Example 1.</i> Single order for a CIV fund for a known investor/nominee, to be dealt on a "historic" basis	1345
<i>CIV Example 2.</i> Single order for a CIV fund for a known investor/nominee, to be dealt on a "forward" basis	1446
<i>CIV Example 3.</i> Single order for a CIV fund for an investor/nominee not known to the fund manager - registration and settlement instructions after trade	1446
<i>CIV Example 4.</i> Single order for a CIV fund for an investor/nominee not known to the fund manager - registration and settlement instructions required before trade	1547
CIV Example 5. Single order for a CIV fund for a known investor/nominee – order modified before execution	1648
<i>CIV Example 6.</i> Single order for a CIV fund for a new investor/nominee to the fund manager - registration and settlement instructions rejected, then modified & accepted	1749
<i>CIV Example 7.</i> Exchange/switch order between several CIV funds from a single fund manager or via a funds supermarket	1749
<i>CIV Example 8.</i> Order for CIV fund by new or existing investor, routed via a client money/asset holding broker or funds supermarket to fund manager	1820
<i>CIV Example 9.</i> Order for CIV fund by an institutional investor, routed via a broker to a fund manager – possibly via a hub/exchange	1924
<i>CIV Example 10.</i> Order for CIV fund by new investor via non-client money/asset holding intermediary to fund manager	1924
<i>CIV Example 11.</i> Order for CIV fund by new investor, routed via non-client money/asset holding intermediary via a non-aggregating hub/exchange to fund manager	2022
<i>CIV Example 12.</i> Order for CIV fund by new investor routed via intermediary to a funds supermarket – which places bulk/net orders to the fund manager	2123
<i>CIV Example 13.</i> Exchange/switch order quantities – OrderPercent, Rounding, Sell Driven	2224
<i>CIV Example 14.</i> CIV Bulk order – purchase of funds for multiple investors into a designated nominee	2325
<i>CIV Example 15.</i> Registration Instruction – Joint Investors	2426
<i>CIV Example 16.</i> Registration Instruction – Tenants in Common,	2527

PRODUCT: DERIVATIVES (FUTURES & OPTIONS)	<u>2628</u>
Use of CFICode to identify derivatives security	<u>2628</u>
Single Leg Instruments	<u>2628</u>
Multileg Instrument Specification	<u>2628</u>
US Listed Options Order Capacity Values	<u>2729</u>
Proposed option order capacity codes and their FIX 4.3 equivalents	<u>2830</u>
CustomerOrderCapacity(tag 582) Mappings for Futures CTICode	<u>3032</u>
Negative Prices permitted for futures and options strategies	<u>3133</u>
Derivatives Markets Order State Transition	<u>3133</u>
Party Roles used for Derivatives Markets	<u>3133</u>
MAPPING FIX 4.2 to FIX 4.3 Usage for Options Markets	<u>3335</u>
General Usage Information – US Futures Markets	<u>3436</u>
Execution Time Bracket reporting for US Futures Markets	<u>3436</u>
Example New Order – Single for Listed Futures Market	<u>3537</u>
Example New Order – Single for Listed Options Market	<u>3844</u>
Example New Order - Multileg for Listed Futures Market (Butterfly Strategy)	<u>4850</u>
Example Multileg Execution Report for Listed Futures Market	<u>5557</u>
Multileg Execution Report Example for Futures Markets	<u>5557</u>
PRODUCT: EQUITIES	<u>6265</u>
Step-Outs and Give-Ups	<u>6265</u>
CFDs	<u>6366</u>
CFD with cash equity hedge executed by same broker as writing the CFD	<u>6366</u>
CFD with cash equity hedge executed by different broker from that writing the CFD	<u>6366</u>
Commission Sharing Arrangements	<u>6568</u>
Soft Dollars	<u>6568</u>
Directed Brokerage	<u>6568</u>
Multi-Day Average Pricing	<u>6669</u>
Introduction	<u>6669</u>
Flow Summary	<u>6669</u>
Example Warehouse Flows	<u>6770</u>
Decision Flows	<u>7174</u>
PRODUCT: FIXED INCOME (FI)	<u>7376</u>
Introduction	<u>7376</u>
Message Dialog	<u>7376</u>
Indication of Interest (Offerings)	<u>7477</u>
Negotiated Trade /Inquiry/Bid or Offer Request	<u>7578</u>
Out-of-Band Negotiated Order	<u>7780</u>
Allocation Instructions	<u>7982</u>
Post Trade Reporting to a 3 rd Party or Virtual Matching Utility	<u>8386</u>
Message Usage Details	<u>8588</u>
General Usage Rules	<u>8588</u>
Indication Of Interest	<u>8588</u>
Quote Request	<u>8588</u>
Quote Response	<u>8689</u>
Quote	<u>8689</u>
New Order - Single	<u>8689</u>
New Order - Multileg	<u>8689</u>
Execution Report	<u>8689</u>
Allocation Instruction	<u>8790</u>
Allocation Report	<u>8790</u>
Trade Capture Report	<u>8790</u>
Instrument component block	<u>8891</u>
OrderQtyData component block	<u>8891</u>
Repurchase Agreements (Repo) and Collateral Management	<u>8891</u>
Repo Terminology	<u>8891</u>

Collateral Management	<u>94</u> 97
Identifying Euro Issuers	<u>100</u> 103
Euro CountryOfIssue Codes:	<u>100</u> 103
Euro Issuer Values:	<u>100</u> 103
Example usage of FI specific component blocks	<u>103</u> 106
Example usage of BenchmarkCurve fields	<u>103</u> 106
Example usage of Stipulation fields	<u>104</u> 107
PRODUCT: FOREIGN EXCHANGE	<u>105</u>108
Foreign Exchange (F/X) Trading	<u>105</u> 108

PRODUCT: COLLECTIVE INVESTMENT VEHICLES (CIV)

Overview and Scope

This Appendix summarises how FIX messages can be used to support order initiation / confirmation and to issue settlement / Registration Instructions for open-ended Collective Investment Vehicles (“CIVs”) – known variously as Mutual Funds, Unit Trusts, Managed Investments. Open Ended Investment Companies (OEICs), Undertaking for Collective Investment in Transferable Securities (UCITs) etc.

Note that the FIX messages for CIV do not address Exchange Traded Funds, closed funds such as Investment Trusts or other scenarios where CIVs are traded as if they were equities.

Market environment

Units in funds are typically sold to Retail Investors on the recommendation of an Intermediary advisor (whose firm may not be authorised to hold client assets or settle transactions), or purchased at the Investors’ initiative via a broker or funds supermarket (which may outsource settlement to a third party) or purchased by the Investor directly from the fund manager (who again may outsource fund administration to a third party).

Retail intermediaries (eg. Intermediary advisors) who don’t hold client funds or settle transactions are rewarded by commission from the fund manager out of charges collected from the Investor. Commission and charges may be paid at the time of investment (“front-end load funds”) and/or during the life of the investment (“no-load funds”). The latter may be called “renewal” or “trail” commission, and is typically paid directly to the intermediary at the end of each period.

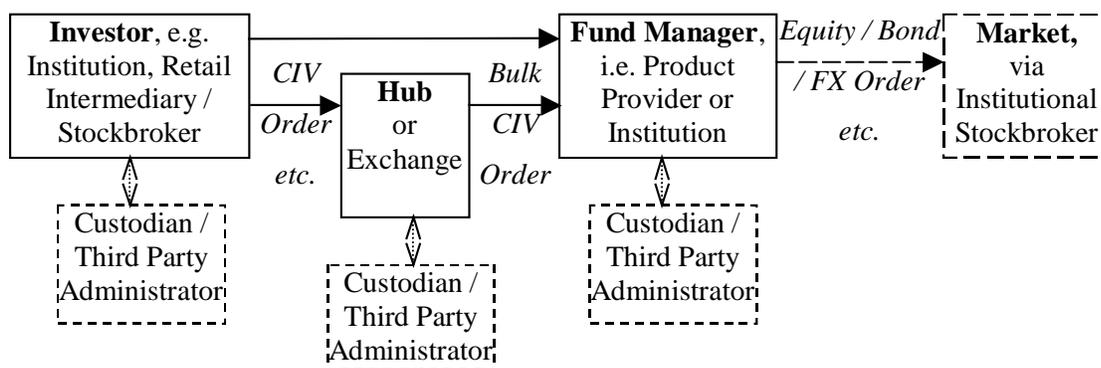
Intermediaries such as brokers and funds supermarkets may charge their own commission etc. directly to the Investor and instruct the fund manager not to deduct commission from the sum invested.

Institutional Investors typically purchase funds directly from the fund manager and no commission is payable.

In some regulatory environments the fund manager is responsible for making compliance and money laundering checks before a CIV order is executed, hence for new investors full details must be supplied with the order.

In some markets Hubs, Exchanges or Funds Supermarkets provide messaging, order matching/crossing, clearing and settlement services between Intermediaries/brokers, Fund managers etc.

FIX messages may be used between any of the participants. The fund manager may also use FIX messages to buy and sell fund assets with other participants in the relevant market(s) (eg. Equities):



Note that in a CIV scenario brokers, intermediaries etc. may be on the “buy side” and institutions may be on the “sell” side, i.e. a reversal of the situation in equity/fixed interest/FX transactions.

CIV Security Type Identification

A Collective Investment Vehicle security type is designated by a CFICode field (ISO 10962 standards-based) value which starts with “EU”. Note that if the Product field is specified, the value should be set to “Equity” to correspond

with the “E” in the CFICode “EU” prefixed value, as presently defined. See “**Volume 6 – Appendix 6D**” for CFICode details.

Types of CIV FIX Messages

The FIX messages specifically supporting CIV trades are:

- “New Order – Single” – used to specify the buy or sell of a CIV fund. The message includes the ability to specify percentage of a holding to be sold, whether or not the order can be crossed or matched, compliance/money laundering status, commission instructions, etc. The New Order – Single comprises the major details:
 - Intermediary & Client Identification Information
 - Commission
 - Order Quantity
 - Registration and Reconciliation details
- “New Order – List” – used for an Investor to initiate exchanges or switches between CIV funds, or by a broker or Hub to place a bulk buy or sell order for several funds. New order List comprises one or more “New Order – Singles”
- Order Cancel Request – used for an Investor, Broker or Hub to request cancellation of an outstanding order
- Order Cancel Reject – used for a fund manager to reject Cancellation of an order
- Order Status Request – used for an Investor, Broker or Hub to request the status of an order
- “Settlement” – used to transmit Investors’ payment details to the fund manager where the Intermediary does not settle trades
- “Registration Instructions” and “Registration response” – used to transmit Investors’ registration details to the Fund manager, allow compliance checks and opening of the correct type of account. This may be sent before or after corresponding New Order messages. The Registration Instructions message type comprises the major details:
 - RegistrationID
 - OrderLink Fields
 - Registration Classification
 - Member Registration
 - Distribution Details
- “Execution Report” – used to transmit details of Unit price basis, charges, commission etc. to the Investor and Intermediary

Allocation messages are not required for CIV trading with Fund managers, but other FIX messages are unchanged and can be used as required, e.g. Market Data, Security Status Request, Quote, Order Status, Order Cancel / Replace, Don’t Know, Business Reject etc.

(See *CIV Examples 1 – 7* below for examples of the use of these message types.)

Order Quantities

Income on units may be credited as additional units on the Investor’s account with the Fund manager, leading to uncertainty about the exact number of units when a holding is to be sold. Similarly when an exchange or switch is requested the cash value of investments realised and to be re-invested is not known. Hence it can be more convenient

for Unit quantities to be expressed as a percentage of total holding, e.g. sell 50% or 100% of the existing holding, and reinvest 50% of the cash proceeds in Fund A, 25% in Fund B and 25% in Fund C.

“Percentage” amounts are indicated in the OrderPercent field.

Where an order is for investment of a money amount (CashOrderQty) or percentage (OrderPercent) the Intermediary may request that the resultant quantity is rounded up or down to a specific fraction or multiple of units by setting RoundingDirection and RoundingModulus.

(See *CIV Example 13* below for an example of the use of OrderPercent & Rounding to specify order quantity.)

Intermediary identification

Where messages are sent to or from a Fund manager via a Hub or Funds Supermarket on behalf of the Intermediary the IntroBroker field may be used to identify the Intermediary who is interfacing with the Investor.

This information is used by the Fund manager used to validate the Investor / Intermediary relationship on his records and to credit Commission to the correct Intermediary.

Investor details

If an Intermediary places a CIV Order for a new Investor (to the Fund manager) then the Registration instructions message can be used to transmit the details as required by the Fund manager:

- RegistAcctType – identifying which of the fund manager’s account types should be opened
- TaxExemptType – identifying which of the (nationally defined) tax-exempt accounts or “plans” is required
- OwnershipType – indicates relationship between owners where there is more than one, e.g. tenants in common (i.e. equal interests), joint tenants with rights of survivorship.
- RegistDtls & RegistEmail – name and address into which purchases for this Investor should be registered, plus e-mail address where applicable.
- InvestorCountryOfResidence – identifying the country of residence of the investor, e.g. for compliance and/or tax purposes
- OwnerType – identifying whether the registered investor is an individual, corporation, nominee/street name, trustee etc. (This information may be required for regulatory purposes and/or to indicate which format of Registration name and address information is required)
- InvestorID and InvestorIDSource – containing identifiers issued by official organisations such as tax authorities, company registrar, regulators or national numbering agencies, together with an identifier for the source of the identifier
- MailingDtls – the name and address to which general correspondence should be sent (if different from the Registration address), semi-annual reports, marketing literature.
- MailingInst – e.g. instructions indicating what the mailing address is to be used for, whether marketing literature is acceptable etc.

(See *CIV Examples 15-16* below for examples of the use of registration instruction for new investors, accounts etc.)

Having received this information the Fund manager responds with a Registration Instructions Response– which in addition to the RegistID of the Registration request should also contain the Account and/or ClientIDs allocated to the Investor.

(See *CIV Examples 3, 4 & 6* below for examples of the use of Registration instruction response message.)

Investor identification

A Fund manager may allocate an Account id and/or Client id to each Investor – depending on the architecture of his account database. These can be returned on the Registration status or Execution report message or by some other means (e.g. printed confirm or contract note), and should be quoted on subsequent New Order etc. messages.

(See *CIV Examples 8-10* below for examples of the use of identification fields for new and existing investors, accounts etc.)

New Investor -> New Order -> Registration instruction

Registration instruction messages can be sent before, after or both before and after a related New Order:

- before the New Order, e.g. to give details of a new investor / account (with name & address etc.). The RegistID specified on this Registration message must also be quoted on the subsequent New Order.
- after the New Order e.g. to give distribution payment details or to override previous Registration instructions for that specific New Order. This message should quote CIOrdID from the New Order (and Account and ClientID if available), but not the RegistID.

The Fund manager will respond to each Registration instruction with one or more Registration status messages, indicating whether the details are:

- Accepted – where possible including the Account and ClientID if these have been allocated by the Fund manager
- Rejected – in which case the RegistRejReasonCode and RegistRejReasonText fields should be populated to indicate the reason for rejection
- Held – e.g. pending receipt of the New Order or for later batch or manual processing, following which an “accepted” or “rejected” Registration status message will be sent

Note that the Designation field is available on the New Order message to provide supplementary registration information.

(See *CIV Examples 6 & 14-16* for examples of registration instructions and the designation field.)

Fund & Unit Identification

Many Funds offer several classes of units, e.g. front-end, back-end or no-load; income or accumulation units etc. In some tax regimes Fund managers are required to differentiate between units purchased before and after the most recent distribution. In markets where ticker symbols are allocated to unit types these are entered in the Symbol field; where tickers are not available an alternative identification such as ISIN is entered in the (mandatory) Symbol field and also the (optional) SecurityID field, with the code type in the SecurityIDSource field.

The Issuer and SecurityDesc fields may also be used to further confirm the Fund and Unit type required.

Note that the Fund managers or regulators may impose restrictions on the Funds in an order, e.g. they must be available to the type of Investor, Account or Tax Exemption, or (for an exchange/switch) they may all have to be issued by the same Fund manager.

Order details - single

Order details for a CIV Order typically include:

- Side – “buy” (sometimes known as create, although creation may not actually be involved) or “sell” (sometimes known as a cancel, although cancellation may not actually be involved) - where “buy” or “sell” order can be matched or crossed by an intermediary, funds supermarket, broker/dealer etc. or forwarded to the fund manager. On the other hand a “subscribe” or “redeem” order must be forwarded to the fund manager, e.g. where the originator requires specific tax treatment and/or dealing charges.
- OrdType – Previous Fund Valuation Point (Historic pricing) or Next Fund Valuation Point –(Forward pricing)

- Order quantity expressed as one of:
 - OrderQty – number of units,
 - CashOrdQty– cash amount to be invested, or
 - OrderPercent – percentage of existing holding (for a sell) or percentage of available cash amount to be invested (for an exchange / switch)
- RoundDirection & RoundModulus – for cash amount or percentage, allows the investor or intermediary to request rounding up or down to the nearest 5, 10, 100 etc. or fractional units
- Currency & ForexReqd – e.g. for an off-shore fund settled in domestic currency
- Designation – supplementary registration information specific to this Order

Order details - list

A CIV “New Order – List” would typically be issued:

- by a retail intermediary to initiate an “exchange” or “switch” between funds on behalf of a single Investor
- by a broker, funds supermarket or hub/exchange to initiate “bulk buy” or “bulk sell” order of funds held for the account of several investors

For an exchange/switch:

- the ListNoOrds and ListSeqNo fields determine the order in which the deals are to be executed
- the ListExecInstType determines how the Order quantities and Settlement amount are to be calculated (i.e. sell-driven, buy-driven with additional cash available, buy-driven without additional cash)

For a bulk buy / bulk sell the Designation field can be used to supply supplementary registration information for each order line, to maintain segregation between the holdings for individual clients.

(See *CIV Examples 13 & 14* below for an example of the use of New Order – List.)

Commission Instructions

The Intermediary can indicate specific commission requirements using:

- Commission & CommType – e.g. a specific commission rate or a waiver of the standard commission rate for the fund, the saving on standard commission being credited as for additional units or as a cash discount
- CommCurrency – to specify that commission on an overseas or offshore fund should be paid in domestic currency
- FundBasedRenewalWaived – to indicate whether or not the Intermediary accepts renewal/trail commission

Compliance

Depending on terms of business and the regulatory environment either or both of the Intermediary and Fund manager may be required to support money laundering status checking and/or right-to-cancel. The New Order message supports these with:

- MoneyLaundering – indicating whether or not checks are required and have already been carried out by the Intermediary
- CancellationRights - indicating whether or not a “right-to-cancel” applies

Settlement instructions

For CIV Orders retail settlement instructions may be transmitted using Settlement instruction features including:

- **SettlInstMode** – indicating that settlement instructions relate to a specific (retail) Order
- **SettlInstSource** – indicating the Investor as the source of settlement instructions
- **PaymentMethod & SettlCurrency** – indicating cheque, bank transfer, payment card, cash account at depository etc.
- **CardHolderName, CardNumber, CardStartDate, CardExpDate, CardIssNo, PaymentDate and PaymentRemitterID** – details required for cash settlement by payment card
- **SettlBrkrCode, SettlDepositoryCode** – for cash settlement via central depositories
- **CashSettlAgentName, CashSettlAgentCode, CashSettlAgentAcctNum, CashSettlAgentAcctName** - for cash settlement by bank transfer
- **PaymentRef** – cross-reference or narrative information for bank transfers etc. to appear on bank statements, SWIFT MT950's etc. to assist reconciliation

Distribution instructions

The Registration instruction message can also carry Distribution instructions, including:

- **NoDistribDetls & DistribSeqNo** – the number of beneficiaries
- **DistribPercent** – the split of each distribution (by value) between several beneficiaries
- **DistribPaymentMethod & CashDistribCurr** – payment method and currency for a specific beneficiary
- **CashDistribAgentName, AgentCode, AgentAcctName and AgentAcctNum** – bank and account details for a specific beneficiary
- **CashDistribPayRef** - cross-reference or narrative information for bank statements

(See *CIV Examples 15 & 16* below for examples of the use of distribution instructions.)

Unit Prices

Fund managers calculate a net asset value for each fund – typically at a fixed time each day, the “valuation point”. They then quote either a single Unit price (“single pricing”) or separate buying and selling prices (“dual pricing”) – depending on the fund’s constitution and regulatory environment.

Valuation point

The unit price applicable to a CIV trade depends on when the Order was received by the fund manager relative to a Valuation point, whether the Fund is normally dealt on a Historic or Forward basis, and possibly also on recent volatility on underlying fund assets and any specific instructions from the Investor.

Some of this information is indicated by fields on the New Order:

- **TransactTime** – the time at which the Investor placed the CIV Order directly, or at which Intermediary placed the Order on behalf of the Investor
- **OrdType** – whether Investor requires a Forward or (where available) a Historic price

Other times establishing the relevant valuation point are shown on the Execution Report:

- **OrderBookedTime** – the time at which the Fund manager provisionally accepted the order for execution (having completed any preliminaries, e.g. setting up an account, money laundering checks)
- **ExecValuationPoint** - the fund valuation point with respect to which a order was priced by the fund manager (may be before or after the OrderBookedTime).

Single pricing

The Unit price for single-priced funds is determined from the net asset value, based on the mid-price of the underlying assets of the fund, divided by the applicable number of units. For these funds ExecPriceType on the Execution Report should be set to “S” = Single.

The manager’s Initial charge (if any) is then charged out separately. In addition a Dilution levy may be charged on large buy or sell transactions, e.g. to compensate for the difference between the mid- and buy/sell- price of the underlying investments. These charges can be notified on the Execution Report in the Contract amounts repeat group.

Dual pricing

For dual priced funds the manager calculates:

- Creation price – based on the “buy” price of the underlying assets (net of transaction taxes etc.)
- Cancellation price – based on the “sell” price of the underlying assets (net of transaction taxes etc.)

If the net cash flow is into the fund new units will be created:

- Offer or Buy price – will be no higher than the Creation price plus the manager’s Initial charge
- Bid, Sell or Redemption price – will be the Offer price minus the manager’s Dealing spread

If the net cash flow is out of the fund existing units will be cancelled:

- Bid, Sell or Redemption price – will be no lower than the Cancellation price
- Offer or Buy price – will be the Bid price plus the manager’s Dealing spread, up to a limit of the Creation price plus the manager’s Initial charge

The manager may sell to buyers units he has re-purchased from sellers (rather than cancelling and re-creating units), thus profiting from the Dealing spread.

The Initial charge covers any commission paid to Intermediaries as well as advertising, administration, dealing costs etc. It can be a money amount or percentage and may be waived on large investments, e.g. by institutional investors. Where the Initial charge is waived for a private investor an Exit charge (money amount or percentage) may be levied if an investment is sold within the first few years. (This is sometimes known as a Deferred contingent sales charge.) These charges can be notified on the Execution Report in the Contract amounts repeat group.

The manager may offer an improved buying price by discounting the initial charge or reducing his dealing spread – the improved price is expressed as “Creation price plus” an amount or percentage, or “Offer price minus” an amount or percentage.

ExecPriceType and (where applicable) ExecPriceAdjustment on the Execution Report indicate how the actual buying or selling price was calculated from the fund valuation price(s).

Execution Reports

The Fund manager should send Execution Report messages to confirm receipt (OrdStatus=“New”) and execution (OrdStatus= “Filled” and/or “Calculated”) of CIV Orders, plus other Order Status from the list below as agreed between the parties – individual Execution Reports being sent for each line of an New Order – List.

In markets where tax treatment and/or dealing charges depend on whether execution was by crossing / matching by an intermediary, or by subscription / redemption at the fund manager the LastMkt field should be used to indicate either the Exchange or 11 for an OTC trade, or omitted if execution was by the fund manager.

CIV-specific use of OrdStatus:

CIV orders to be executed by the fund manager do not use the TimeInForce field and only the following OrdStatus values are expected to be used:

*** This OrdStatus table lists CIV-specific values ***

Precedence	OrdStatus	Description
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11	Pending Cancel	Order with an Order Cancel Request pending, used to confirm receipt of an Order Cancel Request. DOES NOT INDICATE THAT THE ORDER HAS BEEN CANCELED. (Where supported by the receiving broker, intermediary, fund manager etc.)
10	Pending Replace	Order with an Order Cancel/Replace Request pending, used to confirm receipt of an Order Cancel/Replace Request. DOES NOT INDICATE THAT THE ORDER HAS BEEN REPLACED. (Where supported by receiving broker, intermediary, fund manager etc.)
8	Calculated	Order has been filled, settlement details, currency, commission, contract amounts etc. have been calculated and reported in this execution message
7	Filled	Order has been filled, execution valuation point, shares/unit quantity and price have been calculated and reported in this execution message
4	Canceled	Canceled order without executions (where supported by receiving broker, intermediary, fund manager etc.).
2	New	Outstanding order which has not been executed. The OrderBookedTime field will be completed. For Forward priced orders or funds the order will be executed at the next Valuation Point. (This status may not be sent if the order can be executed immediately on a Historic pricing basis)
2	Rejected	Order has been rejected by broker, intermediary or fund manager (for CIV orders). NOTE: An order can be rejected subsequent to order acknowledgment, i.e. an order can pass from New to Rejected status.
2	Pending New	Order has been received by broker's system but not yet accepted for execution. An execution message with this status will only be sent in response to a Status Request message. (Where supported by receiving broker, intermediary or fund manager etc.)

The CIV Fields included for each value of OrdStatus in Execution Report are listed below:

<u>OrdStatus</u>	<u>CIV Fields included on Execution Report</u>
Rejected	
Pending Cancel	CIOrdID, ListID & TransactTime – Intermediary's Order (and List) references and time of submission
Canceled	Other fields may be populated if available
Pending Replace	
Pending New	CIOrdID, ListID & TransactTime – Intermediary's Order (and List) references and time of submission
	All fields populated on the CIV Order (apart from Order fields not available in

Execution Report)

New	<p>Same as for “Pending New” plus:</p> <p>TranBkdTime – time at which the Fund manager accepted the CIV Order onto his books</p> <p>OrderId – order reference assigned by Fund manager (to each line in a New Order - List)</p>
Filled	<p>Same as for “New” plus:</p> <p>ExecID & DealTime – Fund manager’s reference & Valuation point at which the Fund manager priced the CIV Order</p> <p>LastQty, LastPx & ExecPriceType – Unit quantity, price & basis of calculation of the price (e.g. Bid, Offer / Offer minus, Creation / Creation plus etc.)</p>
Calculated	<p>As for “Filled” plus:</p> <p>ContAmt, Type & Curr – type, currency and value of various contract amounts (Initial, Commission, Discount Exit, Dilution etc.)</p>

(See *CIV Examples 1 – 7* below for examples of the use of Execution Report messages.)

CIV EXAMPLES

The following examples illustrate how FIX messages can be used to process CIV fund orders and provide settlement and registration instructions to the fund manager.

NOTE that in the examples:

- “Buyside” refers to an institution or private investor investing in a CIV fund via broker, intermediary – or a hub and/or exchange transmitting messages to/from other buyside parties
- “Sellside” refers to a CIV fund manager or intermediary – or a hub and/or exchange transmitting messages to/from other sellside parties

CIV Example 1. Single order for a CIV fund for a known investor/nominee, to be dealt on a "historic" basis

A typical flow for an order for a CIV fund dealt on Historic price for an investor or nominee known to the fund manager – is as follows:

BUYSIDE			SELLSIDE
			Fund Valuation Point
	→	New Order-Single (IntroBroker, CIOrdID, Account & ClientID specified)	

BUYSIDE		SELLSIDE
	←	Execution Report (ExecType = "F") [Trade] (IntroBroker, ClOrdID, Account & ClientID echoed)
		Commission/ Fee Calc
	←	Execution Report (ExecType = "B") [Calculated] (IntroBroker, ClOrdID, Account & ClientID echoed)

CIV Example 2. Single order for a CIV fund for a known investor/nominee, to be dealt on a "forward" basis

A typical flow for an order for a CIV fund for an investor/nominee known to the fund manager that wishes to deal on a Forward price basis – is as follows:

BUYSIDE		SELLSIDE
	→	New Order-Single (IntroBroker, ClOrdID, Account & ClientID specified) (OrdType="M") [Forward]
	←	Execution Report (ExecType = "0" [New] (IntroBroker, ClOrdID, Account & ClientID echoed)
		Fund Valuation Point
	←	Execution Report (ExecType = "F") [Trade] (IntroBroker, ClOrdID, Account & ClientID echoed)
		Commission/ Fee Calc
	←	Execution Report (ExecType = "B") [Calculated] (IntroBroker, ClOrdID, Account & ClientID specified)

CIV Example 3. Single order for a CIV fund for an investor/nominee not known to the fund manager - registration and settlement instructions after trade

A typical flow for an order for a CIV fund for an investor/nominee not known to the fund manager where the fund manager does not require settlement or registration instructions in advance – is as follows:

BUYSIDE		SELLSIDE
	→	New Order – Single (IntroBroker & ClOrdID specified, Account, ClientID & RegistID <u>not</u> specified)
	←	Execution Report (ExecType = "0" [New] (IntroBroker & ClOrdID echoed)
		Fund Valuation Point

BUYSIDE		SELLSIDE
	←	Execution Report (ExecType = "F") [Trade] (IntroBroker & ClOrdID echoed)
		Commission/ Fee Calc
	←	Execution Report (ExecType = "B") [Calculated] (IntroBroker & ClOrdID echoed)
	←	Registration Instruction Response (RegistStatus = "N") [Reminder] (IntroBroker & ClOrdID echoed)
	→	Settlement Instruction (SettInstTransType = "N") [New] (SettInstMode="4") [Specific Order] (IntroBroker & ClOrdID specified)
	→	Registration Instruction (RegistTransType = "0") [New] (IntroBroker, ClOrdID & RegistID specified)
		Validate Registration Instruction
	←	Registration Instruction Response (RegistStatus = "A") [Accepted] (IntroBroker, ClOrdID & RegistID echoed, Account and/or ClientID returned)

CIV Example 4. Single order for a CIV fund for an investor/nominee not known to the fund manager - registration and settlement instructions required before trade

A typical flow for an order for a CIV fund for an investor/nominee not known to the fund manager where the fund manager requires settlement and registration instructions in advance – is as follows:

BUYSIDE		SELLSIDE
	→	Registration Instruction (RegistTransType = "0") [New] (RegistID, IntroBroker & ClOrdID specified)
	←	Registration Instruction Response (RegistStatus = "H") [Held] (IntroBroker, ClOrdID & RegistID echoed, Account and/or ClientID not returned)
		Validate Registration Instruction
	←	Registration Instruction Response (RegistStatus = "A") [Accepted]
	→	New Order – Single (IntroBroker & ClOrdID specified, Account, ClientID & RegistID <u>not</u> specified)
	←	Execution Report (ExecType = "A" [Pending New]

BUYSIDE		SELLSIDE
	→	Settlement Instruction (SettInstTransType = "A") [New] (SettInstMode="4") [Specific Order] (IntroBroker & ClOrdID specified)
		Validate Settlement Instruction
	←	Execution Report (ExecType = "0") [New]
		Fund Valuation Point
	←	Execution Report (ExecType = "F") [Trade]
		Commission/ Fee Calc
	←	Execution Report (ExecType = "B") [Calculated]

CIV Example 5. Single order for a CIV fund for a known investor/nominee – order modified before execution

A possible flow for an order for a CIV fund for an investor/nominee known to the fund manager, on which the CashOrdQty is modified before execution – is as follows:

BUYSIDE		SELLSIDE
	→	New Order-Single (IntroBroker, ClOrdID, Account & ClientID specified) CashOrdQty = "6,000"
	←	Execution Report (ExecType = "0" [New] (IntroBroker, ClOrdID, Account & ClientID echoed)
	→	Order Cancel/Replace Request (IntroBroker, ClOrdID, Account & ClientID specified) CashOrdQty = "7,000"
	←	Execution Report (ExecType = "5" [Replaced] (IntroBroker, ClOrdID, Account & ClientID echoed)
		Fund Valuation Point
	←	Execution Report (ExecType = "F") [Trade] (IntroBroker, ClOrdID, Account & ClientID echoed)
		Commission/ Fee Calc
	←	Execution Report (ExecType = "B") [Calculated] (IntroBroker, ClOrdID, Account & ClientID specified)

CIV Example 6. Single order for a CIV fund for a new investor/nominee to the fund manager - registration and settlement instructions rejected, then modified & accepted

A possible flow for an order for a CIV fund for an investor/nominee not already known to the fund manager where settlement and registration instructions are supplied, rejected and then corrected after the trade – is as follows:

BUYSIDE		SELLSIDE
	→	New Order – Single (IntroBroker & ClOrdID specified, Account, ClientID & RegID <u>not</u> specified)
		Fund Valuation Point Commission/ Fee Calc
	←	Execution Report (ExecType = “B”) [Calculated] (IntroBroker & ClOrdID echoed)
	→	Settlement Instruction (SettInstTransType = “N”) [New] (SettInstMode=“4”) [Specific Order] (IntroBroker & ClOrdID specified)
	→	Registration Instruction (RegistTransType = “0”) [New] (IntroBroker, ClOrdID & RegID specified)
		Validate Registration Instruction
	←	Registration Instruction Response (RegistStatus = “H”) [Held] (IntroBroker, ClOrdID & RegID echoed, Account and/or ClientID not returned)
	←	Registration Instruction Response (RegistStatus = “R”) [Rejected] (IntroBroker, ClOrdID & RegID echoed, Account and/or ClientID not returned)
	→	Registration Instruction (RegistTransType = “2”) [Replace] (IntroBroker, ClOrdID & RegID specified)
		Validate Registration Instruction
	←	Registration Instruction Response (RegistStatus = “A”) [Accepted] (IntroBroker, ClOrdID echoed, Account and/or ClientID returned)
	→	Settlement Instruction (SettInstTransType = “R”) [Replace] (SettInstMode=“4”) [Specific Order] (IntroBroker & ClOrdID specified)

CIV Example 7. Exchange/switch order between several CIV funds from a single fund manager or via a funds supermarket

A typical flow for an order for a CIV fund for an investor wishing to switch funds between funds from a single fund manager or via a funds supermarket that covers all funds – is as follows:

BUYSIDE		SELLSIDE
	→	New Order-List (ListId & ListExecInstType specified, e.g. ListExecInstType="3" [Exch/switch - Sell Driven]) For each component of exchange/switch: (IntroBroker, ClOrdID, ClientID, Account, Symbol/SecurityId, OrderPercent, Side)
	← ← ←	For each component of exchange/switch: Execution Report (ExecType = "0" [New]) (IntroBroker, ClOrdID, Account & ClientID echoed)
		Fund Valuation Point
	← ← ←	For each component of exchange/switch: Execution Report (ExecType = "F" [Trade]) (IntroBroker, ClOrdID, Account & ClientID echoed)
		Commission/ Fee Calc
	← ← ←	For each component of exchange/switch: Execution Report (ExecType = "B" [Calculated]) (IntroBroker, ClOrdID, Account & ClientID echoed)

Identifier examples – existing investor & account

CIV Example 8. Order for CIV fund by new or existing investor, routed via a client money/asset holding broker or funds supermarket to fund manager

Typical usage of fields on Order and/or Post-Trade messages would be as follows:

Tag	Field Name	Contents
453	NoPartyIDs	2
→	448 PartyID	An identifier for the broker or funds supermarket which is recognized by the fund manager
→	447 PartyIDSource	Indicates source of Party identifier used in preceding field
→	452 PartyRole	6 ["Introducing Firm"]
→	448 PartyID	An identifier for the broker or funds supermarket's nominee/custodian company which is recognized by the fund manager

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452	PartyRole	9 ["Fund manager Client ID"]
→	523	PartySubID	An optional sub-identifier for the broker or funds supermarket's nominee/custodian company which is recognized by the fund manager
11	ClOrdID		Assigned by broker or funds supermarket

CIV Example 9. Order for CIV fund by an institutional investor, routed via a broker to a fund manager – possibly via a hub/exchange

Typical usage of fields on Order and/or Post-Trade messages would be as follows:

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
453	NoPartyIDs		3
→	448	PartyID	An identifier for the broker closest to the investing institution which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	6 ["Introducing Firm"]
→	448	PartyID	An identifier for hub/exchange (where used) which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	1 ["Executing Firm"]
→	448	PartyID	An identifier for the investing institution which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452	PartyRole	9 ["Fund manager Client ID"]
→	523	PartySubID	An optional sub-identifier for the investor which is recognized by the fund manager
11	ClOrdID		Assigned by investing institution

Identifier examples – new investor and/or account

CIV Example 10. Order for CIV fund by new investor via non-client money/asset holding intermediary to fund manager

Typical usage of fields on Order and/or Post-Trade messages would be as follows:

<i>Tag</i>	<i>Field Name</i>	<i>Contents</i>
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<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
453	NoPartyIDs		2
→	448	PartyID	An identifier for the broker closest to the investor which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	6 ["Introducing Firm"]
→	448	PartyID	Not present on the "New Order" message, only on Execution Report(s). An identifier for the investor which is assigned by the fund manager, e.g. after processing a Registration Instruction.
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452	PartyRole	9 ["Fund manager Client ID"]
→	523	PartySubID	Not present on the "New Order" message, only on Execution Report(s). An optional sub-identifier for the investor which is assigned by the fund manager, e.g. after processing a Registration Instruction.
11	ClOrdID		Assigned by intermediary
493	RegistAcctType		An identifier for the type of account required which is recognised by the fund manager
495	TaxAdvantageType		An identifier for the type of tax advantaged account required
492	PaymentMethod		Entered by intermediary (together with Investor's bank/card details) to show how investor will settle cash with the fund manager

CIV Example 11. Order for CIV fund by new investor, routed via non-client money/asset holding intermediary via a non-aggregating hub/exchange to fund manager

Typical usage of fields on Order and/or Post-Trade messages would be as follows:

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
453	NoPartyIDs		3
→	448	PartyID	An identifier for the broker closest to the investor which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	6 ["Introducing Firm"]
→	448	PartyID	An identifier for hub/exchange (where used) which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	1 ["Executing Firm"]

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
→	448	PartyID	Not present on the “New Order” message, only on Execution Report(s). An identifier for the investor which is assigned by the fund manager, e.g. after processing a Registration Instruction.
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452	PartyRole	9 [“Fund manager Client ID”]
→	523	PartySubID	Not present on the “New Order” message, only on Execution Report(s). An optional sub-identifier for the investor which is assigned by the fund manager, e.g. after processing a Registration Instruction.
11	ClOrdID		Assigned by broker

CIV Example 12. Order for CIV fund by new investor routed via intermediary to a funds supermarket – which places bulk/net orders to the fund manager

Typical usage of fields on Order and/or Post-Trade messages between intermediary and funds supermarket would be as follows:

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
11	ClOrdID		Assigned by intermediary
453	NoPartyIDs		2
→	448	PartyID	An identifier for the intermediary closest to the investor which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	6 [“Introducing Firm”]
→	448	PartyID	Not present on the “New Order” message, only on Execution Report(s). An identifier for the investor which is assigned by the funds supermarket, e.g. after processing a Registration Instruction.
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452	PartyRole	9 [“Fund manager Client ID”]
→	523	PartySubID	Not present on the “New Order” message, only on Execution Report(s). An optional sub-identifier for the investor which is assigned by the funds supermarket, e.g. after processing a Registration Instruction.

Typical usage of fields on Order and/or Post-Trade messages between funds supermarket and fund manager for bulk/net orders would be as follows:

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
11	ClOrdID		Assigned by fund supermarket

453	NoPartyIDs		2
→	448	PartyID	An identifier for funds supermarket which is recognized by the fund manager
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field
→	452	PartyRole	1 ["Executing Firm"]
→	448	PartyID	An identifier for the funds supermarket's nominee/custodian company which is recognized by the fund manager.
→	447	PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452	PartyRole	9 ["Fund manager Client ID"]
→	523	PartySubID	An optional sub-identifier for the funds supermarket's nominee/custodian company which is recognized by the fund manager.

Quantity example

CIV Example 13. Exchange/switch order quantities – OrderPercent, Rounding, Sell Driven

Typical use of OrderPercent and Rounding fields on Order and Execution Report messages to and from fund manager or funds supermarket would be as follows:

Investor's holdings before exchange/switch New Order – List are:

Symbol/SecurityId	Quantity held
Fund A	5281
Fund B	2296
Fund C	1833

Exchange/switch order details on the New Order – List are:

Symbol/SecurityId	Side	OrderQty	CashOrderQty	OrderPercent
Fund A	Sell	1281		
Fund B	Sell		£2,000	
Fund C	Sell			100%
Fund X	Buy			20%
Fund Y	Buy			30%
Fund Z	Buy			50%

with : RoundingDirection = 1 [Down]

RoundingModulus = 1

After the Fund Valuation Point the quantities and cash amounts (assuming no commissions, initial or exit charges) are reported on “calculated” Execution Reports are as follows:

Symbol/SecurityId	Side	Price (AvePx)	CumQty	Cash value
Fund A	Sell	£5.21	1281	£6,674
Fund B	Sell	£7.28	274	£1,995
Fund C	Sell	£3.27	1833	£5,994
Fund X	Buy	£8.72	336	-£2,930
Fund Y	Buy	£15.00	293	-£4,395
Fund Z	Buy	£1.00	7331	-£7,331

Settlement amount (ContAmtValue) = £6.72 (credit, i.e. excess cash will be paid to Investor)

CIV Example 14. CIV Bulk order – purchase of funds for multiple investors into a designated nominee

Typical use of New Order – List by a broker for purchase of funds for multiple investors into a designated nominee would be to specify ListExecInstType=“1” [Immediate], with other fields as follows:

Tag	Field Name	Contents
11	ClOrdID	Assigned by broker to identify each component within New Order - List. <i>As required for each component.</i>
→	448 PartyID	An identifier for the funds supermarket’s nominee/custodian company which is recognized by the fund manager. <i>Same for each component of order.</i>
→	447 PartyIDSource	Indicates source of Party identifier used in preceding field, e.g. the Fund manager
→	452 PartyRole	9 [“Fund manager Client ID”]
→	523 PartySubID	An optional sub-identifier for the funds supermarket’s nominee/custodian company which is recognized by the fund manager.
→	448 PartyID	An identifier for the intermediary closest to the investor which is recognized by the fund manager <i>Same for each component of order.</i>
→	447 PartyIDSource	Indicates source of Party identifier used in preceding field
→	452 PartyRole	6 [“Introducing Firm”]
55/ 48	Symbol/SecurityId etc.	Identifier(s) for fund. <i>As required for each component.</i>

<i>Tag</i>	<i>Field Name</i>	<i>Contents</i>
54/ 38/ 152	Side/OrderQty/CashOrderQty	Buy/sell & quantity. <i>As required for each component.</i>
513	RegistID	Assigned by broker to identify Registration Instruction for nominee company – if required. <i>Same for each component of order.</i>
494	Designation	Specific registration (“sub-account”) for each component. <i>As required for each component.</i>

plus other New Order – List fields as required.

CIV Example 15. Registration Instruction – Joint Investors

Typical use of the Registration instruction Joint Investors, e.g. husband & wife, with cash distribution split equally between them would be:

<i>Tag</i>	<i>Field Name</i>	<i>Value</i>	
517	OwnershipType	J [“Joint Investors”]	
413	NoRegistDtls	2	
→	509	RegistDtls	John Smith Esq, 1 Acacia Avenue, Newtown, Countyshire
→	511	RegistEmail	johnsmith99@isp.com
→	522	OwnerType	1 [“Individual Investor”]
→	509	RegistDtls	Mrs Naomi Smith, 1 Acacia Avenue, Newtown, Countyshire
→	511	RegistEmail	Naomismith32@isp.com
→	522	OwnerType	1 [“Individual Investor”]
510	NoDistribInsts	2	
→	477	DistribPaymentMethod	8 [“Direct Credit”]
→	512	DistribPercentage	50
→	478	CashDistribCurr	GBP
→	498	CashDistribAgentName	Anytown Bank
→	499	CashDistribAgentCode	20-01-00
→	500	CashDistribAgentAccountNumber	23456789
→	501	CashDistribPayRef	Fund income
→	502	CashDistribAgentAccountName	Mr J & Mrs N Smith

<i>Tag</i>	<i>Field Name</i>		<i>Value</i>
→	477	DistribPaymentMethod	5 ["Cheque"]
→	512	DistribPercentage	50
→	478	CashDistribCurr	GBP
→	502	CashDistribAgentAccountName	Mrs Naomi Smith

CIV Example 16 Registration Instruction – Tenants in Common,

Possible use of the Registration instruction for Tenants in Common, e.g. a club of private investors that reinvest all their income could be:

<i>Tag</i>	<i>Field Name</i>		<i>Contents</i>
517	OwnershipType		T ["Tenants in Common"]
413	NoRegistDtls		4
→	509	RegistDtls	Frank Jones, 2 South Drive, Anyport, Southshire
→	511	RegistEmail	fjones@myisp.net
→	509	RegistDtls	Sally Smith, 192 West Road, Anyport, Southshire
→	511	RegistEmail	ssmith@hotmail.com
→	509	RegistDtls	James Jordan, 88 Lime Tree Avenue, Lower Anyport, Southshire
→	511	RegistEmail	jamesj@mymail.co.uk
→	509	RegistDtls	Anita Robinson, 2 South Drive, Anyport, Southshire
510	NoDistribInsts		1
477	DistribPaymentMethod		12 ["Reinvest in Fund"]

PRODUCT: DERIVATIVES (FUTURES & OPTIONS)

Use of CFICode to identify derivatives security

The CFICode (tag 461) is used to identify the type of instrument in FIX. The following is the recommended usage of the CFICode for futures and options. The CFICodes (ISO 10962) shall replace of SecurityType (tag 167) enumerations for futures – “FUT” and options – “OPT”. The CFICode for options supports definition of Calls – “C” and Puts – “P” in the second position. The PutOrCall (tag 201) tag is replaced (made obsolete) in FIX 4.3 by the adoption of the CFICode (tag 461).

Single Leg Instruments

CFICode[461]	Description	FIX 4.2 Mapping Values	
		SecurityType[167]	PutOrCall[201]
OCXXXS	Standardized Call Option	OPT	1
OPXXXS	Standardized Put Option	OPT	0
FXXXXS	Standardized Future	FUT	na
OCXFXS	Standardized Call Option on a Future	na ¹	1
OPXFXS	Standardized Put Option on a Future	na	0
FFICN	Nonstandard (flex) Financial Future on an index with cash delivery	FUT	na
FCEPN	Nonstandard (flex) Commodity Future on an extraction resource with physical delivery	FUT	na
FXXXXN	Nonstandard (flex) future – contract type specified in symbology – not provided in CFICode	FUT	na
OCEFCN	Nonstandard (flex) call option on future with european style expiration and cash delivery	OPT	1
OPAFPN	Nonstandard (flex) put option on future with american style expiration and physical delivery	OPT	0
OPXSPN	Nonstandard (flex) put option on a stock with physical delivery (the expiration style is not specified – so is assumed to default to the market standard for flex options).	OPT	0
OCEICN	Nonstandard (flex) call option on an index with european style expiration and cash delivery	OPT	1

Multileg Instrument Specification

The following use of SecurityType and CFICode are proposed for specifying multileg derivative instruments – such as options strategies or futures spreads.

¹ A security type enumeration for an Option on a Future does not currently exist.

SecurityType[167]	CFICode[461]	Description
MLEG	FMXXS	Multileg Instrument with futures contract legs CFICode refers to Future – Miscellaneous
MLEG	OMXXXN	Multileg Instrument with option contract legs CFICode refers to Option – Miscellaneous (This would include multileg instruments that include the underlying security).
MLEG	M	Multileg Instrument with legs made up of various types of securities (not primarily a futures or options multileg instrument that contains one or more derivative legs). CFICode refers to M-Miscellaneous

US Listed Options Order Capacity Values

The following are commonly used order capacity codes from the US listed options markets and how they map to FIX 4.3.

Common Listed Option Market Order Capacity Values	OrderCapacity (tag 528)	OrderRestrictions (tag 529)	Other
“ B ” any account of a broker/dealer, or any account in which a broker or dealer registered or required to be registered with the SEC pursuant to Section 15 under the Act has an interest. <u>This represents any account that is not otherwise an account that falls into any of the below mentioned categories.</u>	Principal		
“ C ” any account in which no member or non-member broker/dealer has an interest.	Agency		
“ D ” any account of a foreign broker/dealer. ²	Principal	6 - Foreign Entity	
“ F ” any firm proprietary account which clears at the Options Clearing Corporation that is not a JBO account.	Proprietary		
“ M ” an account representing a CBOE market-maker.	Proprietary	5-Acting As a specialist or market maker in the security	

² A foreign broker/dealer is defined as any person or entity that is registered, authorized, or licensed by a foreign governmental agency or foreign regulatory organization (or is required to be registered, authorized, or licensed) to perform the function of a broker or dealer in securities, or both. For purposes of this definition, a broker or dealer may also be a bank.

Common Listed Option Market Order Capacity Values	OrderCapacity (tag 528)	OrderRestrictions (tag 529)	Other
“N” Any options account of a market-maker or specialist of another options exchange who is registered as a market maker or specialist in the same class of options multiply listed at an away exchange. Sometimes referred to as an order for a “MM or Specialist Away”.	Proprietary	5-Acting As a specialist or market maker in the security 7 - External Market Participant	
“Y” any options account of a Commodities Trader, Stock Futures Trader or Stock Specialist registered in the underlying security. stock at the primary exchange for trading the stock.	Proprietary	8 – Acting as a specialist in the security underlying of a derivative security	

Proposed option order capacity codes and their FIX 4.3 equivalents

The following are additional codes that are proposed for the listed options markets and how they would map to FIX 4.3.

Proposed Listed Option Market Order Capacity Values	OrderCapacity (tag 528)	OrderRestrictions (tag 529)	Other
“I” Proposed Code used to designate a JBO account which clears Customer at OCC: any joint back office (“JBO”) account of a broker/dealer that has a nominal ownership interest in a clearing broker/dealer and receives good faith margin treatment whereby such trade clears in the customer range at OCC. This ownership position allows the JBO clearing firm to finance securities transactions of the JBO participant on a good faith margin basis.	Agency		AccountType (tag 581)=8 Joint Back Office
“J” Proposed Code used to designate a JBO account which clears Firm at OCC: any joint back office (“JBO”) account of a broker/dealer that has a nominal ownership interest in a clearing broker/dealer and receives good faith margin treatment whereby such trade clears in the firm range at OCC. This ownership position allows the JBO clearing firm to finance securities transactions of the JBO participant on a good faith margin basis.	Proprietary		AccountType (tag 581)=8 Joint Back Office

Proposed Listed Option Market Order Capacity Values	OrderCapacity (tag 528)	OrderRestrictions (tag 529)	Other
<p>“K” Proposed Code used to designate a JBO account which clears MM at OCC: any joint back office (“JBO”) account of a broker/dealer that has a nominal ownership interest in a clearing broker/dealer and receives good faith margin treatment whereby such trade clears in the market-maker range at OCC. This ownership position allows the JBO clearing firm to finance securities transactions of the JBO participant on a good faith margin basis.</p>	<p>Proprietary</p>	<p>5-Acting As a specialist or market maker in the security</p>	<p>AccountType(tag 581)=8 Joint Back Office</p>
<p>“A” Linkage - Principal acting as agent order (“P/A”) order routed through Linkage. (i.e. an order for the principal account of an eligible MM that is authorized to represent customer orders reflecting the terms of related unexecuted customer orders for which the MM is acting as agent).</p>	<p>Agency</p>	<p>5-Acting As a specialist or market maker in the security</p> <p>9 – External Interconnected Market</p>	
<p>“P” Linkage – Principal order. (i.e. an order for the principal account of an eligible MM which is entered to trade at the NBBO at another exchange and is not a P/A order).</p>	<p>Principal</p>	<p>5-Acting As a specialist or market maker in the security</p> <p>9 – External Interconnected Market</p>	
<p>“S”Linkage – Principal satisfaction order (i.e. an order for the principal account of an eligible market maker sent through the Linkage to satisfy the liability arising from a trade through that was initiated by that market-maker).</p>	<p>Riskless Principal</p>	<p>5-Acting As a specialist or market maker in the security</p> <p>9 – External Interconnected Market</p>	

Proposed Listed Option Market Order Capacity Values	OrderCapacity (tag 528)	OrderRestrictions (tag 529)	Other
“Z” Proposed Code used to designate orders as defined under Filing SR-CBOE-00-62: any non-CBOE member or non-broker/dealer account which typically clears at OCC as customer, but is prohibited from entering orders on RAES (i.e. futures traders, spouses of members, MM’s away who are non B/Ds, etc).	Agency	A – Riskless Arbitrage	

CustomerOrderCapacity(tag 582) Mappings for Futures CTICode

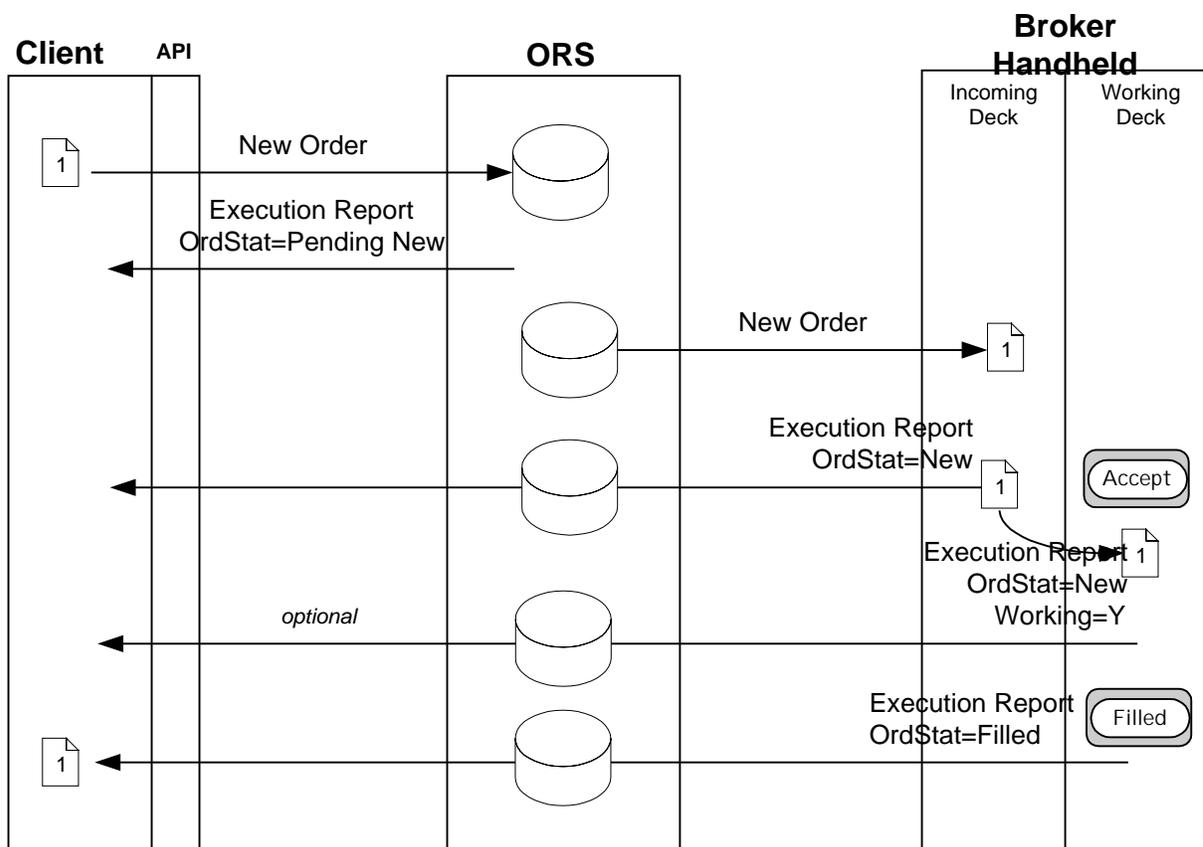
CustOrderCapacity (tag 582)	Description
1	Member trading for their own account
2	Clearing Firm trading for its proprietary account
3	Member trading for another member
4	All other

Negative Prices permitted for futures and options strategies

The AvgPx(tag #6), LastPx(Tag #31), Price(tag #44), StopPx(tag #99), AllocAvgPx(tag #153), DayAvgPx(tag# 426), LegLastPx(tag# 637), UnderlyingLastPx(tag# 651) fields can be negative to support pricing of futures and options strategies, that due to theoretical pricing can result in "buying" a strategy for a negative price (receiving a credit for the strategy) or "selling" a strategy for a price(receiving a debit for the strategy).

Derivatives Markets Order State Transition

Derivatives markets are encouraged to adopt the following order state transition and order state reporting practices.



NOTES:

- The broker is not required to move the order from the incoming deck to the working deck before filling the Order. Therefore, the "Working=Y" might not be received by the client. The Execution Report can be sent by the broker handheld from either the Incoming Deck or the Working Deck.
- The Order can take one or more Fills before the Order is completed, or the Order might only be partially completed by the end of the day.

Party Roles used for Derivatives Markets

		Futures		Options	
Role	Description	Order	Execution	Order	Execution
ExecutingFirm	Firm that is executing the trade. Account[1] will be associated with this firm if present. Carries resultant positions of trades at the clearing house – unless GiveupClearingFirm is specified.	Reqd	Reqd	Reqd	Reqd
InitiatingTrader	If this role exists then this PartyID is the trader acronym that is reported to clearing. The Initiating Trader is associated with the ExecutingFirm. For market makers (specialists), the PartySubID for the InitiatingTrader is used for optional joint account identification	Opt	Cond	Opt	Cond
ClientID	Identification of the customer of the order – also known as the correspondent firm in CMS systems. Replaces ClientID[109]	n/a	n/a	Opt	Cond
ExecutingTrader	The trader or broker that actually executes a trade. If no InitiatingTrader role exists on the trade – then the ExecutingTrader is assumed to be associated with the ExecutingFirm For market makers (specialists), the PartySubID for PartyRole=ExecutingTrader can be used for optional joint account identification.	Opt	Reqd	Opt	Cond
OrderOriginator	ID of the party entering the trade into the system (data entry, userid, buy side trader, etc.). Replaces TraderID[466].	Opt	Cond	Opt	Cond

GiveupClearingFirm	Firm that carries the position that results from a trade against the order. This is the firm to which the trade is given up. The PartySubID will be the account associated with this GiveupClearingFirm. Will be used for CMTA for US listed options.	Opt	Cond	Opt	Cond
CorrespondentClearingFirm	ClearingFirm that is going to carry the position on their books at another clearing house (exchanges). The resultant position does not reside with the market where it is traded – but instead is sent to an alternative market. The PartySubID will be the account associated with the CorrespondentClearingFirm	Opt	Cond	Opt	Cond
ExecutingSystem	System Identifier where execution took place. For instance in some markets there are multiple execution locations – such as an electronic book or automatic execution system. Replaces NYSE ExecutionInformation[9433]	n/a	Cond	n/a	Cond

MAPPING FIX 4.2 to FIX 4.3 Usage for Options Markets

FIX	FIX	Options	
4.2	4.3	Order	Execution
ExecutingBroker[76]	PartyID PartyRole=ExecutingFirm	Reqd	Reqd
Account[1]	Account[1]	Opt	Cond
ClearingFirm[439]	PartyID PartyRole=GiveupClearingFirm	Opt	Cond
ClearingAccount[440]	PartySubID of PartyRole=GiveupClearingFirm	Opt	Cond
Market Maker Sub account information (Market Maker Acronym)	PartySubID of PartyRole=ExecutingTrader or PartyRole= InitiatingTrader	Opt	Cond

Optional data reported on clearing report	PartySubID of PartyRole=ExecutingFirm	Opt	Cond
---	--	-----	------

General Usage Information – US Futures Markets

There are three business scenarios involving give-ups and allocations within a single firm and across multiple firms in the futures industry.

Scenario 1-Allocate entire trade to multiple accounts within the clearing firm.

All relevant account and allocation information is carried in the allocation block. The total quantity of the order continues to be denoted in the OrderQtyData block. The account field (tag 1) is left blank as the information is fully denoted in the allocation block as outlined in the New Order Single for Corn example in this section. Both the main party block and nested party block within the allocation block are not used to carry allocation information when allocating trades across multiple accounts within the executing firm.

Scenario 2-Giveup entire trade to a single account at another firm

All relevant giveup information is contained in the main party block using PartyID to identify clearing firm (PartyRole=4) and PartyID to identify the carrying firm (PartyRole=14). The clearing firm suspense account is carried in account (tag 1). The carrying firm account number is populated in the PartySubID in the party block iteration when PartyRole=14. See the example contained in the Corn Calendar Multileg Order record.

Scenario 3-Allocate entire trade to multiple accounts across multiple firms

All relevant account and giveup information is carried within the allocation block. The total quantity of the order continues to be denoted in the OrderQtyData block. The quantity to be giveup to the each firm is designated using the AllocQty (tag 80) in the allocation block. The appropriate account at the carrying firm is designated using the AllocAccount (tag 79) in the allocation block. The appropriate carrying firm is designated within the nested party block within the appropriate allocation block using the PartyRole=14.

Execution Time Bracket reporting for US Futures Markets

The TradingSessionSubID (tag 625) is to be used to report execution time bracket codes for the US listed futures markets on the Execution Report.

Example New Order – Single for Listed Futures Market

The following addresses sending a New Order - Single message into a futures market.

Tags that are not used in the futures and options industries have been omitted from the record. Tags that may be used based on the Exchange, execution medium and product have been included in the record and noted as not applicable (“n/a”). (Examples of such a tag is TradingSessionSubID which is used for floor based trades to carry the required time bracket designation and therefore is not applicable to screen based trading.)

The order created here is to buy 27 December 2001 Wheat at a price of 4.50. The order is being executed and cleared by firm 300. The order is also being allocated to multiple accounts within the executing firm, which is also the clearing firm as reflected in the allocation block. The order is also denoted as part of an average price group by placing a value in ClOrdLinkID field.

Tag	Example Value	Field Name	Rqd	Comments
		<i>Standard Header</i>	Y	MsgType = D
11	XXX123	ClOrdID	Y	
583	9876	ClOrdLinkID	N	The executions on this order will be average priced with executions on other orders with the same ClOrdLinkID.

component block <Parties>					
453		2	NoPartyIDs	N	
→	448	300	<i>PartyID</i>	N	Firm executing and clearing the trade
→	447	D	<i>PartyIDSource</i>	N	
→	452	4	<i>PartyRole</i>	N	Firm executing and clearing the trade
→	523	n/a	<i>PartySubID</i>	N	Not used when allocating trade across multiple accounts within the firm
→	448	Tim1234	<i>PartyID</i>	N	
→	447	D	<i>PartyIDSource</i>	N	
→	452	13	<i>PartyRole</i>	N	Order Originator-person who entered the order into a system, if appropriate. Generally, the user id of that person
→	523	n/a	<i>PartySubID</i>	N	
End </Parties>					

1	1111	Account	N	Not used when allocating trades across multiple account within the firm
581	1	AccountType	N	AKA Origin. Required for futures markets.

591	0		PreallocMethod	N	
78	3		NoAllocs	N	
→	79	123456	AllocAccount	N	
→	467	n/a	IndividualAllocID	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	<i>NestedPartyID</i>	N	
→	→	525	<i>NestedPartyIDSource</i>	N	
→	→	538	<i>NestedPartyRole</i>	N	
→	→	545	<i>NestedPartySubID</i>	N	
End </NestedParties>					

→	80	2	AllocQty	N	
→	79	9876	AllocAccount	N	
→	467	n/a	IndividualAllocID	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	<i>NestedPartyID</i>	N	
→	→	525	<i>NestedPartyIDSource</i>	N	
→	→	538	<i>NestedPartyRole</i>	N	
→	→	545	<i>NestedPartySubID</i>	N	
End </NestedParties>					

→	80	15	AllocQty	N	
→	79	546789	AllocAccount	N	
→	467	n/a	IndividualAllocID	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	<i>NestedPartyID</i>	N	
→	→	525	<i>NestedPartyIDSource</i>	N	
→	→	538	<i>NestedPartyRole</i>	N	
→	→	545	<i>NestedPartySubID</i>	N	
End </NestedParties>					

→	80	2	AllocQty	N	
63			SettlmntTyp	N	
64			FutSettDate	N	
635		C	ClearingFeeIndicator	N	
21		3	HandlInst	Y	Floor execution for futures markets should always be a 3
18		n/a	ExecInst	N	
110		n/a	MinQty	N	
111		n/a	MaxFloor	N	
100		XCBT	ExDestination	N	
386		n/a	NoTradingSessions	N	
→	336	n/a	TradingSessionID	N	
→	625	n/a	TradingSessionSubID	N	

Component block <Instrument>					
55		W	Symbol	***	ExDestination ticker symbol.
65			SymbolSfx	N	
48		n/a	SecurityID	N	
22		n/a	SecurityIDSource	N	
454			NoSecurityAltID	N	
→	455		SecurityAltID	N	
→	456		SecurityAltIDSource	N	
461		F	CFICode	N	
467			SecurityType	N	
200		200112	MaturityMonthYear	N	
541		n/a	MaturityDate	N	
470			CountryOfIssue	N	
471			StateOrProvinceOfIssue	N	
472			LocaleOfIssue	N	
202		n/a	StrikePrice	N	
206		n/a	OptAttribute	N	
234			ContractMultiplier	N	
207		n/a	SecurityExchange	N	
107		Wheat Future	SecurityDesc	N	
350		n/a	EncodedSecurityDescLen	N	
351		n/a	EncodedSecurityDesc	N	

End </Instrument>				
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140		PrevClosePx	N	
54	1	Side	Y	
60	20010806-13:34:29	TransactTime	Y	

Component block <OrderQtyData>				
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38	27	OrderQty	N	
152	n/a	CashOrderQty	N	

End </OrderQtyData>				
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40	2	OrdType	Y	Limit order.
44	4.500	Price	N	Limit Price of 4.500
99	n/a	StopPx	N	
15		Currency	N	
376		ComplianceID	N	
377		SolicitedFlag	N	
117	n/a	QuoteID	N	
59	0	TimeInForce	N	
168	n/a	EffectiveTime	N	
432	n/a	ExpireDate	N	
126	n/a	ExpireTime	N	
582	4	CustOrderCapacity	N	Also know as Customer Type Indicator (CTI). Required for futures markets.
120		SettlCurrency	N	
58	n/a	Text	N	
354	n/a	EncodedTextLen	N	
355	n/a	EncodedText	N	
77	n/a	PositionEffect	N	
203	n/a	CoveredOrUncovered	N	
210	n/a	MaxShow	N	
388	n/a	DiscretionInst	N	
389	n/a	DiscretionOffset	N	
		Standard Trailer	Y	

Example New Order – Single for Listed Options Market

The following addresses sending a New Order - Single message into an options market.

Tags that are not used in the futures and options industries are not included in the example.

Tags with strike-through text are not currently used by the industries but may be used in the future.

Tags that have an example value of not applicable (n/a) are used in the industries. Herein, however, the value n/a was assigned for one of two reasons. First, specific futures and options markets may or may not utilize certain tags and, if utilized, their use and valid values would need to be addressed by participants in the particular market.

Second, the order created here is to buy 5 IBM September 2001 call options with a strike price of \$100.00 at a price of \$5.50. This and other assumptions concerning the order, such as it is not being allocated, result in some tag values being n/a.

Tag	Example Value	Field Name	Rqd	Comments
		Standard Header	Y	MsgType = D
11	XXX123	ClOrdID	Y	
583	n/a	ClOrdLinkID	N	

component block <Parties>				
453	5	NoPartyIDs	N	
→	448	PLC	PartyID	N Trader badge
→	447	C	PartyIDSource	N As assigned by exchange or clearing house
→	452	11	PartyRole	N Order Origination Trader (if different from Executing Trader) optional
→	523	n/a	PartySubID	N
→	448	0690	PartyID	N OCC Clearing Firm Number
→	447	C	PartyIDSource	N As assigned by exchange or clearing house
→	452	13	PartyRole	N Order Origination Firm (if different from Executing Firm) optional
→	523	n/a	PartySubID	N
→	448	SMG	PartyID	N Trader Badge
→	447	C	PartyIDSource	N As assigned by exchange or clearing house
→	452	12	PartyRole	N Executing Trader (required)
→	523	n/a	PartySubID	N
→	448	0427	PartyID	N OCC Clearing Firm Number
→	447	C	PartyIDSource	N As assigned by exchange or clearing house
→	452	1	PartyRole	N Executing Firm (required)
→	523	n/a	PartySubID	N
→	448	323	PartyID	N OCC Clearing Firm Number

→	447	C	<i>PartyIDSource</i>	N	As assigned by exchange or clearing house
→	452	14	<i>PartyRole</i>	N	Giveup Clearing Firm (CMTA) (optional if trade is being given up to another firm)
→	523	n/a	<i>PartySubID</i>	N	
End </Parties>					

1		AAA	Account	N	
581		n/a	AccountType	N	
591		n/a	PreallocMethod	N	
78		n/a	NoAllocs	N	
→	79	n/a	<i>AllocAccount</i>	N	
→	467	n/a	<i>IndividualAllocID</i>	N	
→	80	n/a	<i>AllocQty</i>	N	
63			SettlmntTyp	N	
64			FutSettDate	N	
21		2	HandlInst	Y	
18		n/a	ExecInst	N	
110		n/a	MinQty	N	
111		n/a	MaxFloor	N	
100		XCBO	ExDestination	N	
386		n/a	NoTradingSessions	N	
→	336	n/a	<i>TradingSessionID</i>	N	
→	625	n/a	<i>TradingSessionSubID</i>	N	
54		1	Side	Y	Buying the options.

Component block <Instrument>					
55		IBM	Symbol	***	ExDestination ticker symbol.
65			SymbolSfx	N	
48		n/a	SecurityID	N	
22		n/a	SecurityIDSource	N	
454			NoSecurityAltID	N	
→	455		<i>SecurityAltID</i>	N	
→	456		<i>SecurityAltIDSource</i>	N	
461		OC	CFICode	N	
467			SecurityType	N	
200		200109	MaturityMonthYear	N	

541	n/a	MaturityDate	N	
470		CountryOfIssue	N	
471		StateOrProvinceOfIssue	N	
472		LocaleOfIssue	N	
202	100.0	StrikePrice	N	
206	n/a	OptAttribute	N	
231		ContractMultiplier	N	
207	n/a	SecurityExchange	N	
107	n/a	SecurityDesc	N	
350	n/a	EncodedSecurityDescLen	N	
351	n/a	EncodedSecurityDesc	N	
End </Instrument>				

140	n/a	PrevClosePx	N	
60	20010806-13:34:29	TransactTime	Y	

Component block <OrderQtyData>				
38	5	OrderQty	N	
152	n/a	CashOrderQty	N	
End </OrderQtyData>				

40	2	OrdType	Y	Limit order
44	5.5	Price	N	Buy at price of 5.5
99	n/a	StopPx	N	
15	n/a	Currency	N	
376	n/a	ComplianceID	N	
377	n/a	SolicitedFlag	N	
117	n/a	QuoteID	N	
59	0	TimeInForce	N	
168	n/a	EffectiveTime	N	
432	n/a	ExpireDate	N	
126	n/a	ExpireTime	N	
528	A	OrderCapacity	N	
529	n/a	OrderRestrictions	N	
582	n/a	CustOrderCapacity	N	
120	n/a	SettlCurrency	N	
58	n/a	Text	N	

354	n/a	EncodedTextLen	N	
355	n/a	EncodedText	N	
77	n/a	OpenClose	N	
203	n/a	CoveredOrUncovered	N	
210	n/a	MaxShow	N	
388	n/a	DiscretionInst	N	
389	n/a	DiscretionOffset	N	
118	n/a	NetMoney	N	
		<i>Standard Trailer</i>	Y	

Example New Order - Multileg for Listed Futures Market (Spread Order)The following addresses sending a New Order – Multileg message into a futures market.

Tags that are not used in the futures and options industries are not included in the example.

Tags with strike-through text are not currently used by the industries but may be used in the future.

Tags that have an example value of not applicable (n/a) are used in the futures industry. Herein, however, the value n/a was assigned for one of two reasons. First, specific futures and options markets may or may not utilize certain tags and, if utilized, their use and valid values would need to be addressed by participants in the particular market. (Examples of such tags are MultiLegRptTypeReq [563] and TradingSessionID [336].)

Second, the order created here is to buy 15 May 2002 - July 2002 Corn spreads at a price of -12. Some specifics concerning the order, such as it is not being allocated, result in some tag values being n/a.

The direction of the strategy is indicated by the Side (54) taken. When a strategy is pre-defined by a futures or options market and an inconsistency arises between:

the strategy indicated and the Side, LegSide (624), and/or LegRatioQty (623), or

the Side indicated and any LegSide indicated

the sell-side may either reject the order or accept the order. If the sell-side accepts the order it will be based on the strategy and Side indicated with any inconsistencies in LegSide and/or LegRatioQty being ignored.

The example also has any trade resulting from this order being given up to another firm. The firm being given up to will carry the trade on its books.

<i>Tag</i>	<i>Example Value</i>	<i>Field Name</i>	<i>Rqd</i>	<i>Comments</i>
		<i>Standard Header</i>	Y	MsgType = AB
11	1234567897	ClOrdID	Y	

583	n/a	ClOrdLinkID	N	
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component block <Parties>					
453		3	NoPartyIDs	N	
→	448	560	PartyID	N	Firm executing and clearing the trade
→	447	D	PartyIDSource	N	
→	452	4	PartyRole	N	
→	523	n/a	PartySubID	N	
→	448	500	PartyID	N	Trade being given up to and carried by this firm
→	447	D	PartyIDSource	N	
→	452	14	PartyRole	N	
→	523	789567	PartySubID	N	Customer account number at carrying firm
→	448	Tim1234	PartyID	N	
→	447	D	PartyIDSource	N	
→	452	13	PartyRole	N	
→	523	n/a	PartySubID	N	
End </Parties>					

1		abcdef	Account	N	Account mnemonic as known by bookkeeping system. In case of giveup specified in party block, this account is at the executing firm.
581		1	AccountType	N	Also known as Origin. Required for futures markets.
591		n/a	PreallocMethod	N	
78		n/a	NoAllocs	N	
→	79	n/a	AllocAccount	N	
→	467	n/a	IndividualAllocID	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	NestedPartyID	N	
→	→	525	NestedPartyIDSource	N	
→	→	538	NestedPartyRole	N	
→	→	545	NestedPartySubID	N	
End </NestedParties>					

→	80	n/a	<i>AllocQty</i>	N	
63			SettlmntTyp	N	
64			FutSettDate	N	
635		C	ClearingFeeIndicator	N	
21		3	HandlInst	Y	Floor executions for futures markets should always be "3".
18		n/a	ExecInst	N	
110		n/a	MinQty	N	
111		n/a	MaxFloor	N	
100		XCBT	ExDestination	N	
386		n/a	NoTradingSessions	N	
→	336	n/a	<i>TradingSessionID</i>	N	
→	625	n/a	<i>TradingSessionSubID</i>	N	
54		1	Side	Y	Buying the strategy.

Component block <Instrument>					
55		C:CAL	Symbol	***	ExDestination ticker symbol.
65			SymbolSfx	N	
48		n/a	SecurityID	N	
22		n/a	SecurityIDSource	N	
454			NoSecurityAltID	N	
→	455		<i>SecurityAltID</i>	N	
→	456		<i>SecurityAltIDSource</i>	N	
461		FM	CFICode	N	
467			SecurityType	N	
200		n/a	MaturityMonthYear	N	
541		n/a	MaturityDate	N	
470			CountryOfIssue	N	
471			StateOrProvinceOfIssue	N	
472			LocaleOfIssue	N	
202		n/a	StrikePrice	N	
206		n/a	OptAttribute	N	
234		n/a	ContractMultiplier	N	
207		n/a	SecurityExchange	N	
107		n/a	SecurityDesc	N	
350		n/a	EncodedSecurityDescLen	N	
351		n/a	EncodedSecurityDesc	N	

End </Instrument>

140	n/a	PrevClosePx	N	
555	2	NoLegs	Y	

Component block <Instrument Leg>					
→	600	C	LegSymbol	***	ExDestination ticker symbol.
→	601		LegSymbolSfx	N	
→	602	n/a	LegSecurityID	N	
→	603	n/a	LegSecurityIDSource	N	
→	604		NoLegSecurityAltID	N	
→	→	605	LegSecurityAltID	N	
→	→	606	LegSecurityAltIDSource	N	
→	608	F	LegCFICode	N	Commodity Future
→	609		LegSecurityType	N	
→	610	200205	LegMaturityMonthYear	N	May 2002 maturity.
→	611	n/a	LegMaturityDate	N	
→	596		LegCountryOfIssue	N	
→	597		LegStateOrProvinceOfIssue	N	
→	598		LegLocaleOfIssue	N	
→	612	n/a	LegStrikePrice	N	
→	613	n/a	LegOptAttribute	N	
→	614		LegContractMultiplier	N	
→	616	n/a	LegSecurityExchange	N	
→	620	Corn Future	LegSecurityDesc	N	
→	621	n/a	EncodedLegSecurityDescLen	N	
→	622	n/a	EncodedLegSecurityDesc	N	
→	623	1	LegRatioQty	N	Equal ratios.
→	624	1	LegSide	N	Buy leg.
→	564	n/a	LegPositionEffect	N	
→	565	n/a	LegCoveredOrUncovered	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	<i>NestedPartyID</i>	N	
→	→	525	<i>NestedPartyIDSource</i>	N	

→	→	538	n/a	<i>NestedPartyRole</i>	N	
→	→	545	n/a	<i>NestedPartySubID</i>	N	
End </NestedParties>						

→		654	n/a	LegRefID	N	
→		566	n/a	LegPrice	N	
→		587	n/a	LegSettlementType	N	
→		588	n/a	LegFutSettleDate	N	
→		600	C	LegSymbol	***	
→		601		LegSymbolSfx	N	
→		602	n/a	LegSecurityID	N	
→		603	n/a	LegSecurityIDSource	N	
→		604		NoLegSecurityAltID	N	
→	→	605		LegSecurityAltID	N	
→	→	606		LegSecurityAltIDSource	N	
→		608	F	LegCFIcode	N	
→		610	200207	LegMaturityMonthYear	N	July 2002 maturity.
→		611	n/a	LegMaturityDate	N	
→		596		LegCountryOfIssue	N	
→		597		LegStateOrProvinceOfIssue	N	
→		598		LegLocaleOfIssue	N	
→		612	n/a	LegStrikePrice	N	
→		613	n/a	LegOptAttribute	N	
→		614	n/a	LegContractMultiplier	N	
→		616	n/a	LegSecurityExchange	N	
→		620	Corn Future	LegSecurityDesc	N	
→		621	n/a	EncodedLegSecurityDescLen	N	
→		622	n/a	EncodedLegSecurityDesc	N	
→		623	1	LegRatioQty	N	Equal ratios.
→		624	2	LegSide	N	Sell leg.
→		564	n/a	LegPositionEffect	N	
→		565	n/a	LegCoveredOrUncovered	N	

Component block <NestedParties>						
→		539	n/a	NoNestedPartyIDs	N	
→	→	524	n/a	<i>NestedPartyID</i>	N	

→	→	525	n/a	<i>NestedPartyIDSource</i>	N	
→	→	538	n/a	<i>NestedPartyRole</i>	N	
→	→	545	n/a	<i>NestedPartySubID</i>	N	
End </NestedParties>						

→		654	n/a	LegRefID	N	
→		566	n/a	LegPrice	N	
→		587	n/a	LegSettlmntTyp	N	
→		588	n/a	LegFutSettlDate	N	
End </Instrument Leg>						

60		20010509-09:20:15	TransactTime	Y		
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Component block <OrderQtyData>						
38		15	OrderQty	N		
152		n/a	CashOrderQty	N		
End </OrderQtyData>						

40		2	OrdType	Y	Limit order.	
44		-12	Price	N	Buy strategy at negative 12.	
99		n/a	StopPx	N		
15		n/a	Currency	N		
376		n/a	ComplianceID	N		
377		n/a	SolicitedFlag	N		
117		n/a	QuoteID	N		
59		0	TimeInForce	N		
168		n/a	EffectiveTime	N		
432		n/a	ExpireDate	N		
126		n/a	ExpireTime	N		
528			OrderCapacity	N	Used for options markets.	
529			OrderRestrictions	N	Used for options markets.	
582		4	CustOrderCapacity	N	Also know as Customer Type Indicator (CTI). Required for futures markets.	
120		n/a	SettlCurrency	N		
58		n/a	Text	N		
354		n/a	EncodedTextLen	N		

355	n/a	EncodedText	N	
77	n/a	PositionEffect	N	
203	n/a	CoveredOrUncovered	N	
210	n/a	MaxShow	N	
388	n/a	DiscretionInst	N	
389	n/a	DiscretionOffset	N	
563	n/a	MultiLegRptTypeReq	N	
		<i>Standard Trailer</i>	Y	

Example New Order - Multileg for Listed Futures Market

(Butterfly Strategy)

The following addresses sending a New Order – Multileg message into a futures market.

Tags that are not used in the futures and options industries are not included in the example.

Tags with strike-through text are not currently used by the industries but may be used in the future.

Tags that have an example value of not applicable (n/a) are used in the industries. Herein, however, the value n/a was assigned for one of two reasons. First, specific futures and options markets may or may not utilize certain tags and, if utilized, their use and valid values would need to be addressed by participants in the particular market. (Examples of such tags are MultiLegRptTypeReq [563] and TradingSessionID [336].)

Second, the order created here is to buy 10 EuroDollar butterfly spreads at a price of -3.0, and is assumed that it will be productized by the sell-side on its electronic order matching system (ie: trade engine). This and other assumptions concerning the order, such as it is not being allocated, result in some tag values being n/a. (An example is the SecurityID [48] which the buy-side would not know until the sell-side has productized the butterfly.)

The direction of the strategy is indicated by the Side (54) taken. When a strategy is pre-defined by a futures market and an inconsistency arises between:

- the strategy indicated and the Side, LegSide (624), and/or LegRatioQty (623), or
- the Side indicated and any LegSide indicated

the sell-side may either reject the order or accept the order. If the sell-side accepts the order it will be based on the strategy and Side indicated with any inconsistencies in LegSide and/or LegRatioQty being ignored.

<i>Tag</i>	<i>Example Value</i>	<i>Field Name</i>	<i>Rqd</i>	<i>Comments</i>
		<i>Standard Header</i>	Y	MsgType = AB
11	05092001-NY-78955	ClOrdID	Y	

583	n/a	ClOrdLinkID	N	
-----	-----	-------------	---	--

component block <Parties>				
453		2	NoPartyIDs	N
→	448	001	PartyID	N
→	447	D	PartyIDSource	N
→	452	4	PartyRole	N
→	523	n/a	PartySubID	N
→	448	4114Z9871272	PartyID	N
→	447	D	PartyIDSource	N
→	452	13	PartyRole	N
→	523	n/a	PartySubID	N
End </Parties>				

1		Z9871272	Account	N
581		1	AccountType	N
591		n/a	PreallocMethod	N
78		n/a	NoAllocs	N
→	79	n/a	AllocAccount	N
→	467	n/a	IndividualAllocID	N

Component block <NestedParties>				
→	539	n/a	NoNestedPartyIDs	N
→	→	524	NestedPartyID	N
→	→	525	NestedPartyIDSource	N
→	→	538	NestedPartyRole	N
→	→	545	NestedPartySubID	N
End </NestedParties>				

→	80	n/a	AllocQty	N
63			SettlementTyp	N
64			FutSettDate	N
635		C	ClearingFeeIndicator	N
21		1	HandlInst	Y
18		n/a	ExecInst	N
110		n/a	MinQty	N
111		n/a	MaxFloor	N

100		XCME	ExDestination	N	
386		n/a	NoTradingSessions	N	
→	336	n/a	TradingSessionID	N	
→	625	n/a	TradingSessionSubID	N	
54		1	Side	Y	

Component block <Instrument>					
55		GE:BF	Symbol	***	
65			SymbolSfx	N	
48		n/a	SecurityID	N	
22		n/a	SecurityIDSource	N	
454			NoSecurityAltID	N	
→	455		SecurityAltID	N	
→	456		SecurityAltIDSource	N	
461		FM	CFICode	N	
467			SecurityType	N	
200		n/a	MaturityMonthYear	N	
541		n/a	MaturityDate	N	
470			CountryOfIssue	N	
471			StateOrProvinceOfIssue	N	
472			LocaleOfIssue	N	
202		n/a	StrikePrice	N	
206		n/a	OptAttribute	N	
231			ContractMultiplier	N	
207		n/a	SecurityExchange	N	
107		n/a	SecurityDesc	N	
350		n/a	EncodedSecurityDescLen	N	
351		n/a	EncodedSecurityDesc	N	
End </Instrument>					

140			PrevClosePx	N	
555		3	NoLegs	Y	

Component block <Instrument Leg>					
→	600	GE	LegSymbol	***	
→	601		LegSymbolSfx	N	
→	602	CME005060001	LegSecurityID	N	

→	603	ISIN	LegSecurityIDSource	N	
→	604		NoLegSecurityAltID	N	
→	→	605	LegSecurityAltID	N	
→	→	606	LegSecurityAltIDSource	N	
→	608	F	LegCFIcode	N	
→	609		LegSecurityType	N	
→	610	200109	LegMaturityMonthYear	N	
→	611	n/a	LegMaturityDate	N	
→	596		LegCountryOfIssue	N	
→	597		LegStateOrProvinceOfIssue	N	
→	598		LegLocaleOfIssue	N	
→	612	n/a	LegStrikePrice	N	
→	613	n/a	LegOptAttribute	N	
→	614		LegContractMultiplier	N	
→	616	n/a	LegSecurityExchange	N	
→	620	GEU1	LegSecurityDesc	N	
→	621	n/a	EncodedLegSecurityDescLen	N	
→	622	n/a	EncodedLegSecurityDesc	N	
→	623	1	LegRatioQty	N	
→	624	1	LegSide	N	
→	564	n/a	LegPositionEffect	N	
→	565	n/a	LegCoveredOrUncovered	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	<i>NestedPartyID</i>	N	
→	→	525	<i>NestedPartyIDSource</i>	N	
→	→	538	<i>NestedPartyRole</i>	N	
→	→	545	<i>NestedPartySubID</i>	N	
End </NestedParties>					

→	654	n/a	LegRefID	N	
→	566	n/a	LegPrice	N	
→	587		LegSettlmntTyp	N	
→	588		LegFutSettlDate	N	
→	600	GE	LegSymbol	***	

→	601		LegSymbolSfx	N	
→	602	CME005060004	LegSecurityID	N	
→	603	ISIN	LegSecurityIDSource	N	
→	604		NoLegSecurityAltID	N	
→	→	605	LegSecurityAltID	N	
→	→	606	LegSecurityAltIDSource	N	
→	608	F	LegCFICode	N	
→	609		LegSecurityType	N	
→	610	200112	LegMaturityMonthYear	N	
→	611	n/a	LegMaturityDate	N	
→	596		LegCountryOfIssue	N	
→	597		LegStateOrProvinceOfIssue	N	
→	598		LegLocaleOfIssue	N	
→	612	n/a	LegStrikePrice	N	
→	613	n/a	LegOptAttribute	N	
→	614		LegContractMultiplier	N	
→	616	n/a	LegSecurityExchange	N	
→	620	GEZ1	LegSecurityDesc	N	
→	621	n/a	EncodedLegSecurityDescLen	N	
→	622	n/a	EncodedLegSecurityDesc	N	
→	623	2	LegRatioQty	N	
→	624	2	LegSide	N	
→	564	n/a	LegPositionEffect	N	
→	565	n/a	LegCoveredOrUncovered	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	NestedPartyID	N	
→	→	525	NestedPartyIDSource	N	
→	→	538	NestedPartyRole	N	
→	→	545	NestedPartySubID	N	
End </NestedParties>					

→	654	n/a	LegRefID	N	
→	566	n/a	LegPrice	N	
→	587		LegSettlmntTyp	N	

→	588		LegFutSettDate	N	
→	600	GE	LegSymbol	***	
→	601		LegSymbolSfx	N	
→	602	CME005060007	LegSecurityID	N	
→	603	ISIN	LegSecurityIDSource	N	
→	604		NoLegSecurityAltID	N	
→	→	605	LegSecurityAltID	N	
→	→	606	LegSecurityAltIDSource	N	
→	608	F	LegCFICode	N	
→	609		LegSecurityType	N	
→	610	200203	LegMaturityMonthYear	N	
→	611	n/a	LegMaturityDate	N	
→	596		LegCountryOfIssue	N	
→	597		LegStateOrProvinceOfIssue	N	
→	598		LegLocaleOfIssue	N	
→	612	n/a	LegStrikePrice	N	
→	613	n/a	LegOptAttribute	N	
→	614		LegContractMultiplier	N	
→	616	n/a	LegSecurityExchange	N	
→	620	GEH2	LegSecurityDesc	N	
→	621	n/a	EncodedLegSecurityDescLen	N	
→	622	n/a	EncodedLegSecurityDesc	N	
→	623	1	LegRatioQty	N	
→	624	1	LegSide	N	
→	564	n/a	LegPositionEffect	N	
→	565	n/a	LegCoveredOrUncovered	N	

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	n/a	NestedPartyID	N
→	→	525	n/a	NestedPartyIDSource	N
→	→	538	n/a	NestedPartyRole	N
→	→	545	n/a	NestedPartySubID	N
End </NestedParties>					

→	654	n/a	LegRefID	N	
→	566	n/a	LegPrice	N	

→	587		LegSettlmntTyp	N	
→	588		LegFutSettDate	N	
End </Instrument Leg>					

60	20010509-09:20:15		TransactTime	Y	
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Component block <OrderQtyData>					
38	10		OrderQty	N	
152	n/a		CashOrderQty	N	
End </OrderQtyData>					

40	2		OrdType	Y	
44	-3.0		Price	N	
99	n/a		StopPx	N	
45			Currency	N	
376			ComplianceID	N	
377			SolicitedFlag	N	
117	n/a		QuoteID	N	
59	0		TimeInForce	N	
168	n/a		EffectiveTime	N	
432	n/a		ExpireDate	N	
126	n/a		ExpireTime	N	
528			OrderCapacity	N	
529			OrderRestrictions	N	
582	4		CustOrderCapacity	N	
120	n/a		SettlCurrency	N	
58	n/a		Text	N	
354	n/a		EncodedTextLen	N	
355	n/a		EncodedText	N	
77	n/a		PositionEffect	N	
203	n/a		CoveredOrUncovered	N	
210	n/a		MaxShow	N	
388	n/a		DiscretionInst	N	
389	n/a		DiscretionOffset	N	
563	n/a		MultiLegRptTypeReq	N	
			Standard Trailer	Y	

Example Multileg Execution Report for Listed Futures Market

Multileg Execution Report Example for Futures Markets

The following addresses receiving an Execution Report – Multileg message.

Tags that are not used in the futures and options industries are not included in the example.

Tags with strike-through text are not currently used by the industries but may be used in the future.

Tags that have an example value of not applicable (n/a) are used in the industries. Herein, however, the value n/a was assigned for one of two reasons. First, individual futures and options markets may or may not utilize certain tags and, if utilized, their use and valid values would need to be addressed by participants in the particular market.

The execution report references an order to buy 15 July 2001/September 2001 Corn Spreads. The order is a give-up trade being executed and cleared by firm 560 and carried on the books of firm 500. This is the first execution of the order and it is for a total of 5 spreads. The order was executed on the trading floor as atomically and is being reported to the customer atomically via this execution report. The order will also be cleared atomically.

Tag	Example Values	Field Name	Rqd	Comments
		<i>Standard Header</i>	Y	MsgType = 8
37	987654	OrderID	Y	
198	n/a	SecondaryOrderID	N	
526	n/a	SecondaryClOrdID	N	
527	n/a	SecondaryExecID	N	
11	123456789	ClOrdID	N	
41	n/a	OrigClOrdID	N	
583	n/a	ClOrdLinkID	N	

component block <Parties>				
453		3	NoPartyIDs	N
→	448	560	PartyID	N
→	447	D	PartyIDSource	N
→	452	4	PartyRole	N
→	523	n/a	PartySubID	N
→	448	500	PartyID	N
→	447	D	PartyIDSource	N
→	452	14	PartyRole	N
→	523	789567	PartySubID	N
→	448	tim1234	PartyID	N

→	447	D	<i>PartyIDSource</i>	N	
→	452	13	<i>PartyRole</i>	N	
→	523	n/a	<i>PartySubID</i>	N	
End </Parties>					

382		1	NoContraBrokers	N	
→	375	455	ContraBroker	N	
→	337	ABC	ContraTrader	N	
→	437	5	ContraTradeQty	N	
→	438	20010509-09:22:40	ContraTradeTime	N	
→	655	n/a	ContraLegRefID	N	
66		n/a	ListID	N	
548		n/a	CrossID	N	
551		n/a	OrigCrossID	N	
549		n/a	CrossType	N	
17		X6789	ExecID	Y	
19		n/a	ExecRefID	N	
150		F	ExecType	Y	
39		1	OrdStatus	Y	
636		Y	WorkingIndicator	N	
103		n/a	OrdRejReason	N	
378		n/a	ExecRestatementReason	N	
1		abcdef	Account	N	
581		1	AccountType	N	
591		n/a	PreallocMethod	N	
63			SettlementType	N	
64			FutSettDate	N	
635		C	ClearingFeeIndicator	N	

Component block <Instrument>					
55		C:CAL	Symbol	***	
65			SymbolSfx	N	
48		n/a	SecurityID	N	
22		n/a	SecurityIDSource	N	
454			NoSecurityAltID	N	
→	455		SecurityAltID	N	
→	456		SecurityAltIDSource	N	

461	FM	CFICode	N	
467		SecurityType	N	
200	n/a	MaturityMonthYear	N	
541	n/a	MaturityDate	N	
470		CountryOfIssue	N	
471		StateOrProvinceOfIssue	N	
472		LocaleOfIssue	N	
202	n/a	StrikePrice	N	
206	n/a	OptAttribute	N	
231		ContractMultiplier	N	
207	n/a	SecurityExchange	N	
107	n/a	SecurityDesc	N	
350	n/a	EncodedSecurityDescLen	N	
351	n/a	EncodedSecurityDesc	N	
End </Instrument>				

54	1	Side	Y	
555	2	NoLegs	Y	Number of legs. Can be zero – must be provided even if zero

Component block <Instrument Leg>				
→	600	C	LegSymbol	***
→	601		LegSymbolSfx	N
→	602	n/a	LegSecurityID	N
→	603	n/a	LegSecurityIDSource	N
→	604		NoLegSecurityAltID	N
→	→	605	LegSecurityAltID	N
→	→	606	LegSecurityAltIDSource	N
→	608	F	LegCFICode	N
→	609		LegSecurityType	N
→	610	200105	LegMaturityMonthYear	N
→	611	n/a	LegMaturityDate	N
→	596		LegCountryOfIssue	N
→	597		LegStateOrProvinceOfIssue	N
→	598		LegLocaleOfIssue	N
→	612	n/a	LegStrikePrice	N
→	613	n/a	LegOptAttribute	N

→	614		LegContractMultiplier	N	
→	616	n/a	LegSecurityExchange	N	
→	620	Corn Future	LegSecurityDesc	N	
→	621	n/a	EncodedLegSecurityDescLen	N	
→	622	n/a	EncodedLegSecurityDesc	N	
→	623	1	LegRatioQty	N	
→	624	1	LegSide	N	
→	564	n/a	LegPositionEffect	N	Provide if the PositionEffect for the leg is different from that specified for the overall multileg security
→	565	n/a	LegCoveredOrUncovered	N	Provide if the CoveredOrUncovered for the leg is different from that specified for the overall multileg security.

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	n/a	<i>NestedPartyID</i>	N
→	→	525	n/a	<i>NestedPartyIDSource</i>	N
→	→	538	n/a	<i>NestedPartyRole</i>	N
→	→	545	n/a	<i>NestedPartySubID</i>	N
End </NestedParties>					

→	654	n/a	LegRefID	N	
→	566	n/a	LegPrice		Provide only if a price was specified for the specific leg. Used for anchoring the overall multileg security price to a specific leg price.
→	637	n/a	LegLastPx		Used to report the execution price assigned to the leg of the multileg instrument
→	587		LegSettlmntTyp		
→	588		LegFutSettDate		Required when SettlmntTyp = 6 (Future) or SettlmntTyp = 8 (Sellers Option)
→	600	C	LegSymbol	***	
→	601		LegSymbolSfx	N	
→	602	n/a	LegSecurityID	N	
→	603	n/a	LegSecurityIDSource	N	
→	604		NoLegSecurityAltID	N	
→	→	605		<i>LegSecurityAltID</i>	N
→	→	606		<i>LegSecurityAltIDSource</i>	N

→	608	F	LegCFICode	N	
→	609		LegSecurityType	N	
→	610	200107	LegMaturityMonthYear	N	
→	611	n/a	LegMaturityDate	N	
→	596		LegCountryOfIssue	N	
→	597		LegStateOrProvinceOfIssue	N	
→	598		LegLocaleOfIssue	N	
→	612	n/a	LegStrikePrice	N	
→	613	n/a	LegOptAttribute	N	
→	614		LegContractMultiplier	N	
→	616	n/a	LegSecurityExchange	N	
→	620	Corn Future	LegSecurityDesc	N	
→	621	n/a	EncodedLegSecurityDescLen	N	
→	622	n/a	EncodedLegSecurityDesc	N	
→	623	1	LegRatioQty	N	
→	624	2	LegSide	N	
→	564	n/a	LegPositionEffect	N	Provide if the PositionEffect for the leg is different from that specified for the overall multileg security
→	565	n/a	LegCoveredOrUncovered	N	Provide if the CoveredOrUncovered for the leg is different from that specified for the overall multileg security.

Component block <NestedParties>					
→	539	n/a	NoNestedPartyIDs	N	
→	→	524	n/a	<i>NestedPartyID</i>	N
→	→	525	n/a	<i>NestedPartyIDSource</i>	N
→	→	538	n/a	<i>NestedPartyRole</i>	N
→	→	545	n/a	<i>NestedPartySubID</i>	N
End </NestedParties>					

→	654	n/a	LegRefID	N	
→	566	n/a	LegPrice		Provide only if a price is required for a specific leg. Used for anchoring the overall multileg security price to a specific leg price.
→	637	n/a	LegLastPx		Used to report the execution price assigned to the leg of the multileg instrument
→	587		LegSettlementTyp		

→	588		LegFutSettDate		Required when SettlementType = 6 (Future) or SettlementType = 8 (Sellers Option)
End </Instrument Leg>					

Component block <OrderQtyData>					
38	15		OrderQty	N	
152	n/a		CashOrderQty	N	
End </OrderQtyData>					

40	2		OrdType	N	
44	-12		Price	N	Required if specified on the order
99	n/a		StopPx	N	Required if specified on the order
388	n/a		DiscretionInst	N	Code to identify the price a DiscretionOffset is related to and should be mathematically added to. Required if DiscretionOffset is specified.
389	n/a		DiscretionOffset	N	Amount (signed) added to the "related to" price specified via DiscretionInst.
45			Currency	N	
376			ComplianceID	N	
377			SolicitedFlag	N	
59	0		TimeInForce	N	Absence of this field indicates Day order
168	n/a		EffectiveTime	N	Time specified on the order at which the order should be considered valid
432	n/a		ExpireDate	N	Conditionally required if TimeInForce = GTD and ExpireTime is not specified.
126	n/a		ExpireTime	N	Conditionally required if TimeInForce = GTD and ExpireDate is not specified.
18	n/a		ExecInst	N	Can contain multiple instructions, space delimited.
528	n/a		OrderCapacity	N	
529	n/a		OrderRestrictions	N	
582	4		CustOrderCapacity	N	
32	5		LastQty	N	
31	-12		LastPx	N	
30			LastMkt	N	

336	n/a	TradingSessionID	N	
625	n/a	TradingSessionSubID	N	Used for time bracket codes for floor trades in the futures markets.
151	10	LeavesQty	Y	
14	5	CumQty	Y	
6	n/a	AvgPx	Y	
424	n/a	DayOrderQty	N	For GT orders on days following the day of the first trade.
425	n/a	DayCumQty	N	For GT orders on days following the day of the first trade.
426	n/a	DayAvgPx	N	For GT orders on days following the day of the first trade.
75	20010509	TradeDate	N	Used when reporting other than current day trades. For futures markets, used to report current trade date as opposed to current calendar date at time of execution.
60	20010509-09:23:05	TransactTime	N	Time the transaction represented by this ExecutionReport occurred
118	n/a	NetMoney	N	
21	3	HandlInst	N	
110	n/a	MinQty	N	
111	n/a	MaxFloor	N	
77	n/a	PositionEffect	N	
210	n/a	MaxShow		
58	n/a	Text		
354	n/a	EncodedTextLen		Must be set if EncodedText field is specified and must immediately precede it.
355	n/a	EncodedText		Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
442	n/a	MultiLegReportingType	N	Default is a single security if not specified.
		<i>Standard Trailer</i>	Y	

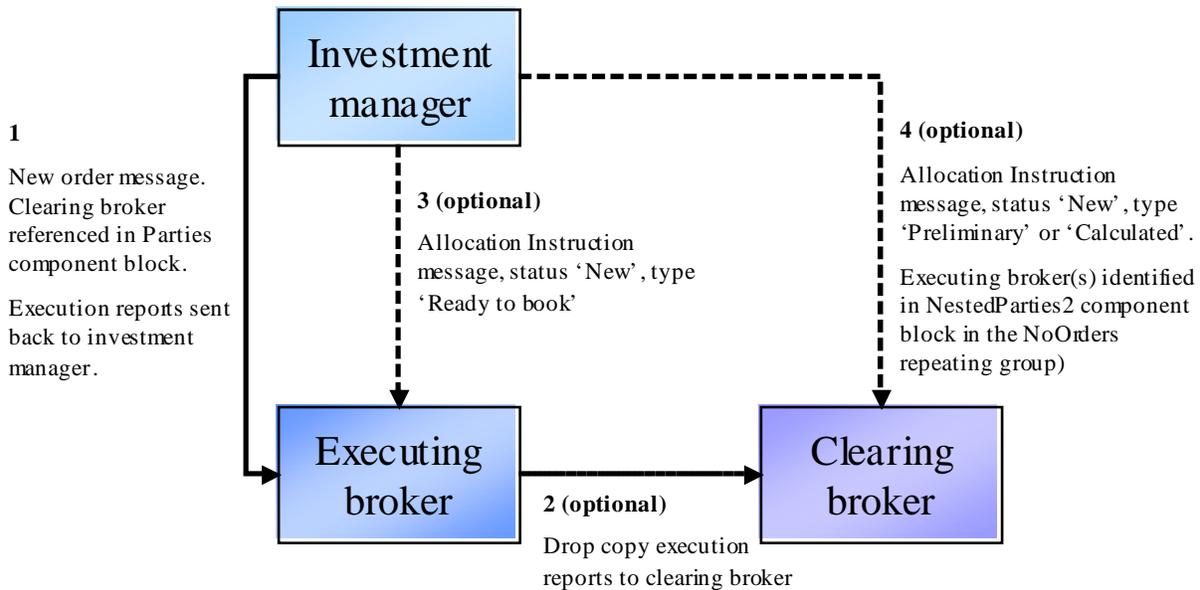
PRODUCT: EQUITIES

Step-Outs and Give-Ups

The new order messages allow a single clearing broker to be identified through use of the Parties component block with PartyRole = 4, Clearing Firm (in the event that the order is to be stepped out to multiple clearing brokers, the NestedParties2 component block in the NoAllocs group should be used, with each entry in the NoAllocs group denoting the quantity to be given up or stepped out to each broker).

The executing broker can optionally send copies of the order executions through to the clearing broker(s) real time using execution report messages. This flow is clearly not relevant in cases where communication to the clearing broker is managed through a central clearing house or similar organisation (e.g. as in the futures markets).

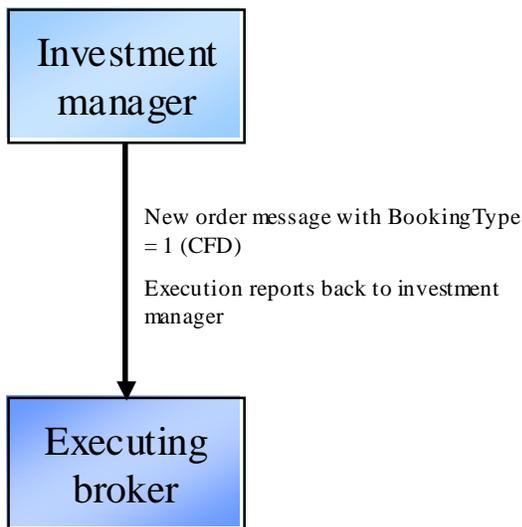
The investment manager provides booking instructions to both the executing and clearing brokers. Where the executing broker does not need to know the details of the underlying funds, a 'ready to book' allocation instruction can be used to tell the executing broker to book the order(s) out and settle against the clearing broker(s). The allocation details themselves are communicated from the investment manager to the clearing broker(s) using an allocation instruction message of type 'Preliminary' or 'Calculated'. This message contains a reference to the Executing Broker in the NestedParties2 field in the NoOrders repeating group (PartyRole = 1, Executing Firm).



This flow also supports the scenario where the investment manager has a block order which is then sent out (in parts) to a number of executing brokers, all to be settled by the same clearing broker. In this case, each executing broker receives a 'ready to book' allocation from the investment manager for their order(s) and the clearing broker receives a single allocation message for the entire block. This latter message will reference the client order ids on each order (which can be used to match up to the execution reports from the executing brokers) and the executing broker id.

CFDs

CFD with cash equity hedge executed by same broker as writing the CFD

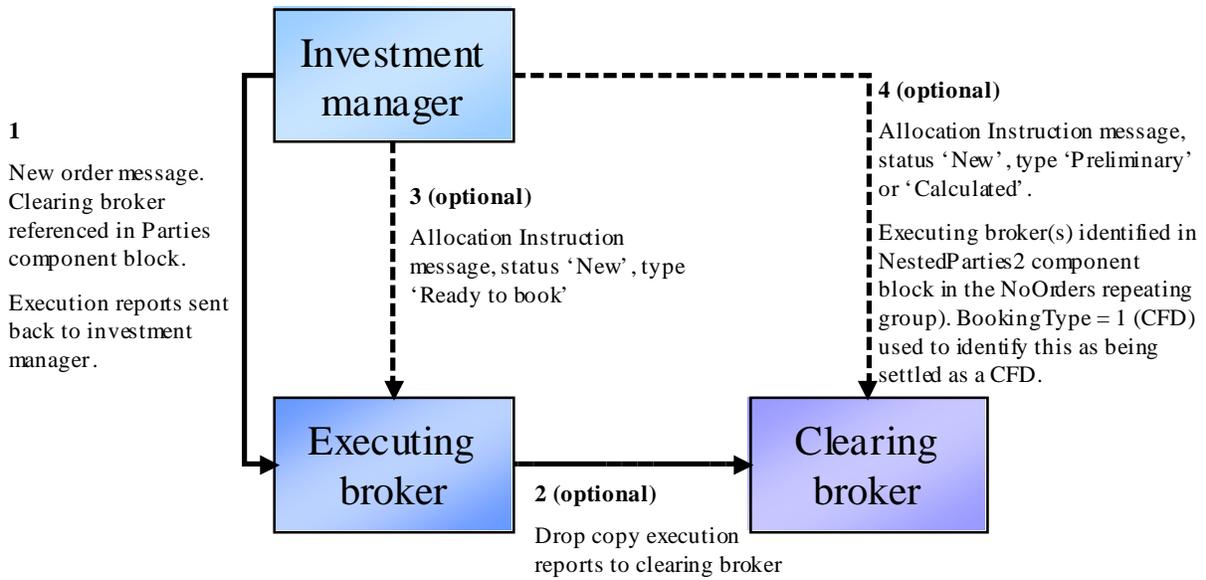


The BookingType field is used on the new order messages to transmit the notification that the order is for a CFD. This information is required at the time of execution as a) the broker may need to invoke separate credit or compliance checks (e.g. different RTL) and b) the broker will need to know to execute a principal cash hedge.

Note the example here could be extended to cover any OTC derivative product where one or more of its cashflows is derived from a cash equity position.

CFD with cash equity hedge executed by different broker from that writing the CFD

Here the clearing broker is writing the CFD and the executing broker is simply executing a cash equity hedge for (and settling with) the clearing broker. The allocation instruction from the investment manager to the clearing broker contains the BookingType field to provide notification that the order is to be booked out as a CFD. BookingType can also optionally be provided on the new order message to the executing broker.



Commission Sharing Arrangements

Soft Dollars

Soft dollar programmes are arrangements whereby a proportion of commission on certain trades is not retained by the broker, but set aside for the payment of certain eligible services for the buy side firm sending the orders. FIX supports the handling of such business in two ways:

- Use of the ProcessCode field on the new order messages (new order single and new order list). Takes value '1=soft dollar' for soft dollar trades.
- Use of the ProcessCode field on the FIX allocation instruction or allocation report message. Takes value '1=soft dollar' for soft dollar trades.

The issue with the first approach is that the ProcessCode flag is applied to an order and therefore must be assumed to be associated with every allocated trade belonging to that order which may not necessarily be the case. For this reason, use of ProcessCode on new order messages is not recommended unless the order is pre-trade allocated to a single sub account.

The second approach is recommended as a) it logically forms part of the post trade allocation process, b) existing alternative allocation mechanisms such as Global OASYS block ETC, OASYS Direct and manual (fax etc.) operate in this way.

Directed Brokerage

Directed brokerage (commission recapture) programmes are arrangements whereby a proportion of commission on certain trades is not retained by the broker, but set aside to be paid ultimately to the underlying funds on whose behalf the trades were executed; this may or may not involve an intermediary (e.g. Frank Russell, State Street, Lynch Jones Ryan) who collects payments from the brokers and manages the payment to the end funds.

As with soft dollars, the ProcessCode field (value '6=plan sponsor') is used. In addition, the identity of the scheme administrator must also be identified. Use of the post-trade allocation instruction message is recommended over use of ProcessCode on the new order messages for the same reasons as given for soft dollars above. The NestedParties component block in the NoAllocs repeating group in the allocation instruction message (for post-trade allocation) or new order message (for pre-trade allocation) should be used for identifying the scheme administrator.

The confirmation message contains an optional field SharedCommission which can be used to communicate the amount of commission actually being split out to the intermediary.

Multi-Day Average Pricing

Introduction

Multi-day average pricing ("warehousing") involves the sellside working a client equity order over a number of days in a similar way to a "good-till" (GT) order, but with the crucial difference that the entire buy-side executed quantity is not booked for settlement until the last day of the warehouse period. Given that the sellside will still have to settle its market-side executions, this will involve the funding of buys (sellside receives from the market), and borrowing stock or failing to deliver on sells (sellside delivers to the market). Note that warehousing is not permitted in certain markets.

The flows outlined below and supported in FIX 4.4 are subject to the following constraints:

- Only equities will be warehoused.
- Multi-leg instruments will not be warehoused.
- No special functionality will be provided to cover corporate actions occurring during a warehouse period.
- Only GT orders will carry warehousing instructions on the order message itself (wrong – this covers day orders as well). If the sellside decide to warehouse a day order they will use the FIX allocation message.
- Sellside firms will be responsible for deciding whether or not to accept a warehouse request.

Flow Summary

The following four flows are supported:

	Day orders	GT orders
Pre-trade notification	Use 589 DayBookingInst (a new value '2 – accumulate' has been added for this purpose). This is used to signify that the day order should be warehoused in full at the end of the day.	Use 427 GTBookingInst, using value '1 – accumulate until filled/expires' or '2 – accumulate until told otherwise'.
Post-trade notification	If the entire order is to be warehoused, use a 'warehouse' allocation instruction message (an Allocation Instruction with AllocTransType = 7 – warehouse) for the portion to be warehoused. If only part of the order is to be warehoused, use a 'warehouse' allocation instruction message for the warehoused portion and book and allocate the rest using a standard allocation instruction message.	As for Day orders.
End of day warehouse recap	At the end of every day where all or part of an order or orders has been warehoused, use an Allocation Report to communicate details of the warehoused portion of the order(s). This message has AllocReportType 5 = Warehouse recap and will communicate the quantity and average price of the warehoused portion of the order(s). For other details relating to the order (e.g. quantity executed that day, quantity remaining at the beginning of that day, the running average price), a 'done for day' execution report should be used. Note trade confirmations will only be generated for any part of the order booked out to a client account (i.e. not warehoused).	As for Day orders.
Warehouse rejection (pre-trade)	Reject the warehouse allocation message with an allocation ack with 87 AllocStatus '1 – rejected' and 88 AllocRejCode - '13 Warehouse request rejected'. The order will then remain in an unbooked state until it is either booked out manually or a new allocation message is	As for Day orders.

	received (and successfully processed).	
Warehouse rejection (post-trade)	As for pre-trade.	As for Day orders.

For all of these flows, either full or partial warehousing is supported (the latter meaning that only part of an order is warehoused, with the balance booked out as normal).

Example Warehouse Flows

These diagrams show a simplified version of the FIX warehousing flows.

Good Till Order – Warehouse Until Filled Using Pre-Trade Booking Instruction

Day 1 – entire part-filled quantity is warehoused

BuySide		SellSide
	→ New order single <i>GTBookingInst = 1</i> →	1. <i>BuySide sends new GT order with instruction to warehouse any part-filled quantity until the order fills or expires (i.e. GTBookingInst is 1).</i>
	← Execution reports <i>(new...partial fills)</i> ←	2. <i>Sellside accepts the order, then sends 1 or more partial fill execution reports.</i>
	← Execution report <i>(done for day)</i> ←	3. <i>Sellside sends a “done-for-the-day” (DFD) execution report when execution completes for the day.</i>
	← Allocation report <i>(AllocReportType = 5)</i> ←	4. <i>Sellside sends a warehouse recap allocation report.</i>
		<i>Note a 'warehouse instructon' allocation instruction message from the buySide is not required at this point due to the use of GTBookingInst when placing the order</i>

Day 2 – further executions; entire part-filled quantity is again warehoused

BuySide		SellSide
	← Execution reports <i>(new...partial fills)</i> ←	2. <i>Sellside sends 1 or more partial fill execution reports.</i>
	← Execution report <i>(done for day)</i> ←	3. <i>Sellside sends a “done-for-the-day” (DFD) execution report when execution completes for the day.</i>
	← Allocation report <i>(AllocReportType = 5)</i> ←	4. <i>Sellside sends a warehouse recap allocation report.</i>
		<i>Note a 'warehouse instructon' allocation instruction message from the buySide is not required at this point due to the use of GTBookingInst when placing the order</i>

Day 3 – further executions; order is now filled and booked out

BuySide	SellSide
---------	----------

	←	Execution reports <i>(new...partial fills...fill)</i>	←		2. <i>Sellside sends 0 or more partial fill execution reports and a final fill.</i>
	→	Allocation instruction <i>AllocTransType 'new'</i> <i>AllocType either 'Buyside preliminary' (if without MiscFees) or 'Buyside calculated' (if with)</i>	→		4. <i>Buyside provides allocations for entire order quantity</i>
	←	Allocation Instruction ACK <i>(AllocStatus 'received')</i>	←		5. <i>Sellside acknowledges receipt of the allocation details.</i>
	←	Allocation Instruction ACK <i>(AllocStatus 'processed')</i>	←		6. <i>Sellside processes and acknowledges allocation details. Confirmation messaging and processing will then take place for the order.</i>
	←	Allocation report <i>(AllocReportType = 5)</i>	←		7. <i>Sellside sends a warehouse recap allocation report.</i>

Good Till Order - Partial Warehousing - Day 1 (some of the part-filled quantity is warehoused; the rest is allocated)

Day 1 – part of the part-filled quantity is warehoused

BuySide		SellSide
	<p>→ New order single <i>GTBookingInst = 1 or 2</i> →</p>	<p>1. Buyside sends new GT order with instruction to warehouse any part-filled quantity (i.e. <i>GTBookingInst</i> is 1 or 2). Should clarify that use of <i>GTBookingInst</i> implies warehouse instructions not required. Should add an example of 'normal' GT (i.e. no <i>GTBookingInst</i>), i.e. post trade instructions</p>
	<p>← Execution reports (new...partial fills) ←</p>	<p>2. Sellside accepts the order, then sends 1 or more partial fill execution reports.</p>
	<p>← Execution report (done for day) ←</p>	<p>3. Sellside sends a “done-for-the-day” (DFD) execution report when execution completes for the day.</p>
	<p>→ Allocation instruction for non-warehoused portion of the order <i>AllocTransType 'new'</i> <i>AllocType</i> either 'Buyside preliminary' (if without <i>MiscFees</i>) or 'Buyside calculated' (if with)</p> <p>← Allocation Instruction ACK (<i>AllocStatus 'received'</i>) ←</p> <p>← Allocation Instruction ACK (<i>AllocStatus 'processed'</i>) ←</p>	<p>4. (a) Buyside decides to book out a proportion of the part-filled order</p> <p>5. (a) Sellside acknowledges receipt of the allocation details.</p> <p>6. (a) Sellside processes and acknowledges allocation details. Confirmation messaging and processing will then take place for the order.</p>
	<p>→ Allocation instruction for buyside warehouse notification <i>AllocTransType 'new'</i> <i>AllocType 'warehouse'</i></p> <p>← Allocation Instruction ACK for warehouse instruction (<i>AllocStatus 'received'</i>) ←</p> <p>← Allocation Instruction ACK for warehouse instruction (<i>AllocStatus 'processed'</i>) ←</p>	<p>4. (b) Buyside warehouses the rest of the order.</p> <p>5. (b) Sellside acknowledges receipt of the warehouse allocation instruction.</p> <p>6. (b) Sellside processes and acknowledges allocation details.</p>
	<p>← Allocation report (<i>AllocReportType = 5</i>) ←</p>	<p>4. Sellside sends a warehouse recap allocation report.</p>
	<p>← Allocation report (<i>AllocReportType = 5</i>) ←</p>	<p>7. Sellside sends a warehouse recap allocation report.</p>

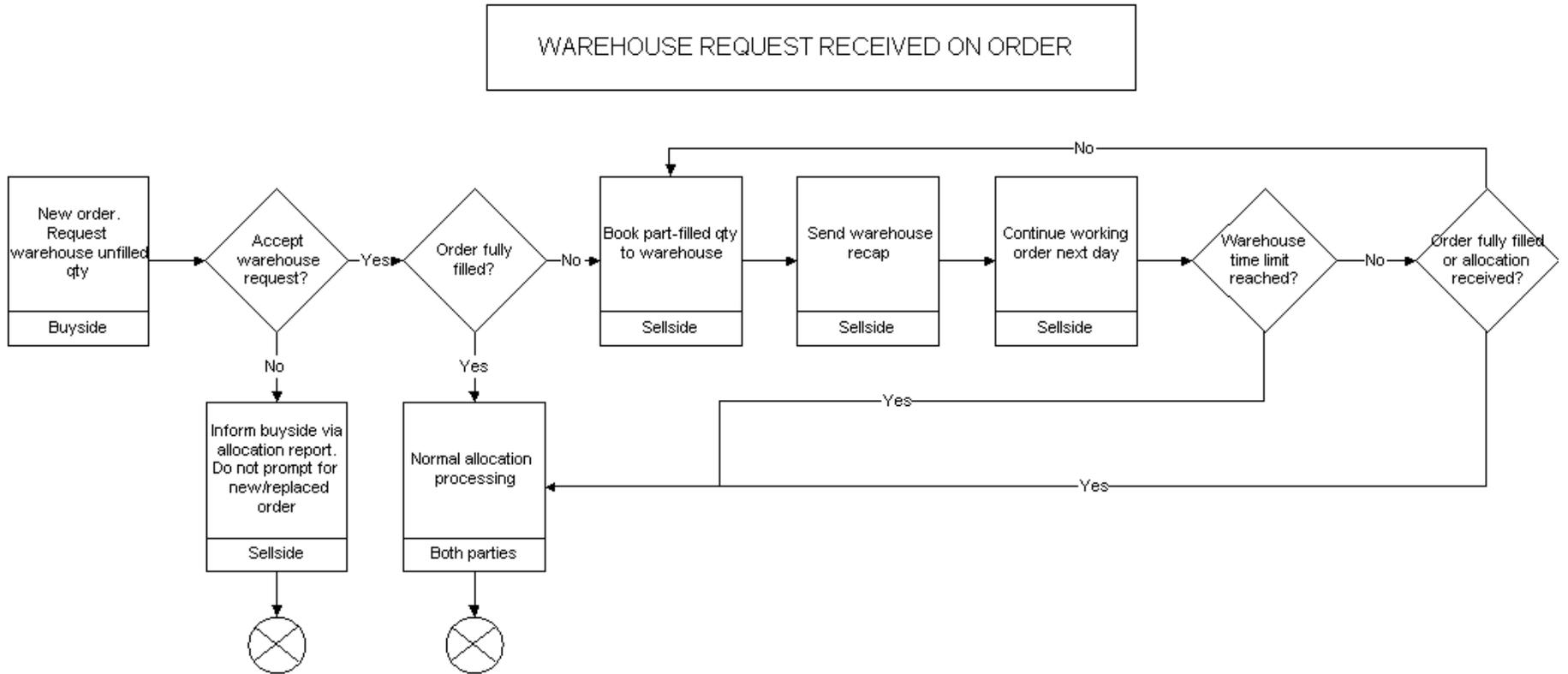
Subsequent days' flows are as in 'Warehouse till filled' scenario above.

Note the flow is similar when the **entire** order is warehoused – in this case, messages 4a, 5a and 6a are missing.

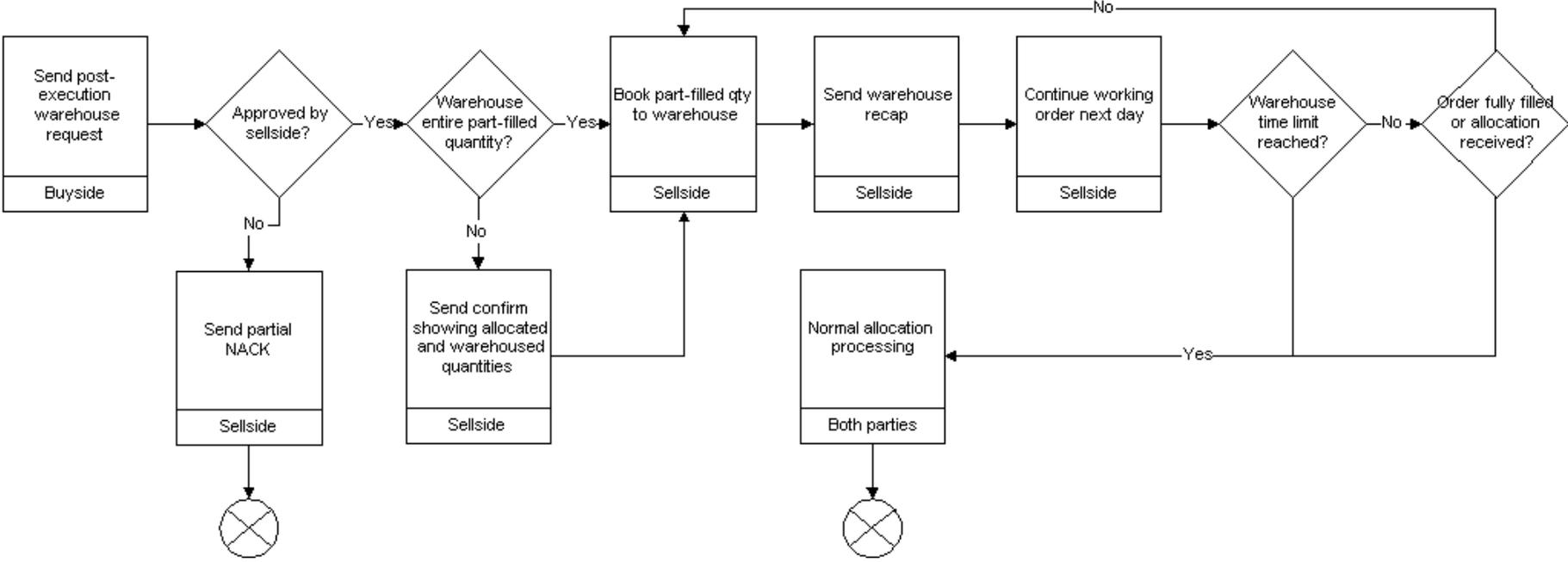
Day Order – Part- or Fully Warehoused

In this case, on day 1 of the order the buy-side decides to warehouse a trade after the DFD message has been sent by the sell-side. The entire part-filled quantity may be warehoused or a proportion may be allocated to client accounts. The flow is exactly the same as for GT orders as above, apart from the original new order not having any GTBookingInst or DayBookingInst.

Decision Flows



WAREHOUSE REQUEST RECEIVED POST-EXECUTION



PRODUCT: FIXED INCOME (FI)

Introduction

This section and the enhancements to the protocol has been the result of the joint effort between the BMA and FPL's Global Fixed Income Committee (formerly Fixed Income Working Group). This Appendix summarizes how FIX messages can be used to support FI trading activities – offerings, negotiated trade/bid or offer request, my bid/offer order, order initiation and execution, and allocation – for the following fixed income asset classes:

- US Treasury Bonds
- US Corporate Bonds
- Municipal Securities
- Agency Securities
- To-Be-Announced (TBA) Mortgage Backed Securities
- Euro Sovereign Bonds
- Euro Corporate Bonds
- US and European Commercial Paper
- Repurchase Agreements (Repos) and Related Securities Lending Activities

The usage models are described as between two counterparties, an Initiator and a Respondent – see the Glossary in Volume 1 for definitions of these roles.

Note that this documentation should be used as a starting point and serves merely to provide guidance in the reader's FIX for FI implementation.

Message Dialog

In FI the trading dialog typically starts in one of two ways: 1) one party sending out offerings to their clients and their clients responding to the offerings, or 2) an interested party initiating an inquiry or a bid/offer request. Once the dialog is initiated a trade could be consummated. The allocation of the trade could be conducted “pre-trade” or “post-trade” directly with the trading counterparty. Third party post-trade reporting using FIX messages is also illustrated.

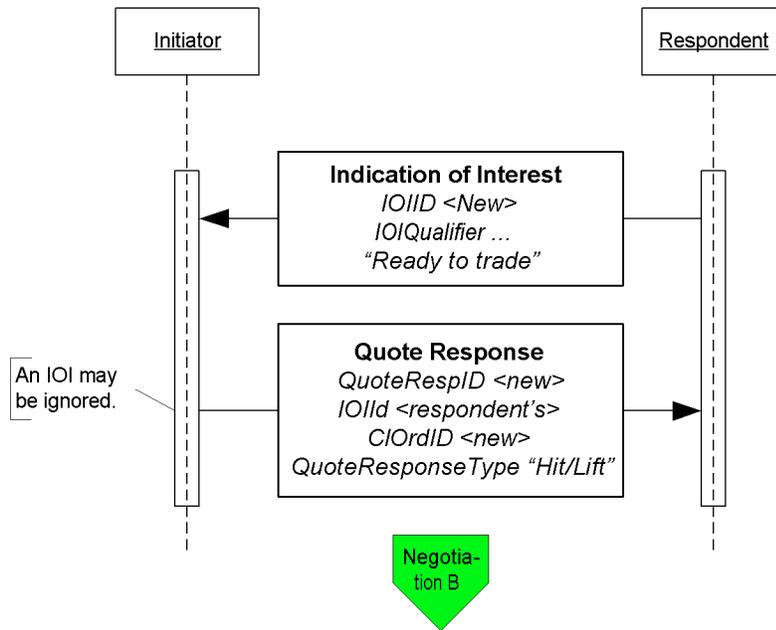
The diagrams below attempts to illustrate the various dialogs that can happen to facilitate an FI trade and the message flows to use depending on the initiation point of the dialog. Note that the diagrams will also show, via the green colored circles, the next step in the message dialog and do not show error conditions (i.e. one party receiving an unknown CUSIP) that can occur during the dialog.

Indication of Interest (Offerings)

Offerings are communicated using the Indication Of Interest (IOI) message type. The recipient of the offerings can elect to ignore the IOI messages or respond to specific IOI messages via the use the Quote Response message type.

Offerings can be sent by the Respondent to an Initiator on a continuous basis as long as the Initiator wants to receive them. The Initiator has the option to ignore the messages sent by not responding or to respond to an offering of interest by sending a Quote Response message back to the Respondent to either “hit” or “lift” the offering. Figure 1 below illustrates the message flow. The Respondent will pickup on the message dialog flow at “B” in the Negotiated Trade diagram (see next section).

Figure 1: Indication of Interest/Offerings



Click [here](#) to go to “B”

Negotiated Trade /Inquiry/Bid or Offer Request

A negotiated trade dialog can be initiated not only via the offerings or IOIs as indicated above, but also via a “my bid or offer”, an inquiry/bid or offer request, both using a Quote Request message type. The difference between a “my bid/offer” message and an inquiry/bid or offer request message is that in a “my bid/offer” the Initiator sends a Quote Request message with a “my bid/offer” price set for the security in question. The Respondent would respond with a Quote message. The rest of the dialog would follow the dialog described below and it is illustrated in the “My bid/offer” diagram below.

An inquiry, bid or offer request/wanted begins with a Quote Request from the Initiator. It is possible for the Respondent to send an unsolicited Quote message to their counterparty to initiate the negotiated trade dialog, however, this arrangement should be bilaterally agreed upon by the counterparties involved.

In the negotiation dialog, the Initiator would send a Quote Request message to the Respondent to inquire about a certain security, inquire for a list of securities that meet certain stipulations and parameters, request a bid or offer or request a quote on a certain security. Should the Respondent choose not to provide a quote a Quote Request Reject can be sent with the appropriate reject reason code set. At this point the current dialog would terminate. Alternatively the Respondent can respond to the Quote Request with a Quote message. The Quote message would provide the pricing levels for the securities requested by the Initiator.

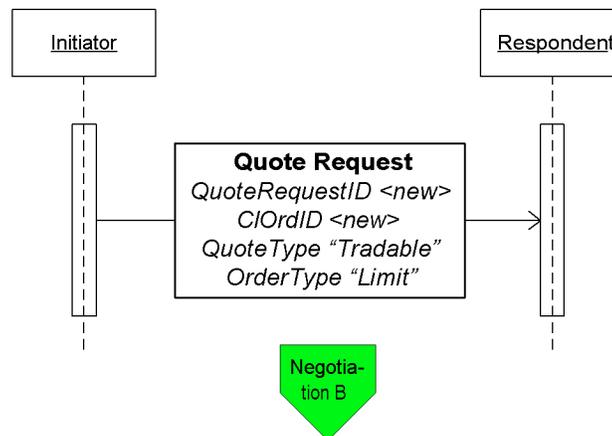
The Initiator will respond to the Quote from the Respondent via the use of the Quote Response message type. The Quote Response message type can be used to end the dialog, “hit/lift” the Quote, or counter the Quote. A “hit/lift” response from the Initiator indicates to the Respondent that the Initiator agrees with the price level and the quantity, and want to complete a trade. On the other hand, if the Initiator responded with a counter offer then the negotiation can continue until one party decides to terminate the dialog or a trade is completed.

To a “hit/lift” or counter message from the Initiator, the Respondent can respond with another “counter” message using the Quote message type, end the negotiation dialog with a Quote Status Report, or give the Initiator an Execution Report message indicating that the trade has been completed. This Execution Report message may or may not include calculations for information such as accrued interest, gross trade amount, etc.

Lastly, if the Initiator deems that there are discrepancies in the Execution Report message received from the Respondent, the Initiator may use the Don’t Know Trade (a.k.a. DK Trade) message type to “reject” the trade information. Resolving the error or discrepancies would be done manually and is currently out of scope for the suggested use of the protocol.

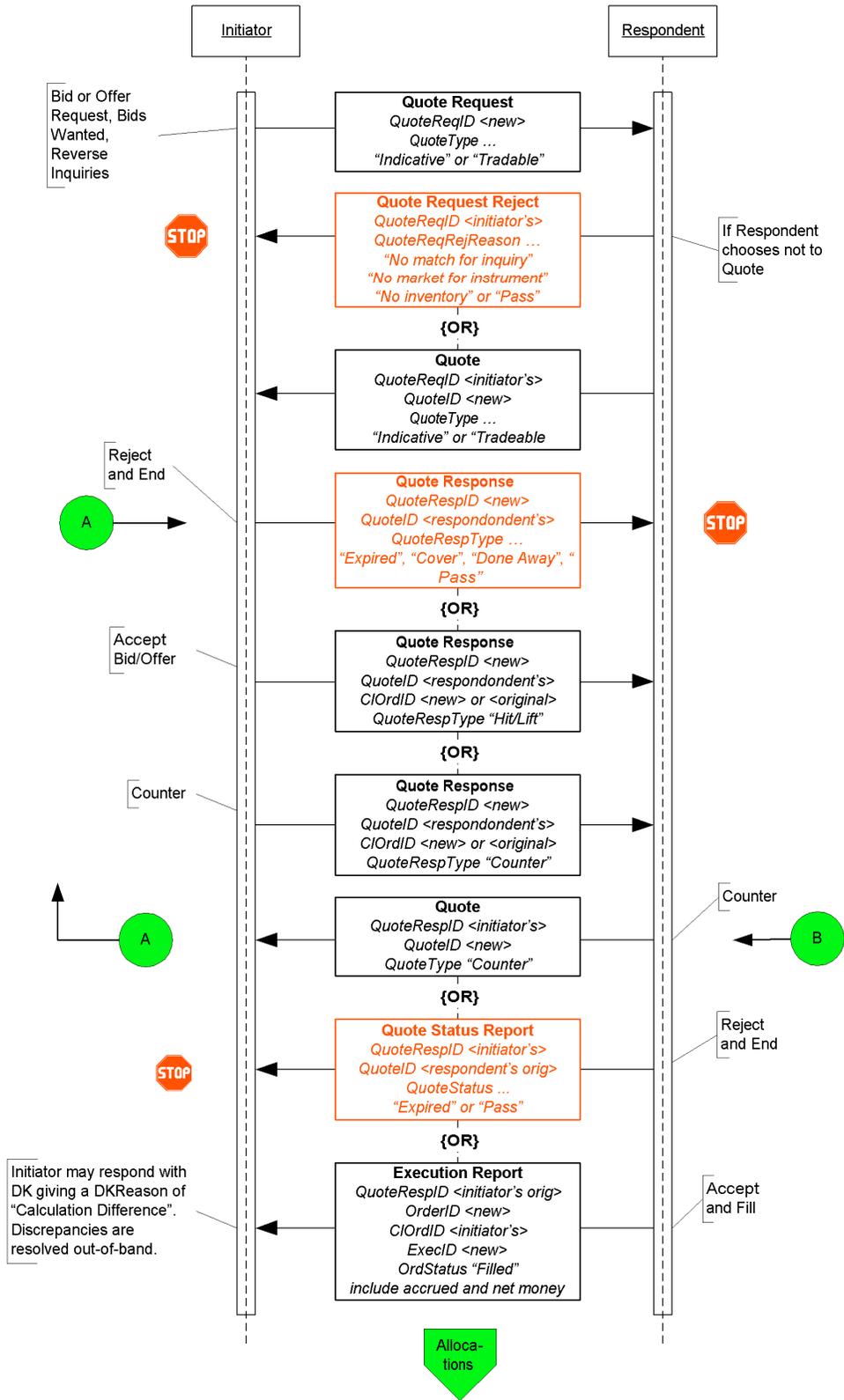
The diagram, Negotiated Trade, on the following page illustrates this flow with some additional details of what values within certain fields can be used.

Figure 2: My Bid/Offer



Click [here](#) to go to “B”

Figure 3: Negotiated Trade/Bid or Offer Request



Click [here](#) to go to "Allocations"

Out-of-Band Negotiated Order

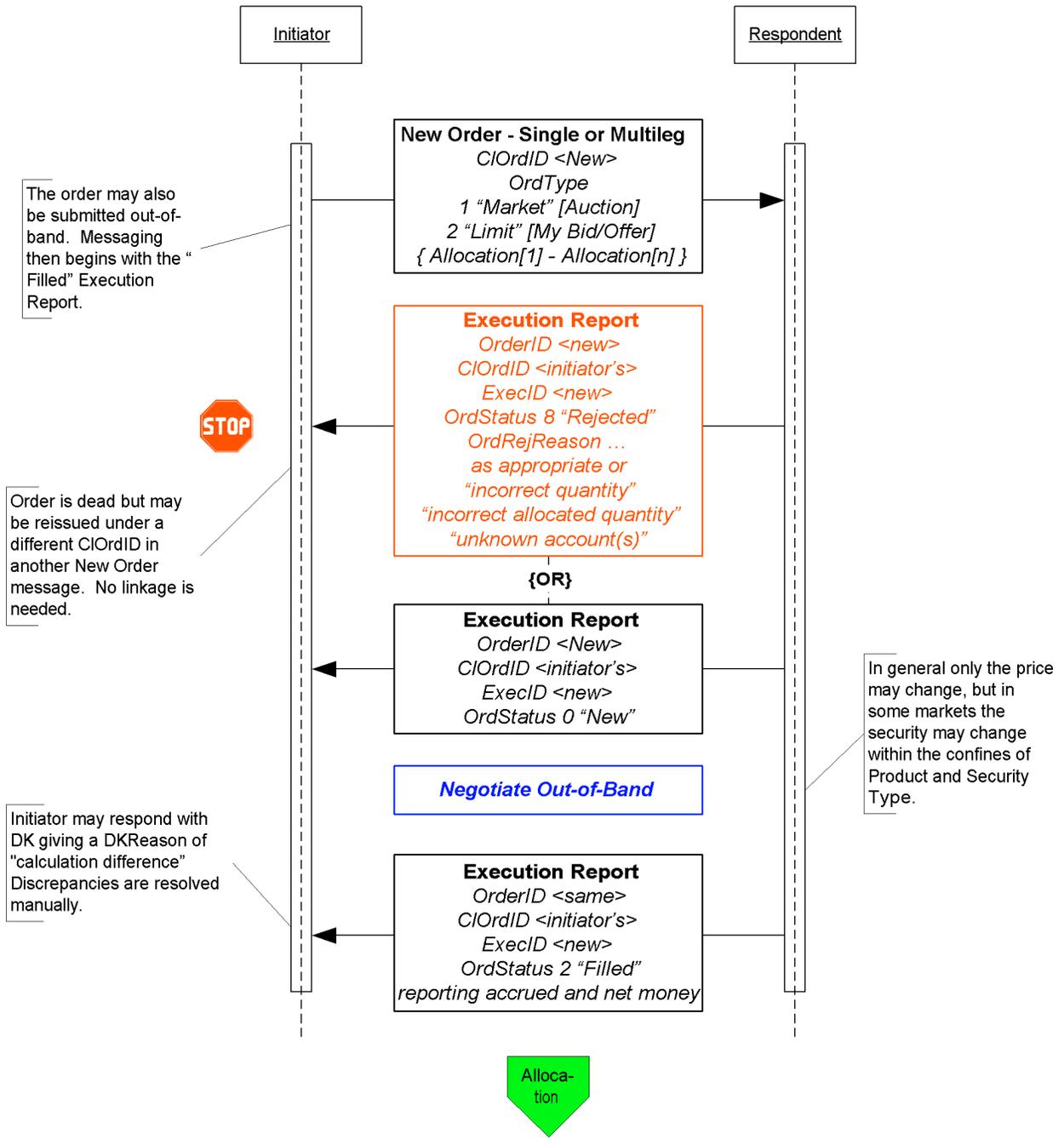
A trade that is negotiated “out-of-band” is a trade negotiated through other means such as verbally on the phone or via an alternate trading system platform. In this dialog it is assumed that the Respondent is able to send the completed trade information electronically using the FIX protocol. The initiation of the order placed by the Initiator could be through the New Order message type or through other means (i.e. verbally or via an alternate trading system platform) agreed upon between the counterparties.

When an order is placed by the Initiator using the New Order message type the Respondent could either accept the order or reject the order using the Execution Report message type. If the order is rejected the dialog ends. If the order is accepted the negotiation can begin out-of-band or “offline”. When the negotiation is completed and the terms of the trade are agreed upon the Respondent would send the Initiator an Execution Report message to confirm that the trade has been completed. The terms of the trade are reiterated in the Execution Report message.

In the event that the Initiator deems that there are discrepancies in the Execution Report message received from the Respondent, the Initiator may use the Don’t Know Trade (a.k.a. DK Trade) message type to “reject” the trade information. Resolving the error or discrepancies would be done manually and is currently out of scope for the suggested use of the protocol.

The diagram on the following page illustrates this dialog.

Figure 4: Out-of-Band Negotiated Trade



Click [here](#) to go to "Allocations"

Allocation Instructions

Allocation instructions can be communicated by the Initiator via three different options:

1. Pre-allocated Order – in this option the Initiator would communicate the allocation instructions within the New Order message when the order is placed with the Respondent.
2. Pre-trade allocation – in this option the Initiator would communicate the allocation instructions to the Respondent in a separate message using the Allocation message. The Allocation message is sent after the order is placed with the Respondent but *before the trade is completed by the Respondent*.
3. Post-trade allocation – in this option the Initiator would communicate the allocation instructions to the Respondent in a separate message using the Allocation message *after the trade has been completed by the Respondent*.

For the Initiator options 2 and 3 represents the same message flow. The main difference is when the Allocation message is sent – in option 2 it is sent prior to the trade being completed and in option 3 it is sent after the trade has been completed.

Once the trade is completed and the Respondent is ready to act on the allocation instructions, assuming no errors in the allocation instructions from the Initiator, the message flow for the Respondent is the same regardless of which option is used by the Initiator to communicate those allocation instructions.

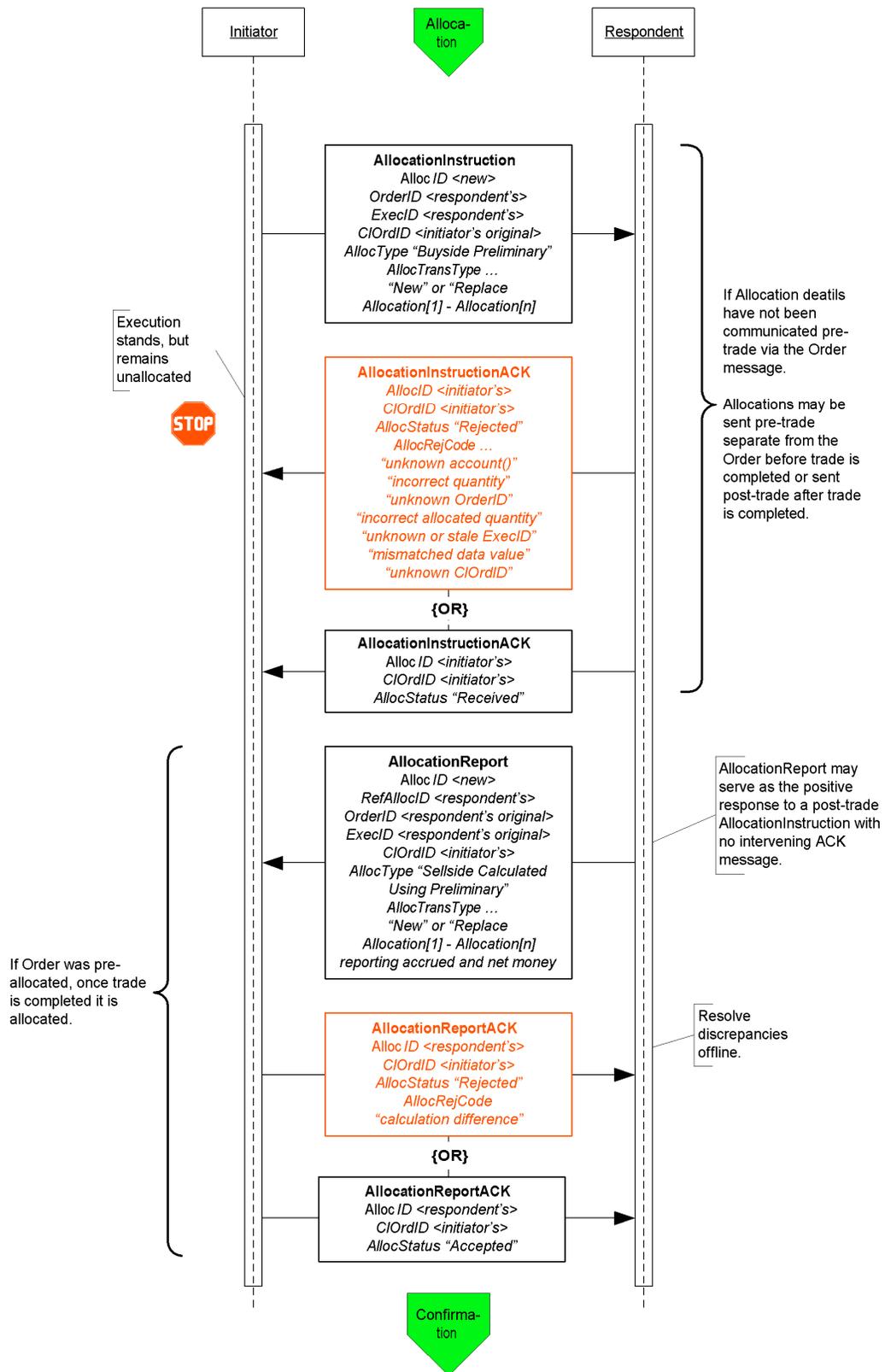
Note that these options work for Fixed Income because of FI's simple trading practices – there is no concept of “done for day”, one set of allocations is applied to a single order usually filled in a single execution.

In the Pre-allocated Order scenario the Initiator would send a New Order message that includes the allocation information needed by the Respondent to allocate the trade once the trade is completed. Note, however, that if even one account cannot be identified, or the quantity of one allocation instance does not meet minimum quantity/minimum increment rules for the instrument, or the sum of allocated quantities does not equal the block trade quantity, the **entire** request must be rejected. If erroneous allocations are sent via the New Order message, the entire New Order message is rejected using the Execution Report message with the appropriate reject code.

If the pre-allocated Order is accepted and filled, the Respondent communicates that information to the Initiator using the Execution Report message type, setting all the appropriate status values per standard protocol usage.

At this point in the message flow the Respondent would begin to allocate the trade according to the allocation instructions already provided in the New Order message and communicating that information back to the Respondent according to the message flow shown in Figure 5, starting with the AllocationReport.

Figure 5: Allocations



Click [here](#) to go to "Confirmation"

In the Pre-trade allocation scenario the Initiator would send the allocation instructions, after placing the order but before the Execution Report message indicated that the trade is completed, to the Respondent using the AllocationInstruction message type. On the other hand, in the Post-trade allocation scenario the Initiator would send the allocation instructions to the Respondent after receiving the Execution Report message indicated that the trade is completed – again using the AllocationInstruction message type.

Before accepting the request the Respondent should determine that all accounts are known, the quantity of each allocation instance meets minimum quantity/minimum increment rules for the instrument and the sum of allocated quantities equals the block trade quantity. If any error is found the Respondent must reject the entire AllocationInstruction using the AllocationInstructionAck message with the appropriate reject reason code. In this event, whether the trade that has been completed or is pending completion, the order is still a live order. A rejection of the AllocationInstruction message does not equate to a reject of the order placed in this case. The Initiator can send a new AllocationInstruction message with the correct instructions and information to the Respondent.

If the Respondent accepts the AllocationInstruction, the message flow would continue as shown in Figure 5 with the Respondent sending the AllocationReport message to communicate the sub-account level calculations for net monies and accrued interest if appropriate. At this stage the Initiator still has the option to reject the validated/calculated allocation message due to differences in calculations of net money, gross amounts, etc., for each of the allocated sub-accounts. Alternatively the Initiator can acknowledge back to the Respondent that the validated/calculated message is accepted. Both the Initiator's response is communicated via the use of the AllocationReportAck message type.

Figure 6: Confirmation and Affirmation

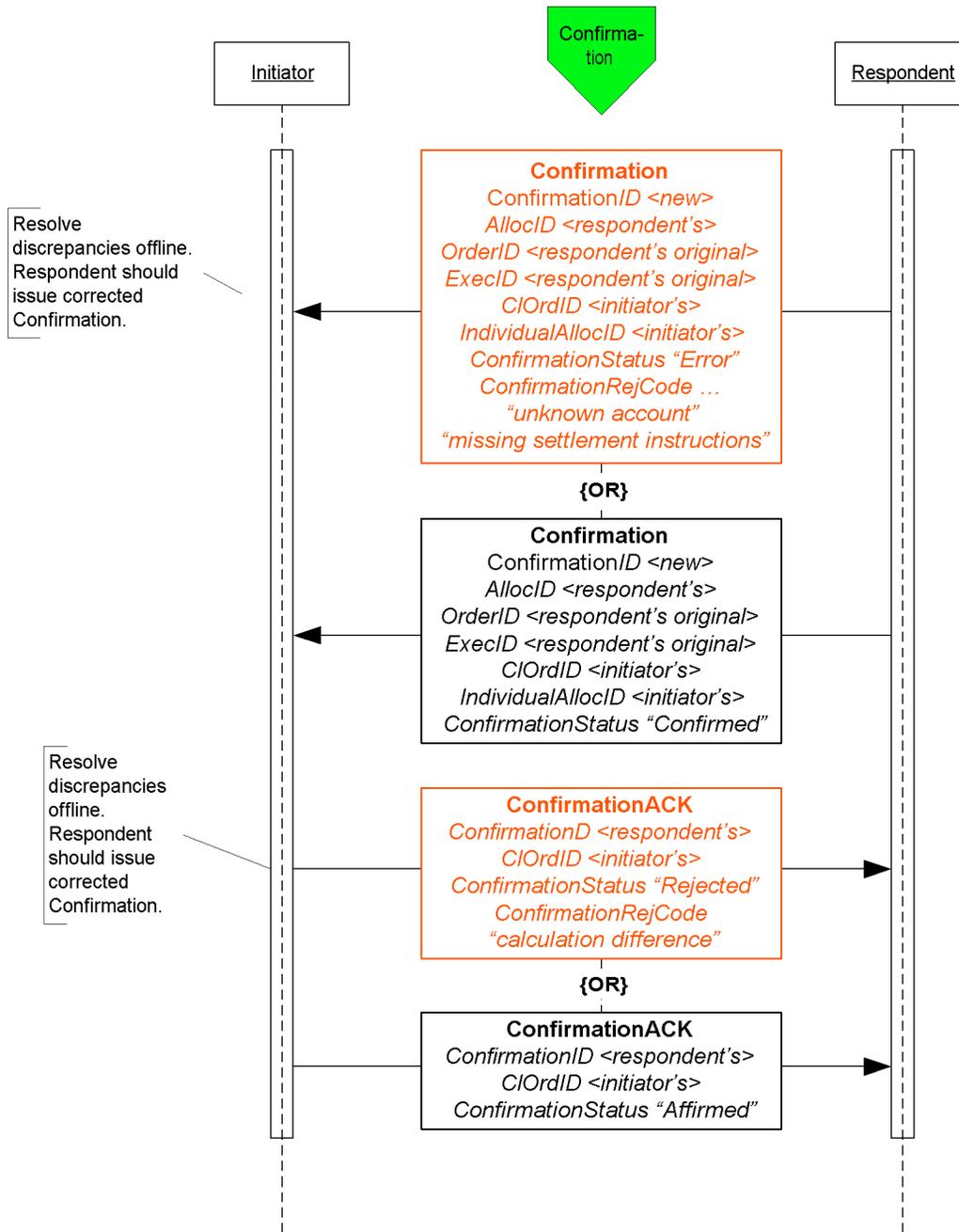


Figure 6 illustrates the message flow of the confirmation process for each of the allocated account instance (the sub-accounts in the AllocationInstruction message) the Respondent would use once the allocation calculations have been confirmed by the Initiator.

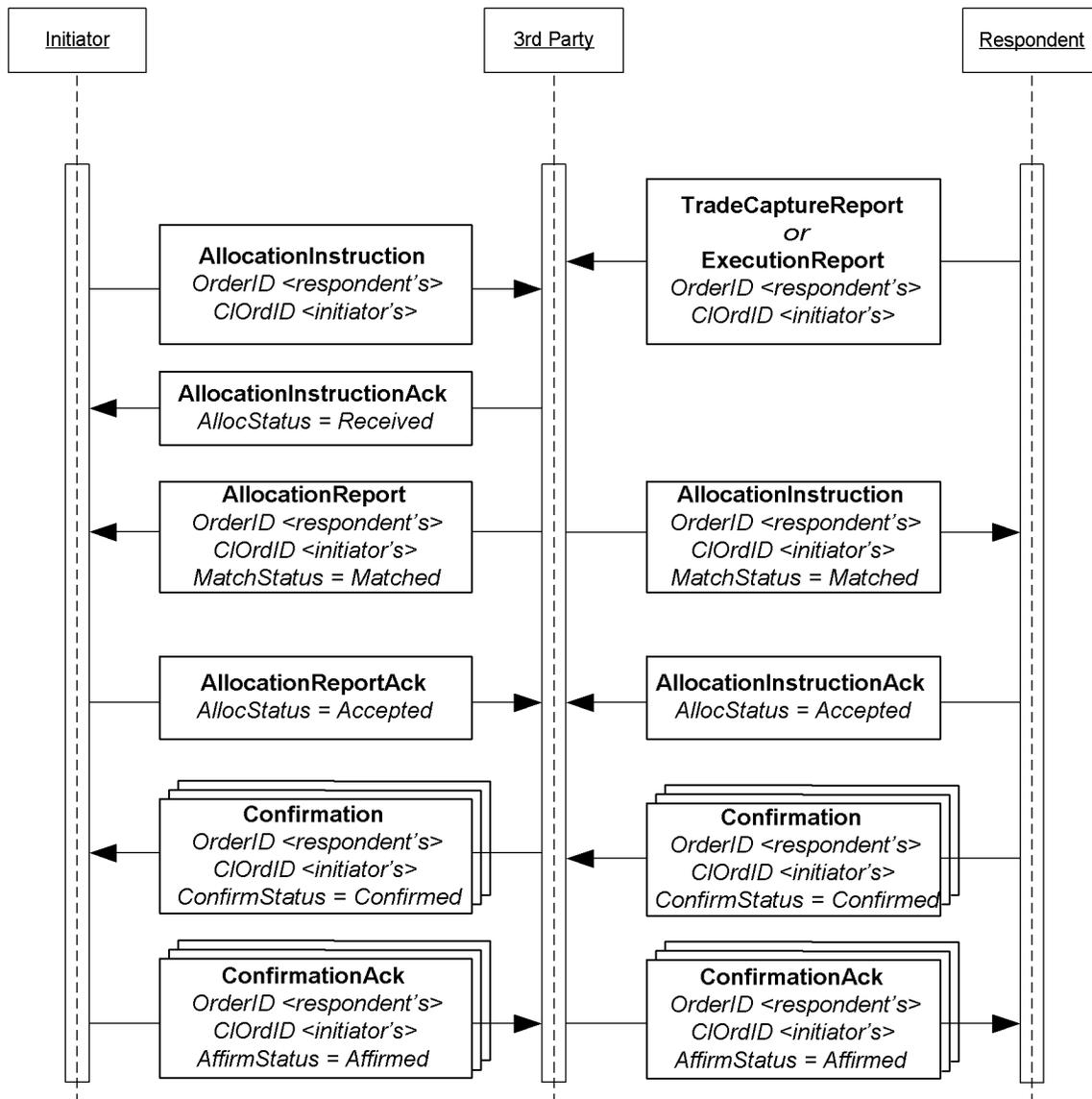
The Confirmation message is an optional message that the Respondent can use to report back, confirms or raise an exception of the booking/confirm status of each of the allocation instances in the trade. When the "confirmed" status is reported to the Initiator it indicates that that piece of the allocated trade is ready to settle. Each Confirmation message will report the details of a single "ticket", therefore the account names, fees, net money and settlement information are reported using fields designated for single account trades.

Once the “confirmed” is received from the Respondent the Initiator has the final say by sending the ConfirmationAck message with the “affirmed” status. However, should the Initiator disagree with the Respondent’s “confirm” the Initiator can send a reject using the ConfirmationAck message with a status of “rejected” and provide a reason for rejection.

Post Trade Reporting to a 3rd Party or Virtual Matching Utility

Figure 7 illustrates the messages needed by the Initiator and the Respondent to send trade notices to a 3rd party or VMU for trade matching.

Figure 7: Post Trade 3rd Party or VMU Trade Reporting



The Allocation Instruction message type is used by the Initiator to report one or more orders and block trades along with associated allocations to a 3rd party or VMU for trade matching.

The Respondent will use the Trade Capture Report, or an Execution Report depending on the 3rd party's requirements, message type to report trades to a 3rd party. This notice of execution will be for block level trades.

Message Usage Details

This section provides some details to the usage of specific fields within messages. These usage guidelines are a supplement to the usage already described in the main volumes of the specification. The usage guidelines discuss requirements for FI that are required by the baseline protocol or will make clarifications specific to FI usage.

General Usage Rules

1. PriceType field must be present when the following price fields are used in any message: Price, BidPx, OfferPx, MktBidPx, MktOfferPx, MidPx.
2. AvgPx field is **usually** expressed as “percent of par”. Where it is not, such as in certain Confirmation scenarios, AvgParPx and LastParPx have been added for communicating the percent-of-par price that will drive settlement calculated from the negotiated price.
3. LegPriceType must be present when LegBidPx or LegOfferPx is used in the NoLegs repeating block of any message that contains this repeating block.
4. In all trade and post-trade messages where price information is being communicated, a limit or execution price is **always** conveyed in Price or LastPx, respectively, with PriceType set appropriately. Depending on market convention for a particular asset class other fields may be used to supplement the quote or execution price such as YieldData component block and/or SpreadOrBenchmark component block. Yield and Spread should communicate only derived information, never the negotiated price.
5. All FIX messages identified for use in FI trading except New Order Single support both single instrument trades “outrights” and trades of two instruments – one to be sold and the other to be bought as a replacement. In the US the latter are often called “swaps”, in other regions they are “switches”, and two-instrument trades involving the sale and purchase of futures contracts with different contract settlement months are called “rolls”. The NoLegs repeating block is used to identify and link the two sides of the trade. LegSwapType can be used instead of LegQty on one side of the trade to instruct the Respondent to calculate the LegQty based on the opposite leg’s quantity. To submit a new order for a swap or roll use New Order Multileg instead of New Order Single.
6. LastPxPar conditionally required in the Execution Report, Allocation, and TradeCaptureReport messages when LastPx is expressed with a PriceType other than “percent of par” (i.e. when LastPx is expressed as “discount” or “yield” PriceType then LastPxPar must be used to express the price in “percent of par” equivalent.)
7. When SettlType is not “regular” then SettlType must to be specified. SettlType “future” requires a value for SettlDate.

Indication Of Interest

An IOI must specify price information by using either one of the set of price information fields (see General Usage Rules section)

Either the IOIQty or the NoLegs repeating block is required.. If the NoLegs repeating block is used, put “0” (zero) in the IOIQty field. IOIQty is required and used for offerings of single instruments. The NoLegs repeating block is used for multilegs (swaps/switches/rolls). In FI’s use there would only be two legs – a buy leg and a sell leg.

ValidUntilTime is where the IOI sender can specify the “firm time” of the offering.

Quote Request

In this message the Initiator can specify what form the quote should be in by using the QuotePriceType field.

The ClOrdID field has been added to this message allowing the Initiator to assign a ClOrdID when requesting for quotes that are of QuoteType “Tradable” and OrdType of “Limit”.

To submit a “my bid/offer” quote request the Initiator will need to specify QuoteType of “Tradable” and OrdType of “Limit”. Pricing information must be specified using either one of the set of price information fields (see General Usage Rules section)

ValidUntilTime – used by the Initiator to indicate the period of time the resulting Quote must be valid for

ExpireTime – used by the Initiator to indicate the period of time when this quote request expires

OrderQtyData component block – required when QuoteType is “Tradeable”

Quote Response

Initiator will use the QuoteRespType field to indicate what type of response this is, i.e. “hit/lift”, “counter”, etc.

IOIid is required if the Quote Response is used to respond to an IOI (offering) message, the field would contain the ID of the IOI message.

Fields required when QuoteRespType is “hit/lift” or “counter quote”: OrderQtyData component block, Side, ValidUntilTime, ClOrdID (see paragraph below), and either one of the set of price information fields (see General Usage Rules section).

In the initial use of the “hit/lift” QuoteRespType, the Initiator is required to assign a ClOrdID. This ClOrdID will be reused throughout the negotiation process, including in the “counter”, until the negotiation ends in either a fill or the negotiation dialog is terminated by either party.

In a “counter quote” to a Quote, only a limited set of data elements can change depending on the security type. Price can be expected to change, but also Instrument being quoted can change in some markets as well as Stipulations and ClearingCode within the Parties component block.

In a “counter quote” with a “my price” set, OrdType must be “Limit” and either one of the set of price information fields (see General Usage Rules section).

Quote

Fields required when QuoteType is “counter” or “Tradeable”: OrderQtyData component block, Side, ValidUntilTime, and either one of the set of price information fields (see General Usage Rules section).

New Order - Single

For OrdType only the following enumeration are applicable: 1 (market), 2 (limit), D (previously quoted), E (previously indicated).

For OrdType of “limit” either one of the set of price information fields (see General Usage Rules section) is required.

TradeDate is required and is set by the Initiator.

HandlInst is required by the protocol but is not a required field for FI. However, for the purposes of being compliant to the protocol the counterparties should bilaterally agree on the value to use.

New Order - Multileg

TradeOriginationDate is used for municipal new issue market. Specifies the date in which agreement in principal between counterparties, prior to actual TradeDate.

TradeDate is required and is specified by Initiator.

For the Multileg Order, if the following fields are not applicable to all legs of the trade then the NestedParties component block associated with each leg within the NoLegs repeating block will be used: Account, AccountType, NoAllocs repeating block, SettlType, and SettlDate.

Execution Report

This message should always use SettlType “future” with a value for SettlDate.

Stipulations component block information must be reiterated and echo back by the Respondent if Initiator had provided information in the Stipulations component block.

For multilegs only use the NoLegs blocks of the Execution Report message for swaps/switches/rolls when OrdStatus is “new”. The partial fill or fill (OrdStatus) Execution Report for each of the legs will be reported separated and execution price for each leg is conveyed in LastPx, AvgPx and LastPxPar, if applicable.

The following fields are required when OrdStatus is “partial”, “filled” or “calculated”: PriceType, Price

The following fields are required when ExecType is “trade” or “trade correct”: LastQty, LastPx, AvgPx, LastPxPar (when conditionally applicable)

The following fields are required when OrdStatus is “filled” or “calculated” AND if NumDaysInterest is populated and not zero: AccruedInterestRate, AccruedInterestAmt

GrossTradeAmt and NetMoney is required when OrdStatus is “filled” or “calculated”.

NumDaysInterest is required where applicable based on security type and when OrdStatus is “filled” or “calculated”.

InterestAtMaturity is required in lieu of AccruedInterestAmt for security types that pay lump-sum at maturity.

Allocation Instruction

PreviouslyReported, ReversalIndicator and MatchType is conditionally required when Initiator is sending the Allocation Instruction message to a 3rd party or VMU.

This message should always use SettlType “future” with a value for SettlDate.

GrossTradeAmt – Initiators are required to send this information when sending Allocation post-trade.

For Financing Trades Use QtyType and ContractMultiplier if necessary to identify how quantities are to be expressed and specify in OrderQty the block cash amount to be allocated and in AllocQty the cash amount to be assigned to each fund.

Allocation Report

Respondents are required to send this information when reporting the Allocation back with calculations.

NetMoney is required from Respondents when reporting the Allocation back with calculations.

NumDaysInterest, AccruedInterestAmt and AccruedInterestRate is required from Respondents when reporting the Allocation back with calculations for security types where this information can be derived or is available.

InterestAtMaturity is required in lieu of AccruedInterestAmt for security types that pay lump-sum at maturity.

AllocNetMoney is required from Respondents when reporting the Allocation back with calculations.

AllocAccruedInterestAmt is required, if the value is not zero, from Respondents when reporting the Allocation back with calculations. AllocAccruedInterestAmt should be calculated and rounded appropriately for each allocation instance. This means that the sum of AllocAccruedInterestAmt will not always match AccruedInterestAmt.

AllocInterestAtMaturity is required, if value is not zero, from Respondents when reporting the Allocation back with calculations. AllocInterestAtMaturity is required in lieu of AllocAccruedInterestAmt for security types that pay lump-sum at maturity. Similar to AccruedInterestAmt, the sum of AllocInterestAtMaturity will not always match InterestAtMaturity.

For Financing Trades use the same quantity rules as given for the Allocation Instruction above.

Trade Capture Report

This message should always use SettlType “future” with a value for SettlDate.

Parties component block is required.

GrossTradeAmt and NetMoney are required.

NumDaysInterest is required where information is applicable.

AccruedInterestRate is required if NumDaysInterest is used and is not zero.

AccruedInterestAmt is required is required for security types that trade with accrued interest.

InterestAtMaturity is required in lieu of AccruedInterestAmt for security types that pay lump-sum at maturity.

Instrument component block

Symbol – use “[N/A]” when there are no applicable symbol. For corporate bonds the symbol or ticker for the company issuing the security can be used in this field.

SecurityID and SecurityIDSource are both required.

SecurityType is required

Factor is conditionally required when it is not equal to one (1) for MBA, TIPS, ABS.

OrderQtyData component block

OrderQty is to be expressed as par amount.

Repurchase Agreements (Repo) and Collateral Management

Specifying rates Repo Terminology

The following table maps Repurchase Agreements and Security Lending terminology to FIX data elements with additional usage explanation specific to repos and security lending.

In repurchase agreements(repo) and financial deals the rate is to be specified in the Price and PriceType fields. The rate type of fixed or floating interest rate is mapped to PriceType values of Yield for fixed rate and Spread for floating rate. A benchmark should also be specified when the rate is a floating rate.

<u>Element</u>	<u>Description</u>	<u>FIX fields</u>	<u>Usage</u>
<u>Accrued interest</u>	<u>Start accrued interest calculated using the day count method appropriate to the underlying security</u>	<u>AccruedInterestAmt</u>	
<u>Allocating entity</u>	<u>The party responsible for assigning specific securities and amounts to the trade</u>	<u><Parties></u>	<u>PartyRole</u> <u>39 = Allocating Entity</u>
<u>Call or put dates</u>	<u>Dates on which the seller or buyer may liquidate the position</u>	<u><Instrument></u> <u>NoEvents (group)</u> <u>Event Type</u> <u>EventDate</u> <u>EventPx</u> <u>EventText</u>	
<u>Cash amount</u>	<u>Amount of currency</u>	<u>StartCash</u>	
<u>Cash outstanding</u>	<u>The current balance of the cash debt</u>	<u>CashOutstanding</u>	
<u>Clean price</u>	<u>Spot price of the security without accrued interest</u>	<u><UnderlyingInstrument></u> <u>UnderlyingPx</u>	
<u>Collateral assignment reason</u>	<u>The reason for an initial assignment or subsequent substitution of collateral for a financing deal</u>	<u>CollAsgnReason</u> <u>0 = Initial</u> <u>1 = Scheduled</u> <u>2 = Time Warning</u>	

<u>Element</u>	<u>Description</u>	<u>FIX fields</u>	<u>Usage</u>
		<u>3 = Margin Deficiency</u> <u>4 = Margin Excess</u> <u>5 = Forward Collateral Demand</u> <u>6 = Event of default</u> <u>7 = Adverse tax event</u>	
<u>Collateral value</u>	<u>Repo value times the inverse of haircut, also known as the "all in" price</u>	<u>TotalNetValue</u>	<u>At the initial collateral assignment TotalNetValue is the sum of (UnderlyingStartValue * (1-haircut)).</u> <u>In a collateral substitution TotalNetValue is the sum of (UnderlyingCurrentValue * (1-haircut)).</u>
<u>Contract currency</u>	<u>The base agreement currency, not necessarily the same as the payment currency</u>	<u><FinancingDetails></u> <u>AgreementCurrency</u>	
<u>Currency of payments</u>	<u>Currency in which payments are to be made</u>	<u>Currency</u>	
<u>Day count</u>	<u>Method for calculating accrued interest – 30/360, actual/360, actual/actual, actual/365, 30/365.</u>		<u>Not supported directly in the protocol – understood in the context of the underlying security type and master agreement</u>
<u>Delivery</u>	<u>Delivery or custody of underlying securities</u>	<u><FinancingDetails></u> <u>DeliveryType</u>	<u>DeliveryType</u> <u>0 = "Versus. Payment": Deliver (if Sell) or Receive (if Buy) vs. (Against) Payment</u> <u>1 = "Free": Deliver (if Sell) or Receive (if Buy) Free</u> <u>2 = Tri-Party</u> <u>3 = Hold In Custody</u>
<u>Dirty price</u>	<u>Spot price of the security including accrued interest</u>	<u><UnderlyingInstrument></u> <u>UnderlyingDirtyPrice</u>	
<u>End consideration</u>	<u>Total cash returned at the end of the term</u>	<u>EndCash</u>	
<u>End date</u>	<u>Close date, date of the return of the securities for monay, "off" date</u>	<u><FinancingDetails></u> <u>EndDate</u>	
<u>Face or cash fill</u>	<u>In collateral assignment and substitution dictates whether the quantity of the replacement security is to be based on par-for-par (face) or value-for-value (cash).</u>	<u><Stipulations></u>	<u>StipulationType=FILL</u> <u>StipulationValue=<face or cash></u>
<u>Flex schedule</u>	<u>Single maturity but moneygiver's cash may be returned most often on a predetermined paydown schedule</u>	<u><FinancingDetails></u> <u>TerminationType</u> <u><Stipulations></u>	<u>StipulationType=PAYFREQ</u> <u>StipulationValue= <dates></u>

<u>Element</u>	<u>Description</u>	<u>FIX fields</u>	<u>Usage</u>
<u>Forward accrued interest</u>	<u>End accrued interest calculated using the day count method appropriate to the underlying security</u>	<u>EndAccruedInterestAmt</u>	
<u>Forward price</u>	<u>Price agreed to on the end leg of the transaction – will vary for indexed bonds</u>	<u>Price2</u>	<u>Denominated in the same type as Price</u>
<u>Frequency of substitutions</u>	<u>Maximum frequency – monthly, semi-annually, annually</u>	<u><Stipulations></u>	<u>StipulationType=SUBSFREQ</u> <u>StipulationValue=<frequency>, e.g. M</u>
<u>General collateral</u>	<u>Securities collateralizing a repurchase agreement described generally (treasuries, corporates) rather than specifically by identifier.</u>	<u><Instrument></u> <u><UnderlyingInstrument></u> <u>UnderlyingSecurityType</u> <u>TREASURY</u> <u>PROVINCE</u> <u>AGENCY</u> <u>MORTGAGE</u> <u>CP</u> <u>CORP</u> <u>EQUITIES</u> <u>SUPRA</u> <u>CASH</u>	<u>Product=FINANCING</u> <u>SecurityType=REPO</u> <u>SecuritySubType=GENERAL</u> <u>UnderlyingSecurityType=TREASURY</u> <i><u>If bonds of a particular issuer or country are wanted and UnderlyingSecurityType is not granular enough, include UnderlyingIssuer, UnderlyingCountryOfIssue, UnderlyingProgram, UnderlyingRegType, and/or <UnderlyingStipulations></u></i> <u>Examples:</u> <u>SecurityType=REPO</u> <u>UnderlyingSecurityType=MORTGAGE</u> <u>UnderlyingIssuer=GNMA</u> <u>SecurityType=REPO</u> <u>UnderlyingSecurityType=AGENCY</u> <u>UnderlyingIssuer=CA Housing Trust</u> <u>UnderlyingCountryOfIssue=CA</u> <u>SecurityType=REPO</u> <u>UnderlyingSecurityType=CORP</u> <u>UnderlyingNoStipulations=1</u> <u>UnderlyingStipulationType=RATING</u> <u>UnderlyingStipulationValue=>bbb-</u>
<u>Haircut</u>	<u>Reduction in market value taken on assigned securities in calculating their collateral value – based on market volatility and credit.</u>	<u><UnderlyingStipulations></u>	<u>UnderlyingStipType=HAIRCUT</u> <u>UnderlyingStipValue=<percent></u>
<u>Largest piece</u>	<u>Maximum size of securities acceptable in the transaction</u>	<u><Stipulations></u>	<u>StipulationType=MAXDNOM</u> <u>StipulationValue=<size></u>

<u>Element</u>	<u>Description</u>	<u>FIX fields</u>	<u>Usage</u>
<u>Lookback days</u>	<u>Number of business days prior to floating rate reset date when the benchmark price will be captured and used to determine the new rate upon reset</u>	<u><Stipulations></u>	<u>StipulationType=LOOKBACK</u> <u>StipulationValue=<number of days></u>
<u>Margin</u>	<u>The fraction of the cash consideration that must be collateralized, expressed as a percent. A MarginRatio of 102% indicates that the value of the collateral (after deducting for "haircut") must exceed the cash consideration by 2%.</u>	<u><FinancingDetails></u> <u>MarginRatio</u>	
<u>Margin excess</u>	<u>The amount by which the total net value of collateral times margin ratio exceeds cash outstanding</u>	<u>MarginExcess</u>	
<u>Market value</u>	<u>Dirty price times nominal amount</u>	<u>not supported directly – see Repo value</u>	
<u>Master agreement</u>	<u>The name of the standard master agreement forming the basis of the financing relationship</u>	<u><FinancingDetails></u> <u>AgreementDesc</u> <u>AgreementID</u> <u>AgreementDate</u>	

Current list of master agreements, amendments and annexes:

MRA 1996 Repurchase Agreement

MRA 1996 Repurchase Agreement – Annex I 1997 (for FASB 125 compliance)

MRA 1996 Repurchase Agreement – Amended 1997 for FASB 125

MRA 1996 International Transaction (Annex III)

MRA 1996 Agency Transaction (Annex IV)

MRA 1996 Forward Transaction (Annex V)

MRA 1996 Buy/Sell Back Transaction (Annex VI)

MRA 1996 Equity Securities Transaction (Annex VIII, Feb 1998)

MRA 1996 Japanese Financial Institutions Transaction (Annex IX, Aug 2002)

MRA 1987 Repurchase Agreement

MRA 1987 Repurchase Agreement – Amended 1997 for FASB 125

GMRA 2000 Repurchase Agreement

GMRA 2000 Agency Transaction

GMRA 2000 Bills Transaction (U.K.)

GMRA 2000 Forward Transaction

<u>Element</u>	<u>Description</u>	<u>FIX fields</u>	<u>Usage</u>
		GMRA 2000 Buy/Sell Back Transaction GMRA 2000 Equities Transaction GMRA 2000 Canadian Transaction GMRA 2000 Italian Transaction GMRA 2000 Japanese Transaction GMRA 2000 Netherlands Transaction GMRA 1995 Repurchase Agreement GMRA 1995 Buy/Sell Back Transaction GMRA 1995 Agency Transaction GMRA 1995 Repurchase Agreement – Amended for GMRA 2000 Conformance GMRA 1995 Buy/Sell Back Transaction – Amended for GMRA 2000 Conformance GMRA 1995 Agency Transaction – Amended for GMRA 2000 Conformance GMRA 1995 Forward Transaction (as enabled by Amendment for GMRA 2000 conformance) GMRA 1992 Repurchase Agreement MSLA 2000 Securities Loan MSLA 2000 Agency Transaction (Annex I) MSLA 2000 Term Loan MSLA 1993 Securities Loan MSLA 1993 Agency Transaction MSLA 1993 Securities Loan – Amended 1998	
Maturity type – fixed or open	Open (term is indefinite and may be terminated by either party on demand) or Fixed (pre-determined, may be overnight or from one day to five years). Termination prior to maturity is open to negotiation.	<FinancingDetails> TerminationType 1 = Overnight 2 = Term 3 = Flexible 4 = Open	
Maximum pieces	Maximum number of pieces acceptable in the transaction	<Stipulations>	StipulationType=PMAX StipulationValue=<count>
Minimum pieces	Minimum number of pieces acceptable in the transaction	<Stipulations>	StipulationType=PMIN StipulationValue=<count>
Number of substitutions	Number of substitutions permitted	<Stipulations>	StipulationType=MAXSUBS StipulationValue=<count>
Other dynamic stipulations		<Stipulations>	StipulationType=TEXT StipulationValue=<text>
Par quantity	Face or nominal value of securities	<UnderlyingInstrument> UnderlyingQty	

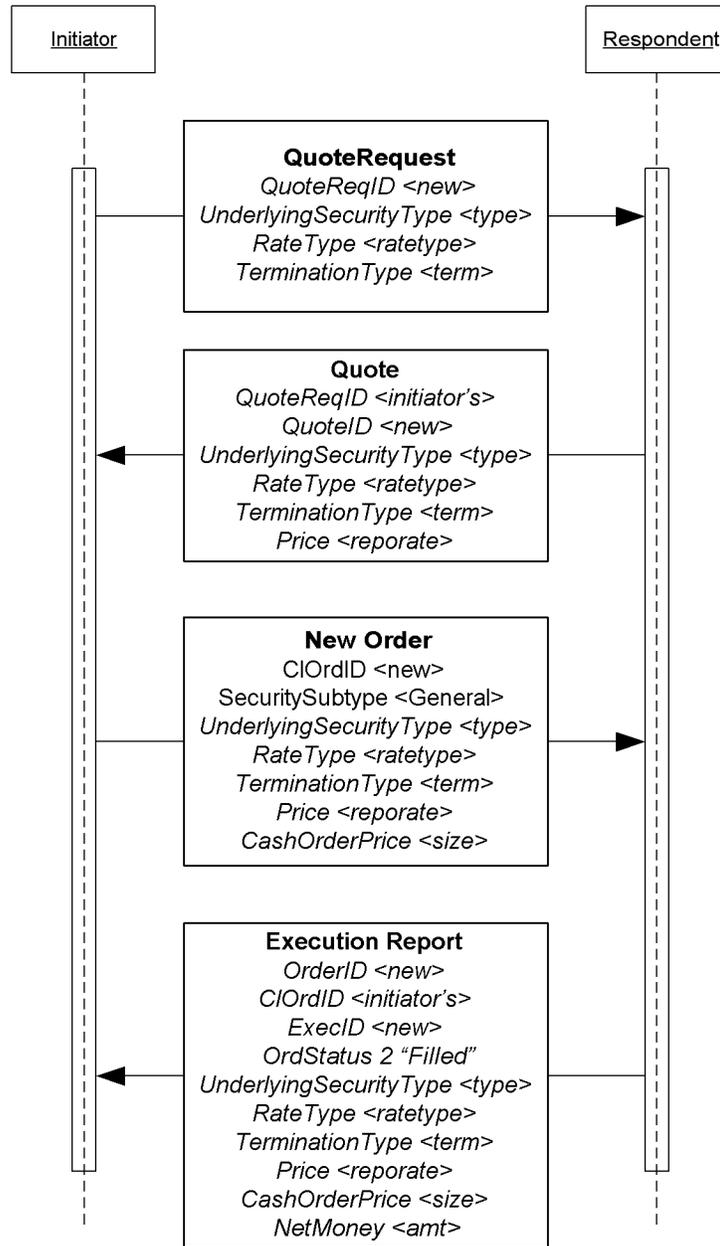
Element	Description	FIX fields	Usage
Payment calendar	Schedule of dates based on frequency of interest payments	<Stipulations>	StipulationType=PAYFREQ StipulationValue=<dates>
Payment interval	Payment interval, i.e. 3 months, 6 months, etc.	<Stipulations>	StipulationType=PAYFREQ StipulationValue=<interval> e.g. 3M
Percent of variance	Maximum variance allowable in the value of replacement securities	<Stipulations>	StipulationType=TRDVAR StipulationValue=<count>
Rate reset calendar	Schedule of dates based on frequency	<Stipulations>	StipulationType=PRICEFREQ StipulationValue=<dates>
Rate reset interval	Reset interval, i.e. 3 months, 6 months, etc.	<Stipulations>	StipulationType=PRICEFREQ StipulationValue=<frequency> e.g. 6M
Rate type	How the yield paid on the cash investment is to be calculated	PriceType 9 [yield = Fixed Rate] 6 [spread = Floating Rate] <BenchmarkCurveData>	
Repo rate	The fixed yield or yield spread paid on the cash investment	Price	expressed in yield or spread to benchmark
Repo value	Market value rounded using the appropriate market practice convention of the security in the repo market.	<UnderlyingInstrument> UnderlyingStartValue UnderlyingCurrentValue UnderlyingEndValue	These fields are the repo value (rounded market value) of each piece of collateral at the start, current and end of the deal. Haircut is not factored in these values. The respondent is free to populate these fields as needed based on the purpose of the current message, but we recommend UnderlyingStartValue on initial assignment and UnderlyingCurrentValue on substitution since TotalNetValue is conditionalized on these actions.
Securities lending fee	Used in lieu of interest rate of Fee-based transactions	MiscFeeType MiscFeeAmt	MiscFeeType 13 = Securities Lending
Security rating range	Minimum acceptable rating on any securities involved in the transaction	<Stipulations>	StipulationType=RATING StipulationValue=<source / range>
Smallest piece	Minimum size of securities acceptable in the transaction	<Stipulations>	StipulationType=MINDNOM StipulationValue=<size>
Spot price	Price for the start leg of the transaction	Price PriceType 1 = Percentage 2 = Per unit 3 = Fixed amount	
Start consideration	Total cash remitted at the beginning of the term	StartCash	
Start date	Settlement date for "on" date or "start leg"	<FinancingDetails> StartDate	

Element	Description	FIX fields	Usage
<u>Trade date</u>	<u>Date of trade agreement</u>	<u>TradeDate</u>	
<u>Type of financing deal</u>	<u>Attributes of the financing arrangement – Repo, Reverse Repo, Sell/Buy, Buy/Sell, Fee-based Loan, Fee-based Borrow, Loan vs. Cash, Borrow vs. Cash, Fee-based Loan vs. Cash, Fee-based Borrow vs. Cash, Master Forward Sell/Buy, Master Forward Buy/Sell, Sec Lend, Sec Borrow, Borrow Pledge</u> <u>Often combined with Overnight, Term, Flexible, Open</u>	<u><Instrument></u> <u>SecurityType</u> <u>REPO – repurchase agreement</u> <u>FORWARD – forward</u> <u>BUYSELL – buy/sellback or sell/buyback</u> <u>SECLOAN – securities loan</u> <u>SECPLEDGE – securities pledge</u> <u>Side</u> <u><FinancingDetails></u> <u>TerminationType</u> <u>StartDate</u> <u>EndDate</u> <u><UnderlyingInstrument></u>	<u>Product=FINANCING</u> <u>SecurityType=REPO</u> <u>SecuritySubType=GENERAL</u> <u>Side=<buy, sell, lend, borrow></u> <u>TerminationType=<type></u> <u>StartDate=<start></u> <u>EndDate=<end></u> <u>UnderlyingSecurityType=<type></u> <u>AgreementDesc=<master agreement></u>

Collateral Management

The following diagrams illustrates an example flow for collateral management once a repo or financing deal has been completed. Figures 8 to 11 shows an example for 2-party model and Figure 12 shows an example for 3-party model.

Figure 8: Example flow of Repo Trade



Click [here](#) to go to “Collateral Assignment”

Figure 9: Example flow for Collateral Assignment

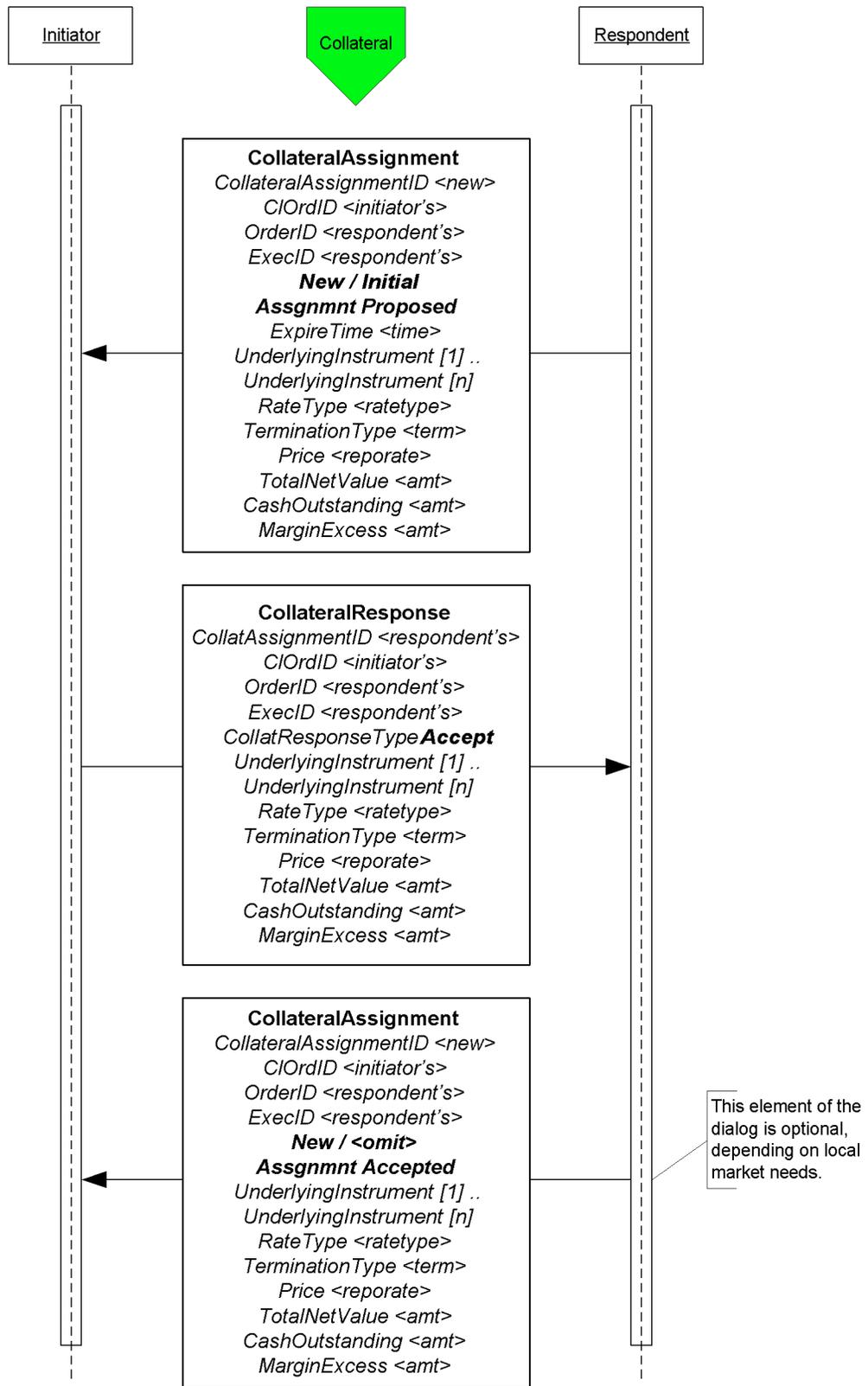


Figure 10: Example use of Collateral Request

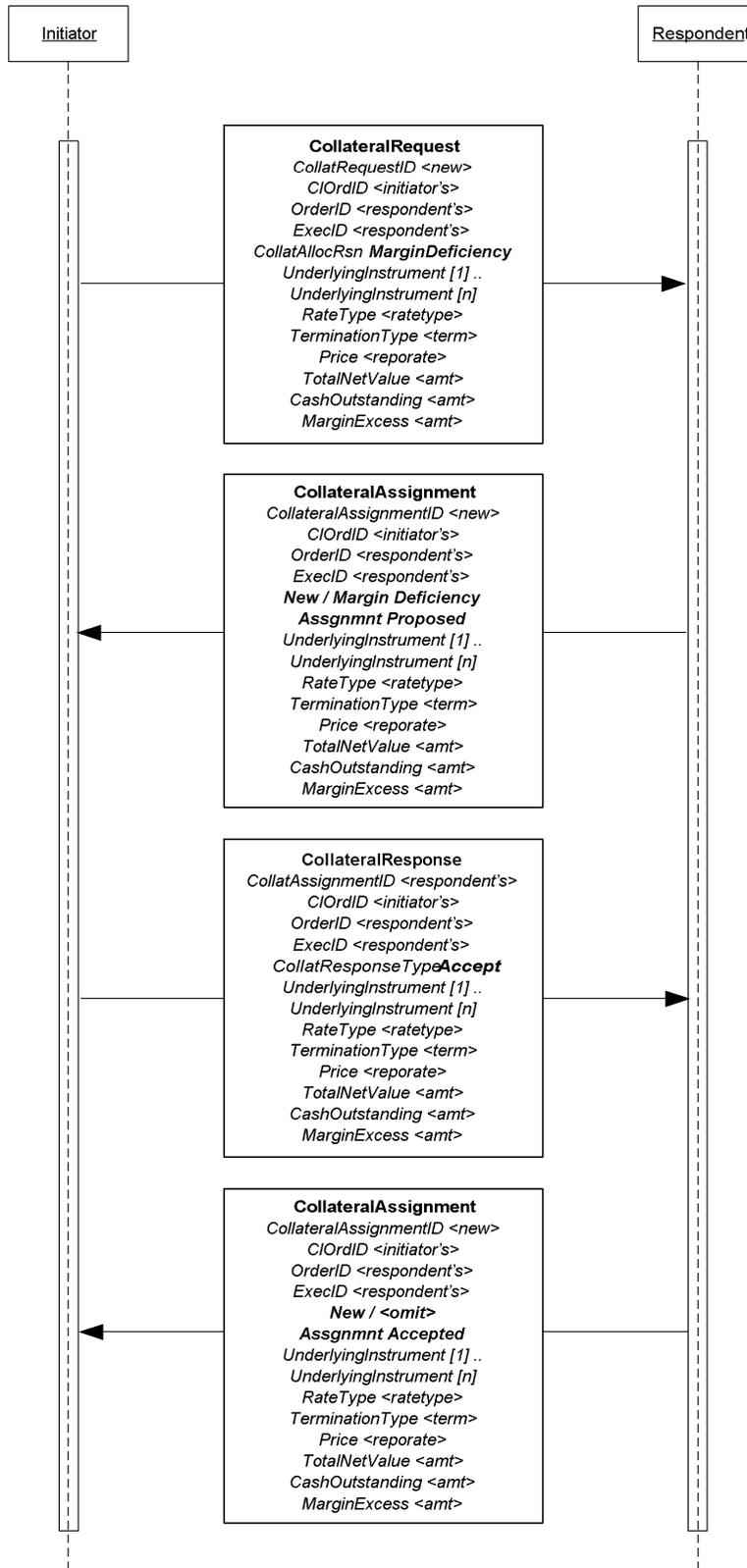


Figure 11: Collateral Inquiry

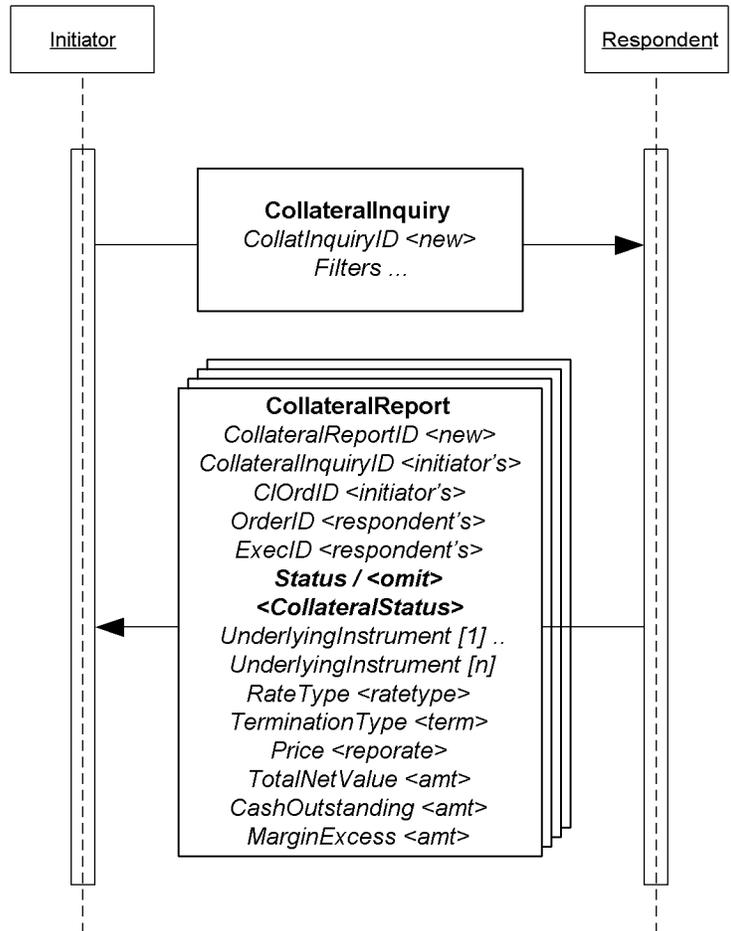
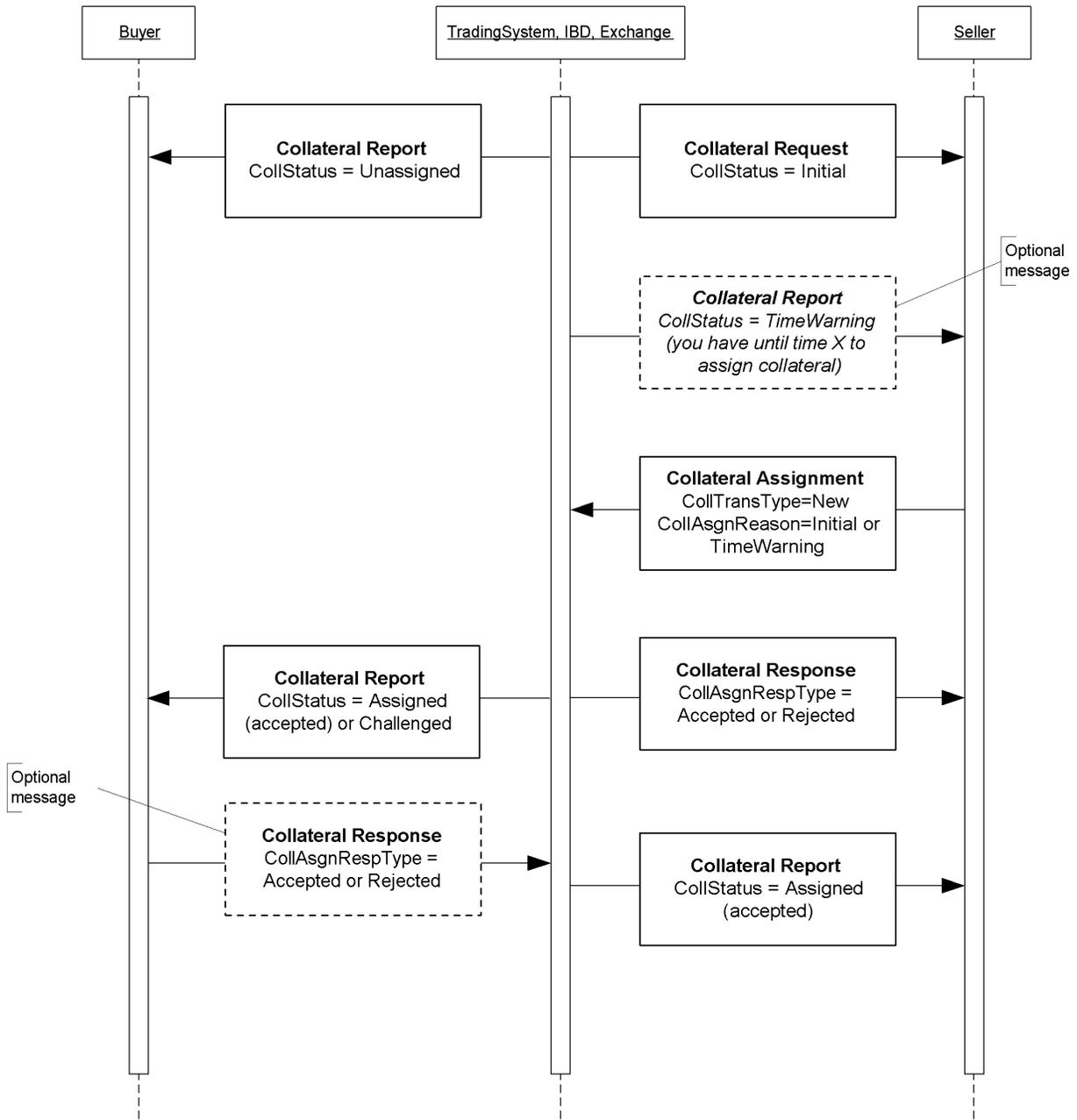


Figure 12: 3-Party Collateral flow



Identifying Euro Issuers

Euro CountryOfIssue Codes:

Use ISO codes in CountryOfIssue to identify the issuing country for non-US Governments. Omit CountryOfIssue or use a value of 'XS' when the issuer is a supra-national agency, e.g. the first nine entries in the table below.

Euro Issuer Values:

The list below are used in the Issuer (106) field to further identify the issuer for securities such as EUSUPRA, EUSOV and PFAND (see data dictionary entry to SecurityType (167) in Volume 6. The abbreviations are from Bloomberg.

*Credit / Sovereign issued in any currency.

COE	Council of Europe
DTA	Deutsche Ausgleichsbank
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
HESLAN	Hessen
KFW	Kreditanstalt fuer Wiederaufbau
LANREN	Landwirtschaftliche Rentenbank
NORWES	Nord-Rhein-Westfalen NRW
SACHAN	Sachsen-Anhalt
RATB	Austrian Treasury Bill
RAGB	Austrian Government Bond
AOBL	Austrian Bundesobligation (OBL)
RABSS	Austrian Bundesschatzscheine
AUST	Austrian Government International Bond*
RAGBS	RAGB Coupon Strip (Austrian)
RAGBR	RAGB Principal Strip (Austrian)
RAMTB	Austria Medium Term Bill
BGTB	Belgian Treasury Bill
BGB	Belgian Government Bond
BELG	Belgian Government International Bond
OLOS	Belgian Strip
OLOR	Belgian Principal Strip
DGTB	Danish Treasury Bill
DGB	Danish Government Bond
DENK	Danish Government International Bond* (DKK)

RFTB	Finnish Treasury Bill
RFGB	Finnish Government Bond
FINL	Finnish Government International Bond*
FNHF	Finnish Housing Bond
BTF	BTF - French Fixed-Rate Short Term Discount Treasury Bills
BTNS	BTAN - French Fixed-Rate Treasury Notes
FRTR	OAT - French Treasury Bonds
FRTRR	OAT - French Treasury Bonds Principal STRIPS
FRTRS	OAT - French Treasury Bonds Coupon STRIPS
CADES	Social Security Debt Repayment Fund (French)*
BUBILL	German Treasury Bill
DBSB	German Federal Treasury Bill (rarely used puttable & DM Ccy)
BKO	German Two Year Notes
FSDB	German Financing Treasury Notes (DM Ccy)
DBR	German Government Bond
DBRR	German Government Bond Principal STRIPS
DBRS	German Government Bond Coupon STRIPS
OBL	German Five Year Bonds
DBRUF	German Unity Fund DBR – S (only 2)
BKOUF	German Unity Fund – BKO (None)
DBP	German Federal Post -- BUNDESPOST
DBB	German Federal Railroad --BUNDESBAHN
THA	Treuhand Agency Bonds
TOBL	Treuhand Agency Obligations – All matured
ENTFND	German Retribution Fund – Only 2 sinking funds
GERP	European Recovery Program Special Funds (German only 2)
BUKASS	Bundeskassenscheine – 1 matured
GTB	Hellenic Republic Treasury Bill
GGB	Hellenic Republic Government Bond
GREECE	Hellenic Republic Government International Bond*
GGBSTP	Hellenic Republic Government Bond Coupon STRIPS
GGBRES	Hellenic Republic Government Bond Residual STRIPS
IRISH	Irish Government Bond

IRELND Irish Government International Bond*

BOTS Italian Treasury Bill

BTPS Italian Government Bond

CCTS Italian Treasury Certificate

ICTZ Italian Zero Coupon Bonds

CTES Italian Government Bonds Issued in EUR –Matured

CTOS Italian Government Bonds with Put Option – All matured

ITALY Italian International Bonds*

BTPSS Italian Government Bond Coupon STRIPS

BTPSR Italian Government Bond Residual STRIPS

LGB Luxembourgish Government Bond

NETHER Dutch Government Bond

NETHRR Dutch Principal Strip

NETHRS Dutch Strip

DTB Dutch Treasury Certificate

NBC Dutch Bank Certificate – All matured

NGTB Norwegian Treasury Bill

NGB Norwegian Government Bond

NORWAY Norwegian Government International Bond* (NOK)

PORTB Portuguese Treasury Bills

PGB Portuguese Government Bond

PORTUG Portuguese Government International Bond*

SPGB Spanish Government Bond

SPGBS Spanish Government Bond Coupon Strips

SPGBR Spanish Government Bond Principal Strips

SPAIN Spanish Government International Bond*

SGLT Spanish Letras del Tesoro

SWTB Swedish Treasury Bill

SGB Swedish Government Bond

SWED Swedish Government International Bond* (SEK)

SGBS Swedish Government Bond Coupon Strip

SGBR Swedish Government Bond Residual Strip

SWISTB Swiss Treasury Bill

SWISS Swiss Government Bond

GENTB Geneva Treasury Bill (CHF)

UKTB United Kingdom GBP/EUR Treasury Bill

UKT United Kingdom Gilt Bond

UKTS United Kingdom Gilt Bond Coupon STRIPS

UKTR United Kingdom Gilt Bond Residual STRIPS

UKIN United Kingdom International Bond*

BOE Bank of England EUR Bill

BOEN Bank of England EUR Note

Example usage of FI specific component blocks

Example usage of BenchmarkCurve fields

Note: the following is a **subset** of possible value combinations.

Description/ Common Name	BenchmarkCurveC urrency	BenchmarkCurveName	BenchmarkCurvePoint
Curve	USD	Treasury	INTERPOLATED
5 Year	USD	Treasury	5Y
Old 5 Year	USD	Treasury	5Y-OLD
10 Year	USD	Treasury	10Y
Old 10 Year	USD	Treasury	10Y-OLD
30 Year	USD	Treasury	30Y
Old 30 Year	USD	Treasury	30Y-OLD
3 Month LIBOR	USD	LIBOR	3M
6 Month LIBOR	USD	LIBOR	6M
Canadian	CAD	Treasury	INTERPOLATED
UK Curve	GBP	Treasury	INTERPOLATED
ECU/EURO	EUR	Treasury	INTERPOLATED
US Swap	USD	SWAP	INTERPOLATED
Euro Swap	EUR	SWAP	INTERPOLATED
EDFS	EUR	FutureSWAP	INTERPOLATED
German Bund	DEM	Treasury	INTERPOLATED
US MuniAAA	USD	MuniAAA	10Y
US T point	USD	Treasury	2/2031 5 3/8 (combination of

			maturity and coupon)
--	--	--	----------------------

Example usage of Stipulation fields

NoStipulations	StipulationType	StipulationValue	Description of the Stipulation
4	WALA	>=60	Weighted average loan age Less than or equal to 60 months
	TRDVAR	.0025	Trade variance .25%
	PSA	.25	Prepayment speed 25%
	GEOG	ORANGE OR CONTRACOSTA	Geographics Orange OR Contra Costa Counties

PRODUCT: FOREIGN EXCHANGE

Foreign Exchange (F/X) Trading

Notes:

- The forex Symbol is defined in [Electronic Broking Services, Ltd. \(see http://www.ebs.com\)](http://www.ebs.com) format: "CCY1/CCY2".
 - Rates are expressed as "currency1 in currency2" (or "currency2 per currency1") and are calculated as CCY2 divided by CCY1 (**NOT** CCY1 divided by CCY2)
 - (e.g. "GBP/USD" represents a rate expressed as USD per GBP, "USD/JPY" represents a rate expressed as JPY per USD, etc.).
 - CCY1 and CCY2 are ISO currency codes
- OrderQty represents the amount expressed in units of currency specified by the Currency field. Note OrderQty must be capable of representing large values with at least 2 decimal places.
- The value of the Currency field represents the denomination of the quantity field(s).
- The Rate (specified as a "Price" field) represents CCY2 divided by CCY1 (**NOT** CCY1 divided by CCY2)
- The "unknown quantity" can be calculated using the following rules:
 - If Currency field value = CCY1 then as: (OrderQty * Rate)
 - If Currency field value = CCY2 then as: (OrderQty / Rate)

Verbal representation	Side	OrderQty	Currency	Symbol (CCY1/CCY2)	Rate	Rate "Style"	"Resulting" Quantity
Sell 1,000,000 USD for JPY	Sell	1,000,000	USD	USD/JPY	105.92	Normal	105,920,000
				JPY/USD	0.009441088	Inverted	
Sell 50,000,000 JPY for USD	Sell	50,000,000	JPY	USD/JPY	105.92	Normal	472,054.38
				JPY/USD	0.009441088	Inverted	
Buy 50,000,000 JPY for USD	Buy	50,000,000	JPY	USD/JPY	105.92	Normal	472,054.38
				JPY/USD	0.009441088	Inverted	
Buy 1,000,000 USD for JPY	Buy	1,000,000	USD	USD/JPY	105.92	Normal	105,920,000
				JPY/USD	0.009441088	Inverted	
Sell 1,000,000 USD for CAD	Sell	1,000,000	USD	USD/CAD	1.437	Normal	1,437,000.00
				CAD/USD	0.695894224	Inverted	
Sell 50,000,000 CAD for USD	Sell	50,000,000	CAD	USD/CAD	1.437	Normal	34,794,711.20
				CAD/USD	0.695894224	Inverted	
Buy 50,000,000 CAD for USD	Buy	50,000,000	CAD	USD/CAD	1.437	Normal	34,794,711.20
				CAD/USD	0.695894224	Inverted	
Buy 1,000,000 USD for CAD	Buy	1,000,000	USD	USD/CAD	1.437	Normal	1,437,000.00

				CAD/USD	0.695894224	Inverted	
Sell 1,000,000 USD for GBP	Sell	1,000,000	USD	GBP/USD	1.6368	Normal	610,948.19
				USD/GBP	0.610948192	Inverted	
Sell 50,000,000 GBP for USD	Sell	50,000,000	GBP	GBP/USD	1.6368	Normal	81,840,000.00
				USD/GBP	0.610948192	Inverted	
Buy 50,000,000 GBP for USD	Buy	50,000,000	GBP	GBP/USD	1.6368	Normal	81,840,000.00
				USD/GBP	0.610948192	Inverted	
Buy 1,000,000 USD for GBP	Buy	1,000,000	USD	GBP/USD	1.6368	Normal	610,948.19
				USD/GBP	0.610948192	Inverted	
Sell 1,000,000 USD for EUR	Sell	1,000,000	USD	EUR/USD	1.001	Normal	999,001.00
				USD/EUR	0.999000999	Inverted	
Sell 50,000,000 EUR for USD	Sell	50,000,000	EUR	EUR/USD	1.001	Normal	50,050,000.00
				USD/EUR	0.999000999	Inverted	
Buy 50,000,000 EUR for USD	Buy	50,000,000	EUR	EUR/USD	1.001	Normal	50,050,000.00
				USD/EUR	0.999000999	Inverted	
Buy 1,000,000 USD for EUR	Buy	1,000,000	USD	EUR/USD	1.001	Normal	999,001.00
				USD/EUR	0.999000999	Inverted	
Sell 1,000,000 EUR for GBP	Sell	1,000,000	EUR	EUR/GBP	.6111	Normal	611,100.00
				GBP/EUR	1.636393389	Inverted	
Sell 50,000,000 GBP for EUR	Sell	50,000,000	GBP	EUR/GBP	.6111	Normal	81,819,669.45
				GBP/EUR	1.636393389	Inverted	
Buy 50,000,000 GBP for EUR	Buy	50,000,000	GBP	EUR/GBP	.6111	Normal	81,819,669.45
				GBP/EUR	1.636393389	Inverted	
Buy 1,000,000 EUR for GBP	Buy	1,000,000	EUR	EUR/GBP	.6111	Normal	611,100.00
				GBP/EUR	1.636393389	Inverted	
Sell 1,000,000 EUR for CHF	Sell	1,000,000	EUR	EUR/CHF	1.6125	Normal	1,612,500.00
				CHF/EUR	0.620155039	Inverted	
Sell 50,000,000 CHF for EUR	Sell	50,000,000	CHF	EUR/CHF	1.6125	Normal	31,007,751.94
				CHF/EUR	0.620155039	Inverted	
Buy 50,000,000 CHF for EUR	Buy	50,000,000	CHF	EUR/CHF	1.6125	Normal	31,007,751.94
				CHF/EUR	0.620155039	Inverted	
Buy 1,000,000 EUR for CHF	Buy	1,000,000	EUR	EUR/CHF	1.6125	Normal	1,612,500.00
				CHF/EUR	0.620155039	Inverted	

